$ 2.50

# Washington Apple Pi

The Journal of Washington Apple Pi, Ltd.

Volume 8 September 1986 Number 9

## Highlights

- Button-Down Guide to Apple: Part II-OperatingSystems
- Pinpoint, Expanded AW & Auto-Start Ram Disk
- Family Home Money Manager: Part 5
- Kyan Pascal 2.0: A Review
- MicroPhone, Red Ryder and Smartcom II: A Review
- Softviews - 3 Stat Packages

## In This Issue



For information on joining WAP, see "General Information", page 6.

# Family Computer Center

An Authorized Apple Dealer

*announces*

## Expanded Service Facilities

Visit our new service location at 6691 Backlick Road in Springfield,VA and see why we're the leading source for Apple sales and service in the Metro Area. We offer a variety of services including on-site equipment maintenance and upgrades (in stock!!) for your Mac 128 or 512 computer. Call ahead for an appointment and your Macintosh can be upgraded while you wait!! As always, you may leave your equipment for repair at either of our two convenient Fairfax locations.

## New Retail Sales Store

Our new retail sales outlet is at the same easy-access location as our service center. We feature a complete line of Apple hardware and accessories. Our system specialists are helpful, friendly, and knowledgeable. Stop by our new store and find out how we can bring out the best in your Apple computer.

## Special Micro-Floppy Price

Bring in this ad from the WAP "Highlights" and get a box of Maxell MF2-DD for the Macintosh Plus or Macintosh 512E for only $29.95. Offer good until September 30, 1986. Springfield location only.

## Locations...

11917L Fair Oaks Mall
Fairfax, VA 22030
(703) 385-2758

6691 Backlick Road
Springfield, VA 22150
(703) 866-9122

Service Center (703) 866-0068

***WAP Specials***

**SCSI**
Hard Disk
Special

Grab a Dataframe 20 SCSI Hard Disk Drive and fulfill the need for speed.

The Dataframe 20 uses one-third less power than competing models and has a 40g shock rating.

Family Computer Center special WAP price only $995

---

Family Computer Center is offering a special Macintosh Upgrade price for Washington Apple PI members. Call 866-9122 for more information.

**Upgrades Now In Stock!!**

# Clinton Computer -- Your #1 Apple Dealer!

277 S. Washington St, Alexandria, VA (703)838-9700 ● 9636 Ft. Meade Rd, Laurel, MD (301)953-1110 or (301)792-0600 ● 6443 Old Alex. Ferry Rd, Clinton, MD (301)856-2500

## Clinton Computer, *p.s.*

### *Our Shops or Your Site -- Your Choice!*

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

Located at 6457 Old Alex. Ferry Road in Clinton, with satellite shops at our Alexandria and Laurel store, ***p.s.***'s primary purpose is to provide factory-authorized service for the main lines of products we sell. We stock the parts to service your equipment quickly. "While-you-wait" service can be arranged if you call for an appointment.


If you need service at your site, we can send out the Mobile Service Van to your place of business. The only vehicle of its type in the Metro area, our van has its own fully-equipped workbench and power supply.

### *A Service Contract Can Save You Money !*

An ***AppleCare™*** service contract on your Apple computer equipment is a smart way to avoid unexpected expense, at an annual cost less than that of one major repair. In addition, Clinton Computer provides **FREE PREVENTIVE MAINTENANCE** check-ups for all of our service contract customers.

And, as an *Apple Pi* member, you receive a 25% discount off the list price of ***AppleCare***. Call Karen Lundquist at (301)856-2500.

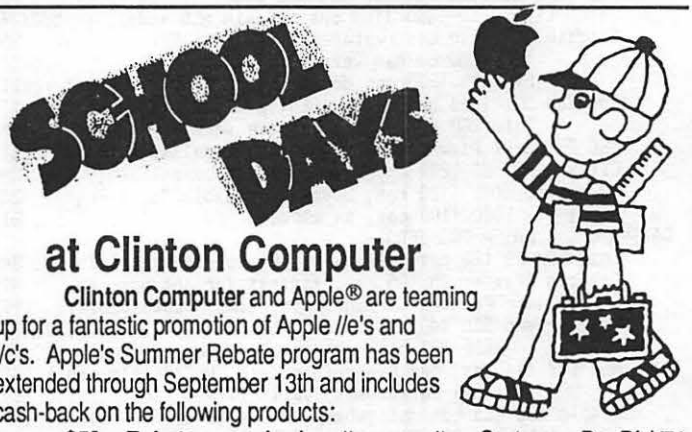
## BBS at Clinton Computer

Clinton Computer now has a Bulletin Board System (BBS). Through it you can get --

- The Latest Info on Hardware and Software Products
- Public Domain Software (Apple //, Macintosh and IBM)
- Upcoming Special Sales and Events

We are on-line 24 hours a day at 300/1200 Baud.

**(301)856-2365**




## at Clinton Computer

**Clinton Computer** and Apple® are teaming up for a fantastic promotion of Apple //e's and //c's. Apple's Summer Rebate program has been extended through September 13th and includes cash-back on the following products:

**$50 Rebate** -- Apple //e or //c System; DuoDisk™; ImageWriter™II; UniDisk™ 3.5"; Apple Personal Modem; and Apple II Memory Expansion Card.

**$25 Rebate** -- UniDisk™; Disk //c; Mouse //e or //c; and ImageWriter II SheetFeeder.

**$10 Rebate** -- Apple //e Numeric Keypad; Apple Joystick; Hand Controllers; //e Enhancement Kit; //c Carrying Case; Apple //c Video Accessory Kit; and Apple //e 256K Upgrade Kit.

### *We're the Choice of Metro Area Schools for 6,000 Apples!*

Over the past three years, Clinton Computer has been selected by local school systems to install an amazing 6,000 Apple computer systems! We are the designated dealer for five Maryland counties -- Calvert, Charles, Montgomery, Prince George's and St. Mary's -- and for four Virginia jurisdictions -- Alexandria City, and Arlington, Fairfax, and Prince William Counties. We have also installed computers in a large number of private and parochial schools -- including those of the Washington Archdiocese.

### *FREE! Win an Apple ImageWriter II Printer*

As part of our ***School Days*** promotion, Clinton Computer will be awarding three ImageWriter II Printers to lucky customers, one at each of our three stores. Entry forms are available at all stores and the drawing will be held on September 15, 1986.

One entry per person. No purchase necessary. No cash value. Employees of Clinton Computer and their families are not eligible to enter.

### DISCOUNT POLICY FOR WASHINGTON APPLE PI MEMBERS

CLINTON COMPUTER offers Washington Apple Pi members a 25% DISCOUNT OFF THE LIST PRICE on all Apple brand peripherals and software and on AppleCare (no CPU's). Discount is available to persons who have been Pi members for at least 3 months. Discount applies to cash and certified check purchases and cannot be applied retroactively. Add 1% for credit card and personal check purchases. If the product is not in stock, we can take your prepaid order. Pi members need to present their cards up-front. No phone or mail orders, please. Discount cannot be used in combination with other promotions. Members should primarily use the Pi network of experts for after-sale support.

*This ad was produced on a Macintosh and LaserWriter, using MacWrite and Aldus PageMaker. Apple, the Apple logo, and LaserWriter are registered trademarks of Apple Computer, Inc. Macintosh is a trademark of McIntosh Laboratory, Inc. and is being used with express permission of its owner.*

# —— Operant Systems ——

## —— HARDWARE ——

DOT-MATRIX PRINTERS—
- Epson FX-85 (160 cps, 32 cps NLQ mode)..... 395
- FX-286 (200 cps wide carriage upgrade of FX-185). 569
- LX-80 (100 cps, 16 cps NLQ mode)..... 259
- LQ-800/LQ-1000 (180 cps, 24-pin NLQ mode).... 585/765
- Okidata 192 (160 cps replacement for Oki 92)..... 359
- 193 (132 column version of above)..... 519
- 292/293 (200 cps draft, 100 cps NLQ, 18-pin) (call)
- Toshiba 321 (216 cps draft, BEST print for the buck)... 519
- 351 (288 cps, wide carriage version of above). 1099
- NEC P5/P6/P7 Pinwriter (24 wire high-quality matrix) (call)
- Citizen MSP 20 (200 cps matrix, Epson-compatible)..... 349
- Panasonic 1091 (120 cps, Epson-compatible "Best Buy").. 259
- 1080 (100 cps, as above)..... 219

DAISYWHEEL & LASER PRINTERS—
- Epson DX-20 (20 cps daisywheel, Diablo compatible)..... 349
- Citizen Premier 35 (35 cps, fastest for the money)..... 499
- Canon Laser Printer (8 pages/min, Diablo compatible).. 1995
- Silver-Reed 800 (40 cps, Diablo-compatible)..... 759
- 600 (25 cps daisywheel, wide carriage)..... 569
- NEC Elf (16 cps, par & ser interface, NEC/Diablo emul). 419
- 8830 (55 cps daisywheel, built like a tank)..... 1195
- Diablo 635 (55 cps daisywheel, replaces 630 model).... 1099
- Qume LetterPro 20 (20 cps daisywheel)..... 429

MODEMS—
- Hayes Micromodem IIe (300 baud card for II+/IIe w/sft). 145
- Smartmodem 2400 (2400/1200/300 baud, RS-232)..... 599
- Smartmodem 1200 (1200 baud, RS-232, auto-dial)... 389
- Smartmodem 300 (300 baud, as above)..... 145
- Novation Apple-Cat II (w/ Conware, 1200 baud upgrade).. 209
- Prometheus Promodem 1200 (1200/300 baud, RS-232)..... 289
- Promodem 1200A (1200/300 card w/ software).. 209
- US Robotics Password (1200/300 baud, auto-dial/answer). 229
- Courier 2400 (2400/1200/300, autodial/ans). 439
- Anchor Automation Express (1200/300 loaded w/ features) 249
- Volksmodem 12 (1200/300 baud, RS-232) 199
- Lightning 24 (2400/1200/300, RS-232). 389
- ZoomModem IIe Plus (300 baud card w/adv software)..... 119

DISK DRIVES—
- Applied Engineering half-hi floppy (for IIC series)..... 119
- Controller for 2 drives..... 55
- Corvus Winchester drives..... (call)

CP/M & 6502C SYSTEMS—
- Applicard (6 Mhz Z-80, 64K to 192K RAM, 70-col video).. 125
- Microsoft Softcard IIe (Z-80, 80 col & 64K on one card) 265
- Softcard II (includes CP/M 2.2 and MBASIC)... 239
- Titan Accelerator IIE (3.6 Mhz 6502C coprocessor)..... 229
- Speed Demon (6502C high-speed coprocessor)..... 169
- Applied Engineering Z-Ram II (256K and CP/M for IIc)... 265
- TransWarp (3.6 Mhz 6502C, 256K RAM) 225

MONITORS—
- Amdek 300G/300A (12" green/amber anti-glare, 18Mhz).125/139
- Color 300 (13" composite color)..... 229
- NEC JB-1201/1205 (green/amber anti-glare screen, 20Mhz) 145
- JB-1260 (12" green, 15Mhz, best value for money).... 99

INTERFACES & BUFFERS & CLOCKS—
- Pkaso/U printer interface (superior graphics)..... (call)
- Quadram Microfazer (8K to 128K parallel buffer)..... 139
- Grappler+ printer interface (parallel w/ graphics)..... 85
- Buffered Grappler+ (16K to 64K buffer plus graphics)... 149
- Practical Peripherals Seriall (serial for modems/print) 109
- Graphicard (parallel w/ graphics). 79
- Printerface (std par w/o graphics) 59
- ProClock (PRODOS compatible)..... 109

VIDEO BOARDS—
- Videx Ultraterm (up to 160 column/48 line display !!).. 209
- Microtek 80-col card (w/64K RAM, AppleWorks-compatible). 99
- Applied Engineering RamWorks III (64K—3 meg + 80 col). 139
- Viewmaster (80 col for II+)..... 119

MEMORY EXPANSION—
- Microtek 16K RAM card..... 79
- Legend "S" card (256K to 1 meg, runs Appleworks on IIC+) 209
- Titan Technologies 128K RAM card..... 179

## —— SOFTWARE ——

WORD PROCESSING—
- Wordstar 3.3 (includes 6 mhz Z-80 Applicard)..... 149
- Word Perfect (BEST IBM prog now avail for IIe/c).... 95
- Bank Street Writer or Speller..... 45
- pfs: Write IIe ..... 79
- ScreenWriter II (40/70/80-col display w/speller).... 85
- HomeWord w/ HomeWord Speller..... 49
- Sensible Speller IV (DOS or PRODOS versions avail).. 79
- The Word Plus (super spelling checker for CP/M).... 109

SPREADSHEETS—
- Multiplan (state-of-the-art spreadsheet)..... 70
- SuperCalc 3a (spreadsheet & graphics for the IIe/c) 135

INFORMATION MANAGEMENT—
- dBASE II (the best Apple database, requires CP/M).. 299
- pfs: File, Report, or Graph..... 79
- The General Manager 2.0..... 149
- Thinktank (electronic outliner)..... 89
- DB Master 4+ (latest version)..... 185

BUSINESS & ACCOUNTING—
- Dollars & Sense (accounting w/graphics)..... 79
- Managing Your Money (accounting + investment mgmt). 115
- Peachtree Back to Basics Accounting (GL/AR/AP)..... 115
- BPI Accounting (GL/AR/AP/PAY/INVENTORY).....each 225

COMMUNICATIONS—
- Ascii Express Professional (best DOS/PRODOS program) 80
- Crosstalk (best program for CP/M)..... 125
- CompuServe Starter Kit (password & 5 free hours).... 25

ODDS & ENDS—
- Print Shop/Print Shop Companion/Libraries.....36/29/18
- Newsroom/Clip Art Collection.....35/19
- Pinpoint..... 45
- Typing Tutor III..... 36
- Kensington System Saver Fan (w/surge protector)..... 66
- Kraft Joystick / Hayes Mach III..... 35/39
- KoalaPad Graphics Tablet (with graphics software)... 85
- Curtis Emerald Surge Protector (6 outlets & cord)... 45
- Flight Simulator II..... 36

MACINTOSH
- Microsoft Word (what MacWrite should have been).... 119
- Excel (best Mac spreadsheet available)... 245
- Basic interpreter ..... 99
- Chart (presentation business graphics).... 85
- File..... 119
- Multiplan..... 119
- MacEnhancer (has the ports Apple forgot). 175
- Filevision (graphics database system)..... 109
- Odesta Helix 2.0 (database for the serious user)... 239
- Dollars & Sense (accounting w/graphics)..... 95
- Sidekick w/PhoneLink..... 65
- Iomega Bernoulli Drive (5/10/20 meg removable).. (call)
- ReadySetGo (page processor)..... 125
- MacForth Level II..... 169
- Hippo C..... 99
- Kensington Mac System Saver (fan & surge protector). 75
- Surge Protector (replaces power cord).... 39

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.

# OFFICERS & STAFF

**Board of Directors**

| | | |
|---|---|---|
| President | - Tom Warrick | (301) 656-4389 |
| Vice Pres-Apple | - Bruce Field | (301) 340-7038 |
| Vice Pres-Mac | - Jay Heller | (301) 977-2599 |
| Treasurer | - Edward Myerson | (703) 759-5479 |
| Secretary | - Peter Combes | (301) 251-6369 |
| Directors | - Theron Fuller | (703) 370-5563 |
| | - Martin Milrod | (301) 464-2154 |
| | - Leon Raesly | (301) 439-1799 |
| | - Jay Thal | (202) 244-3649 |
| | - Mike Ungerman | (703) 455-3441 |
| | - Bernie Urban | (301) 229-3458 |
| | - Rich Wasserstrom | |
| Past President | - David Morganstein | (301) 972-4263 |
| Editor | - Bernie Urban | (301) 229-3458 |
| Head Software Libr. | - Jim Little | (301) 762-3215 |
| **Office Managers** | - Gena & Bernie Urban | (301) 654-8060 |
| Journal Staff: | | |
| Associate Editor | - Gena Urban | (301) 229-3458 |
| Store Distrbtn. | - Raymond Hobbs | (301) 490-7484 |
| Columnists: | | |
| Apple /// | - Charlene Ryan | (703) 836-0463 |
| Developer's View | - Jim Lanford | (202) 723-0050 |
| DisabledSIG | - Jay Thal | (202) 244-3649 |
| EDSIG | - Peter Combes | (301) 251-6369 |
| GAMESIG | - Barry Bedrick | (703) 534-7891 |
| MacNovice | - Ralph Begleiter | (301) 340-3296 |
| Pascal (PIG) | - Bob Platt | |
| Q & A | - Bruce Field | (301) 340-7038 |
| Mac Q & A | - Jonathan Hardis | (301) 330-1422 |
| Meeting Reports | - Adrien Youell | (301) 951-0838 |
| Musical Apple | - Raymond Hobbs | (301) 490-7484 |
| Softviews | - David Morganstein | (301) 972-4263 |
| Telecomm | - Dave Harvey | (703) 527-2704 |
| Review Coord. | - Jim Burger (day) | (202) 337-7900 |
| Review Coord. | - Raymond Hobbs | (301) 490-7484 |
| Review Coord. | - David Morganstein | (301) 972-4263 |
| UBBS - Apple | - Euclid Coukouma | (301) 839-2046 |
| UBBS - Mac | - | |
| View from Durham | - Chris Klugewicz | (301) 262-1816 |
| Disketeria Staff: | - Jim Little | (301) 762-3215 |
| | - John Malcolm, Joy Aso, Ed Lang, | |
| | - Pat Foreman, Gordon Stubbs, | |
| | - Nancy Little, Richard Langston III | |
| Mac Disk. Staff: | - Dave Weikert | (301) 926-4461 |
| | - John DeMarco, Gary Elliott, | |
| | - Andy Gallant, Michael Jones (contd.) | |

| | | |
|---|---|---|
| Mac Disk contd. | - Ralph Mullendore, Shirley Weaver | |
| DOS 3.3 Lib. | - Jim Little | (301) 762-3215 |
| Macintosh Lib. | - Larry Halff | (703) 237-0984 |
| Pascal Lib. | - Mike Hartman | (301) 445-1583 |
| ProDOS Lib. | - J.T. (Tom) DeMay Jr. | (301) 779-4632 |
| Group Purchases | - Rich Wasserstrom * | (703) 893-7143 |
| | *(Evenings 7:00-9:30, M-F) | |
| Head Reading Lib. | - Walt Francis | (202) 966-5742 |
| Apple Tea Coord. | - Amy Billingsley | (301) 622-2203 |
| Arrangements | - Leon Moore | (301) 946-2642 |
| Dealer Rel. Comm. | - John Alden | (202) 686-1656 |
| | - Jim Burger (day) | (202) 337-7900 |
| | - Rich Wasserstrom | |
| General Counsel | - Jim Burger (day) | (202) 337-7900 |
| Membership | - Dana Schwartz | (301) 654-8060 |
| Program | - John Alden | (202) 686-1656 |
| Publicity Chairman | - Hunter Alexander | (703) 820-8304 |
| Public Relations | - Leon Raesly | (301) 439-1799 |
| SIGs&Slices Coord. | - Jay Thal | (202) 244-3649 |
| Telecom Sys. Opr. | - Leon Raesly | (301) 439-1799 |
| Tutorials | - Oscar Kramer | (301) 384-5206 |
| | - George Sall | (703) 768-0212 |
| | - Steve Stern | (301) 881-2543 |
| | - Ted Meyer | (703) 893-6845 |
| Volunteer Coord. | - Sue Roth | (703) 356-9025 |
| SIG Chairmen: | | |
| Annapolis Slice | - Steve Toth | (301) 757-3280 |
| AppleWorks | - Ken DeVito | (703) 960-0787 |
| Apple /// | - David Ottalini & | (301) 681-5792 |
| | - Bill Rosenmund | (703) 941-5050 |
| Apple //c | - | |
| CP/M | - Charles Franklin | (301) 997-9138 |
| DisabledSIG | - Jay Thal | (202) 244-3649 |
| dPub SIG | - Tom Piwowar | (202 223-6813 |
| EDSIG | - Peter Combes | (301) 251-6369 |
| Forth SIG | - Kevin Nealon | (703) 280-1136 |
| Frederick Slice | - Scott Galbraith | (301) 865-3035 |
| GAMESIG | - Ronald Wartow | (301) 654-4439 |
| LawSIG | - John Weld (day) | (202) 463-0662 |
| Mac Prog. Grp. | - Timothy Buehrer | (703) 548-8971 |
| Music SIG | - Raymond Hobbs | (301) 490-7484 |
| NEWSIG | - Bernie Benson | (301) 951-5294 |
| Pascal (PIG) | - John Dyer | (703) 538-5636 |
| PI-SIG | - Bob Golden | (301) 593-6165 |
| STOCKSIG | - Robert Wood | (703) 893-9591 |
| Telecomm. SIG | - George Kinal | (202) 546-7270 |

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



# EDITORIAL

MacWorld Expo . . . If there is a depressed economy, including the microcomputer industry, there was no evidence of it at the Expo which took place Aug 14-16 in Boston. The Bayside Convention Center was filled almost to capacity. There seemed to be more attendees than the reported 13,000 last year. This time, there were no major new announcements by Apple. Apparently the vendors were not happy with Apple's announcements at prior Expos. They complained that the show goers were more interested in Apple products than in their own 3rd party products. So Apple refrained this time and probably will do so again in Dallas at the October Expo. There were two "megascreens" available for the Mac Plus, one at $3000 and the other show-priced at $1595. Both worked well, especially on Levco's Prodigy II. Sculley and Gates announced and Microsoft demonstrated MicroWorks. Popularity of the DataFrame hard drives was evident and activity around SuperMac Technology was frenetic as they displayed their 20 meg XP (twice as fast) and the 40 meg version.

Others will report more at this forthcoming main meeting, but one last development which bears close scrutiny is the announcement by Dan Cochran of Apple that A.P.P.L.E. is now a mail house for certified developers and will be the exclusive supplier of technical materials, software development tools, etc. for fees established by Apple.

# PRESIDENT'S CORNER
## by Tom Warrick

***Great Mystery of the Universe solved:*** It pays to read the Washington Apple Pi Journal closely! Did everyone see the little note Bernie, our Editor, slipped in on page 61 of the August issue? For years everyone had speculated as to where Apple came up with the name ***"FID"*** for its DOS 3.3 file copy and disk utility. ***Bruce Tognazinni***, author of the justly infamous "Tognazinni Chess" program that used to be on the Games III WAP disk, revealed the origin of this name at the Midwest Apple User Group Conference on July 19 in Chicago —but I'm not going to spoil the secret by giving it away here. You'll have to look it up. By the way, if you like text adventure games and think you know something about your Apple II, you should definitely go back and try "Tognazinni Chess".

***Steven Dutch***, writing in the Summer 1986 issue of ***The Skeptical Inquirer*** on "Four Decades of Fringe Literature," has an excellent discussion of the decline in recent years in books on "pseudoscience," the attempts to dress up in scientific guise discussions of astrology, Atlantis, cryptozoology (e.g., Bigfoot), UFO's, laetrile, creationism and the like. As readers of The Skeptical Inquirer know, fringe literature exists, in part, to satisfy the public thirst for information about science that people can easily understand. Professor Dutch cites a number of reasons for this favorable trend, and notes, "I suspect the rise of microcomputers may also have played a role in diverting attention from fringe works, first of all by providing intellectually stimulating alternative activity (to reading, for example, *Chariots of the Gods)* and, second, by enabling millions of people to develop a feeling of technological competence and a sense of participation in science and technology."

The Skeptical Inquirer is a magazine devoted to exploring and debunking claims of the paranormal and supernatural and is—not coincidentally—a lot of fun to read. It is the official journal of the ***Committee for the Scientific Investigation of Claims of the Paranormal*** (CSICOP), a group that includes such diverse personalities as ***The Amazing Randi*** (a magician who claims no supernatural powers and who goes after his "colleagues" who do—he is one of the recipients of this year's MacArthur "genius" grants for his work with CSICOP), ***Isaac Asimov, Martin Gardner, Philip J. Klass, F. H. C. Crick, L. Sprague de Camp, Paul MacCready,*** and the ubiquitous ***Carl Sagan.*** Subscriptions to The Skeptical Inquirer are $20.00 a year. For more information, write The Skeptical Inquirer, P.O. Box 229, Buffalo, New York 14215.

***Future of the Pi:*** Every year in the fall WAP spends a morning taking stock of where we are, where we are going and (more importantly) where we should be going. This year, the "Future of the Pi" meeting will be held at 9:30 a.m., Saturday, September 20, in the auditorium of USUHS. Subjects covered will be the WAP Journal, meetings, the telecommunications system, our public-domain software library, tutorials, and other things you'd like to see your user group doing. I urge all Pi members to come, as these sessions provide the best means your officers have to find out what everyone is thinking. Are there any other topics (specific or general) that you would like to discuss? If so, give me a call or leave me a message on the AppleLink board of the Telecommunications System.

One very useful thing I learned from you at the July meeting was that many people wanted ***signs*** directing them to specific activities at our main monthly meetings. We haven't done this for awhile, but it would obviously be extremely useful for everyone. We need a ***volunteer*** who can prepare signs a couple of days before each monthly meeting and who can tape them up before and remove them after the meeting. It doesn't matter what type of computer you have, but a program like ***Print Shop*** or ***MacDraw*** would be ideal. Access to a photocopier that enlarges 8.5"x 11" to 11"x17" would also be useful. If you could volunteer a few hours to do this, it would be a big help to everyone. If you are interested, give one of our two vice presidents, ***Bruce Field*** and ***Jay Heller,*** or me, a call.

***Upload articles for the Journal:*** One of the most frequently requested things people have asked for is a way to upload articles for the WAP Journal. We hope to have such a capability starting this fall. Watch this space for details.

***On the road again...*** It seems like it may be happening again this fall. There is the possibility that some of our WAP meetings ***may have to be moved*** due to schedule conflicts at USUHS. ***November's*** meeting is quite likely to have to be moved either temporarily (to the third or fifth Saturday, the latter of which would be two days after Thanksgiving) or physically (does anyone have influence at NIH?). Keep an eye out in the WAP Journal for any changes of meeting locations.

***Paradise Found?*** I heard the other day from ***Tim Buehrer,*** our former Macintosh Programmers' Group Chair, who, you may recall, left Washington to take a position on the staff of the Congress of the Federated States of Micronesia. Tim sends this report: "Greetings from a wet paradise. It was a beautiful, sunny day when we got off the plane. We were greeted by a number of people from the Congress and given leis and crowns of flowers. Perfect introduction to paradise. The scenery is like Hawaii must have been 60 or 80 years ago. When it is clear the water is blue and the mountains a lush green. When it is overcast, the clouds cover the tops of the mountains. Then it rained. In

contd.

the middle of the night it began to rain heavily. In fact, it was so heavy that water came in through the roof, poured out the hole in the ceiling above the fan and was spewed around the room by the fan. Oh, well."

Tim reports that ***Pohnpei,*** the tropical island on which he works, is indeed fully integrated into the technological world—he found a LaserWriter there. However, he says, the latest Finder and System are somewhat slow to arrive. Distribution problems from Cupertino to Pohnpei are easy to understand, as everything that isn't flown in has to be sent by a slow boat on its way to China. Tim also asks if anyone knows where he can order a ***"Watsco"*** , which I understand to be a device that keeps the power from coming back on too quickly after a power outage. If anyone knows where we can order one for Tim, please let me know.

***Jim Little,*** our Head Software Librarian, mentioned to me the other day that two of our Pi members deserve particular thanks and appreciation for their efforts at developing best-selling home-grown public-domain software: ***Gary Hayman*** and ***John Love.*** Gary put together WAP disk 172, ***"Print Shop Graphics"***, which is a "must have" for those many of you who own Brøderbund's justly-famed Print Shop program. John Love's ***"Love's Follies"***, a utilities disk, is also one of our most popular library disks. John is, I understand, moving into the Macintosh programming world, and we hope we will see more of his articles in the Journal as he explores the exhilarating (and frustrating) world of Mac programming. Gentlemen, we thank you. If anyone else is interested in working to put together a disk to share with your fellow members, contact Jim Little for information as to how to go about doing it.

I should also mention the outstanding work of ***Marty Milrod*** and ***Larry Halff*** in putting together our Mac disks. Over the last few months they've inundated us with so many new Mac disks that I, for one, haven't had a chance to play with them all. Marty and Larry together combine to bring to this effort both youthful vigor and the wisdom of the ages (Marty provides the youth, of course).

# EDSIG NEWS
## by Patricia Kirby

**EDSIG Calendar**

**Thursday, September 25 at 7:30 PM, Office**

"Intervideo, an educational authoring system, that enables teachers and trainers without specialized knowledge to prepare interactive lessons using an Apple computer and a video disc player." For those who have wished for a truly easy-to-use, inexpensive authoring tool, EDSIG Chairman Peter Combes will demonstrate the final version of his soon-to-be-released D.C. Heath Co. program. It has been widely acclaimed at prototype demonstrations.

EDSIG plans several meetings this year at local colleges and schools. Stay tuned.

# LETTERS TO THE EDITOR

Dear Editor,

Re: Wap Journal July 1986, "A Button-Down Guide to the Apple" by Raymond Hobbs.

Thanks, from a novice member, to Mr. Hobbs for taking the time to write his most interesting and informative article, and to you for printing it in the Journal. My handicapped son (cerebral palsy), Paul, has an Apple //e equipped with an adaptive firmware card, a head switch, a printer, several disks, some of them that, more often than he would like, display "SYNTAX ERROR" on the monitor. Some of the disks that Paul has are: Apple Presents Apple, Diskware DOS 3.3 Systems Master, AppleWorks, Apple Writer, Text Talker, Word Communications and The Print Shop.

I work with Paul because, in order for him to use the computer, I have to initially set it up—mode of operation, speed of operation, etc. Paul has been a member of WAP for several years and, to his (and my) knowledge, this is the first article that really rated our attention as novice members. Of course, Mr. Jay Thal's articles have always been of special interest to Paul, and sometime back he wrote to Mr. Thal requesting some specific information.

We'll be looking forward to Mr. Hobbs next article on Operating Systems and any other articles that apply to "novice members". Now, if Mr. Hobbs would be so kind as to recommend some helpful reading material that goes beyond the "Owners Manual", it would be appreciated. Also, maybe Mr. Fields could forward a transcript or disk or what have you, that covers materials presented at the three WAP tutorials—any reasonable fee involved would of course be forwarded.

**Paul J. Klepac and Father**

Dear Editor,

I thoroughly enjoyed the article in the July 1986 WAP Journal entitled, "A Button-Down Guide to the Apple", by Raymond Hobbs. I think it helps the novice to understand the innerworkings of the Apple computer. I would like to see more simplistic articles like this one. For example, what happens when the operator tells the printer to "PRINT". I like the "organization chart" concept expressed in the July article. Many articles in the WAP Journal answer questions relating to "I can't get my printer to works with 'ABC' software and 'XYZ' hardware." Why? How does the Apple handle printer instructions? What really goes on? Why is it so complicated to understand? This would be an interesting aricle. I've had printer troubles myself. So much so, that I bought a second (brand name) printer that accepts my print commands, but I never knew why the first (so-called brand name compatible) printer never worked properly.

Another topic could be, "How Bulletin Boards Work". What equipment do you need? How are bulletin boards organized? What are their purposes? What benefits can be derived from investing in equipment to use them?

I hope Raymond Hobbs keeps writing articles such as the July one. I enjoy the simplistic approach to understanding computers. As our worthy President of WAP mentioned in his July article, WAP is here to help and educate all users in the use of the Apple. That is why I joined.

By the way, I use only a few select programs, such as AppleWorks, Print Shop and Apple Writer //e.

**Thomas W. Slifker**

# EVENT QUEUE

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

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

Following are dates and topics for upcoming months:

| | | |
|---|---|---|
| Sept | 27 | - Apple II - Databases |
| | | - Mac - Power data bases |
| Oct | 25 | - The Apple IIGS (tentative) |
| | | - Macintosh bridges to other computers |
| Nov | 22 | - Apple II - Telecommunications |
| | | - Mac - TBA |

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

# General Information



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

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

Current office hours are:

| | | |
|---|---|---|
| Monday - Friday | - | 10 AM to 2:30 PM |
| Tues. & Thurs. | - | 7 PM to 9:00 PM ** |
| Saturday | - | 12 Noon to 3:00 PM |

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

# JOB MART

**HELP WANTED:** The Washington Apple Pi office needs a part-time clerical person to help with membership mailings and perform general clerical duties. No typing skills needed. Non-smoking informal atmosphere. 16 to 20 hours per week, flexible. Office hours are 10 - 2:30. $5.00 per hour. Ideal for mother of young school-age children. Call Gena at WAP office, 654-8060.

# CLASSIFIEDS

**WANTED:** Give someone else an advantage while you take an advantage. Donate your tax-deductible Apple computer to a Learning Center. Please call Center for Unique Learners, (301) 231-0115, ask for Mr. Halker.

**WANTED:** Imagewriter, std. carriage (Model M0151), for my 128K Mac. Call Elizabeth at 251-9050 (O) or 460-6545 (H), Rockville.

**WANTED:** Used 400K Apple Mac external disk drive for up to $140. Call Jack at (202) 287-3460 from 8 to 4.

**FOR SALE:** Apple ][+ 48K, green screen, 1 drive and board, $425. The Accountant with Key, $40. Transend II, $75. dBase II v2.4 for Apple CP/M, $195. BPI General Ledger, $150. DB Master v.3, $75. Call Bill, days (202) 544-0180.

**FOR SALE:** Apple Daisywheel Printer (very light use, like new—AppleCare(d)-for) w/original carton, 8 printwheels and 4 ribbons, $850. A-B switchbox, $70. 40-ft. serial cable, $70. 6-ft. RS-232 ribbon cable, $20. Mac Software: OverVue v2.0d(np), $125; ThinkTank512 v1.2NP, $90; MS Multiplan v1.02 (including backup disk), $80; MS Chart v1.0 (including backup disk), $65. All w/manuals, some w/orig. packaging. Call Bob Purvis at (301) 366-7226.

**FOR SALE:** AST RAMSTACK 1.5 Memory Expansion for Macintosh XL (LISA), $500. Four 400K External Disk Drives, $130 each (volume discount negotiable). Call (202)223-4700 daytime, ask for Penny.

**FOR SALE:** Applied Engineering Ramworks with 64K. Never been used. $99. Call Bill Weingartner between 8:30 and 4:30 M-F at 692-7235 or 692-7273.

**FOR SALE:** Apple /// computer, 256K single drive, hardly used, great backup unit for /// user, $750. Add printer, monitor and Advanced VisiCalc, $850. Call Stuart Cohen (301) 774-9182, evenings.

**FOR SALE:** Apple ][+, screen (Gorilla-new), 2 disk drives (Apple II and MicroSci-new), Microline Okidata 92 printer-new, $600. Call Bob Moore (202) 829-0268.

# COMMERCIAL CLASSIFIEDS

**FOR SALE:** 5 - 400K Mac external disk drives. $200 ea. or $800 for all 5. Call Ginger at (202) 628-6282.

**RAM-STAR©** - an Applicard or MicroPro Starcard CP/M ramdisk driver that supports many popular memory cards - including RAMWORKS! Fantastic addition to your machine. For more information, contact Empathy Software, P.O. Box 785, College Park, MD 20740 (301) 345-8961.

**"Night Care Service":** I love children and I love my Apple, so my Apple //c and I have decided, together, to offer a "night care" service. Drop off the kids between 6 and 7 PM, pick them up between 10 and 11 PM. I have "Print Shop", "Reader Rabbit and the Word Factory", "Piece of Cake Math", and "Rocky's Boots". We can play with my software, or bring your own! The service will cost $5 per hour per child (further children from the same family get the reduced rate of $3 per hour per child). Call Phil Shapiro at (202) 686-5465, evenings before 10. In DC on Conn. Ave. near Nebraska.

# * September 1986 *

WAP

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| | 1 Call Bob Golden 593-6165 re PI-SIG meeting | 2 | 3 | 4 GameSIG 7:30PM-Off; Mac Progmrs 7:30PM-Lady of Lourdes | 5 | 6 |
| -> Monday, 8th is deadline for Journal articles | 8 Telecom SIG 7:30 PM Office | 9 Apple// Beginning Tutorial #1 7:30-9:00PM Office | 10 Executive Board 7:30 PM Office | 11STOCKSIG 8PM Office; FAC Slice 7:30 MRIID Ft.Detrick | Sat. 13th-> contd.-Mus. SIG 1:30PM Call Ray Hobbs | 13 Annapolis Slice-Anne Arundel Com Col.Arnold |
| 14 | 15 | 16 Apple// Beginning Tutorial #2 7:30-9:00PM Office | 17 | 18 Pascal SIG 8:00 PM Office | 19 | 20 |
| 21 | 22 Mac Begin. Tutorial #1 7-10 PM Office | 23 Apple// Beginning Tutorial #3 7:30-9:00PM Office | 24 Apple /// Ch. of Com. Bldg., DC 7:30 PM | 25 EDSIG 7:30 PM Office | 26 | 27 WAP Meeting - Apple II & Mac 9AM - USUHS |
| 28 | 29 Mac Begin. Tutorial #2 7-10 PM Office | 30 BBS Comm. 7:30 PM Office | | | | |

# * October 1986 *

WAP

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| | | | 1 | 2 GameSig 7:30PM-Off. Mac Progrms 7:30PM-Lady of Lourdes | 3 | 4 |
| -> Monday, 6th is deadline for Journal articles | 6 PI-SIG 7:30 PM Office | 7 Apple// Beginning Tutorial#1 7:30-9:00PM Office | 8 Executive Board 7:30PM Office | 9STOCKSIG 8PM Office; FAC Slice 7:30 MRIID Ft.Detrick | 10 | 11 MusicSIG 1:30PM Call Ray Hobbs |
| 12 | 13 Telecom SIG 7:30 PM Office | 14 Apple// Beginning Tutorial #2 7:30-9:00PM Office | 15 | 16 Pascal SIG 8:00 PM Office | 17 | 18 |
| 19 | 20 Mac Begin. Tutorial #1 7-10 PM Office | 21 Apple// Beginning Tutorial #3 7:30-9:00PM Office | 22 Apple /// Ch. of Com. Bldg., DC 7:30 PM | 23 EDSIG 7:30 PM Office | 24 | 25 WAP meeting - Apple // & Mac 9AM - USUHS |
| 26 | 27 Mac Begin. Tutorial #2 7-10 PM Office | 28 BBS Comm. 7:30 PM Office | 29 | 30 | 31 And the Goblins'll get you if you don't watch out! | |

# SIGNEWS

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

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

**DisabledSIG** - For information call Jay Thal at 344-3649.

**dPub SIG** (Desktop Publishing) meets on the first Wednesday at 7:30 PM in the PEPCO auditorium at 1900 Penn. Ave., NW. The next meeting will be on September 3.

**EdSIG** (the education special interest group) meets on the 4th Thursday of the month at the office, 7:30 PM. See Edsig News elsewhere in this issue.

**FEDSIG** meets on the last Wednesday of the month at 7:30 PM at the office.

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

**GameSIG** meets on the first Thursday of each month at the office, 7:30 PM. The next meeting will be on September 4. See their news elsewhere in this issue.

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

**PIG**, the Pascal Interest Group, meets on the third Thursday of each month at the office, 8:00 PM. The next meeting will be on September 18.

**PI-SIG** meets on the first Monday night of each month at the office, 7:30 PM. Call Bob Golden at 593-6165 for details.

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

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

**Telecom SIG** meets on the second Monday night of each month at the office, 7:30 PM.

# WAP HOTLINE For Use by WAP Members Only

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

| | | |
|---|---|---|
| **General** | John Day | (301) 621-7543 |
| | Dave Harvey | (703) 527-2704 |
| | Robert Martin | (301) 498-6074 |
| **Accounting Packages** | | |
| Accountant(Dec.Sup.) | Mark Pankin | (703) 524-0937 |
| BPI Programs | Jaxon Brown | (301) 350-3283 |
| | Otis Greever | (301) 262-5607 |
| Home Accountant | Leon Raesly | (301) 439-1799 |
| Howardsoft (Tax) | Leon Raesly | (301) 439-1799 |
| | Otis Greever | (301) 262-5607 |
| **APPLE SSC** | Bernie Benson | (301) 951-5294 |
| **Apple TechNotes** | Joe Chelena | (703) 978-1816 |
| **AppleWorks** | Jay Jones (Balt.) | (301) 969-1990 |
| | Ken Black | (703) 369-3366 |
| | Ken DeVito | (703) 960-0787 |
| **Communications Packages and Modems-Telecom.** | | |
| Anchor Mark 12 | George Kinal (7-10) | (202) 546-7270 |
| | Jeremy Parker | (301) 229-2578 |
| Apple Modems | John Day | (301) 621-7543 |
| ASCII Express | Dave Harvey | (703) 527-2704 |
| BIZCOMP Modem | Jeremy Parker | (301) 229-2578 |
| General | Tom Nebiker | (216) 867-7463 |
| Hayes Smartmodem | Bernie Benson | (301) 951-5294 |
| Robotics Modem | Joan B. Dunham * | (301) 585-0989 |
| SeriAll Comm. Card | Joan B. Dunham * | (301) 585-0989 |
| Smartcom I | Harmon Pritchard | (301) 972-4667 |
| VisiTerm | Steve Wildstrom | (301) 564-0039 |
| XTALK CP/M Comm. | Bernie Benson | (301) 951-5294 |
| **Computers, Specific** | | |
| Apple //c | John Day | (301) 621-7543 |
| Franklin&Laser128 | Doug Trueman | (417) 679-3526 |
| LISA/Mac XL | John Day | (301) 621-7543 |
| Macintosh: | | |
| General | Terry Monks | (703) 471-4610 |
| | Steve Hunt | (301) 262-9080 |
| | Donald Schmitt | (717) 334-3265 |
| | Rob Clark | (804) 872-9070 |
| Comm. & Modems | Steve Hunt | (301) 262-9080 |
| Concertware | Skip Horvath | (703) 536-4091 |
| Excel | David Morganstein | (301) 972-4263 |
| | Mark Pankin | (703) 524-0937 |
| File Vision | Steve Hunt | (301) 262-9080 |
| Helix | Jim Berry * | (703) 662-0640 |
| | Harvey Levine | (301) 299-9380 |
| Inside Mac | Jon Hardis | (301) 330-1422 |
| Lang.-C,Pascal,XLisp | Carolyn Komada | (703) 691-1986 |
| MacDraw | Tom Berilla | (301) 434-3256 |
| | Tom Parrish | (301) 654-8784 |
| MacLion (DBMS) | Mark Miani | (202) 362-8123 |
| MacProject | Jay Lucas | (703) 751-3332 |
| MacTerminal | Jon Hardis | (301) 330-1422 |
| MS-BASIC & MS-File | John Love | (703) 569-2294 |
| Multiplan | John Boblitz | (301) 356-9384 |
| | John Love | (703) 569-2294 |
| | Steve Hunt | (301) 262-9080 |
| | Walt Francis | (202) 966-5742 |
| MusicWorks | Skip Horvath | (703) 536-4091 |
| OverVue | J.T.(Tom) DeMay Jr. | (301) 779-4632 |
| | Tom Parrish | (301) 654-8784 |
| Spreadsheets | David Morganstein | (301) 972-4263 |
| Spreadsheets&Graphcs | Bob Pulgino | (202) 797-0879 |
| Sidekick | Ray Hobbs(7:30-10) | (301) 490-7484 |
| ThinkTank | Tom Parrish | (301) 654-8784 |
| Word | Marty Milrod | (301) 464-2154 |
| **Data Bases** | | |
| dBase II | Paul Bublitz | (301) 261-4124 |
| | John Staples | (703) 893-5985 |
| dBase II & III | Ray Hobbs(7:30-10) | (301) 490-7484 |
| | Jim Kellock (day) | (301) 986-9522 |
| | Leon Raesly | (301) 460-0754 |
| DB Master | Dave Einhorn | (301) 593-8420 |
| Data Perfect | Leon Raesly | (301) 439-1799 |
| Data Factory | Bob Schmidt | (301) 736-4698 |
| General Manager | Normand Bernache | (301) 935-5617 |
| PFS | Bill Etue | (703) 620-2103 |
| | Ginny Spevak | (202) 362-3887 |
| QuickFile II | J.J. Finkelstein | (301) 652-9375 |
| Q-Pro-4 | John Staples | (703) 893-5985 |
| VisiPlot | Leon Raesly | (301) 439-1799 |
| **Games - Apple //** | Charles Hall | (301) 330-4052 |
| **Games - Mac** | Ron Wartow | (301) 654-4439 |
| **Hard Disks** | | |
| Corvus & Omninet | Tom Vier (BBS) | (301) 986-8085 |
| Corvus | Leon Raesly | (301) 439-1799 |
| Sider | Jaxon Brown | (301) 350-3283 |
| | Otis Greever | (301) 262-5607 |
| **Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)** | | |
| A | Louis Biggie | (301) 967-3977 |
| A | Peter Combes | (301) 251-6369 |
| A,I | Jeff Dillon | (301) 422-6458 |
| A | Richard Langston | (301) 869-7466 |
| A | Leon Raesly | (301) 439-1799 |
| A,I,M | Richard Untied | (609) 596-8816 |
| A,I,M | John Love | (703) 569-2294 |
| M | Raymond Hobbs | (301) 490-7484 |
| P | Donn Hoffman * | (412) 578-8905 |
| P | Michael Hartman | (301) 445-1583 |
| Forth | Bruce Field | (301) 340-7038 |
| MS Basic | Ray Hobbs(7:30-10) | (301) 490-7484 |
| **Math/OR Applns.** | Mark Pankin | (703) 524-0937 |
| **Monitor, RGB** | John Day | (301) 621-7543 |
| **Operating Systems** | | |
| Apple DOS | Richard Langston | (301) 869-7466 |
| | John Love | (703) 569-2294 |
| | Adam Robie | (301) 460-6537 |
| | Richard Untied | (609) 596-8816 |
| CP/M | Ray Hobbs (7:30-10) | (301) 490-7484 |
| | Leon Raesly | (301) 439-1799 |
| ProDOS | Richard Langston | (301) 869-7466 |
| | John Love | (703) 569-2294 |
| **Printers** | | |
| General | Walt Francis | (202) 966-5742 |
| | Leon Raesly | (301) 439-1799 |
| | Joan B. Dunham * | (301) 585-0989 |
| Apple Color Plotter | John Day | (301) 621-7543 |
| Apple Daisy Wheel | John Day | (301) 621-7543 |
| Daisywriter 2000 | Bill Etue | (703) 620-2103 |
| | Henry Greene | (202) 363-1797 |
| IDS 460 | Jeff Stetekluh | (703) 979-8249 |
| Imagewriter | John Day | (301) 621-7543 |
| MX-80 | Jeff Dillon | (301) 434-0405 |
| NEC 8023 | Bill Mark | (301) 779-8938 |
| Okidata | Michael Proffitt | (301) 874-2270 |
| | Dan Robrish | (301) 530-4202 |
| Scribe | Phil Leber | (703) 378-4391 |
| Silentype | Bruce Field | (301) 340-7038 |
| **Spreadsheets** | Leon Raesly | (301) 439-1799 |
| | Walt Francis | (202) 966-5742 |
| Lotus 1-2-3 | Walt Francis | (202) 966-5742 |
| | Ray Hobbs(7:30-10) | (301) 490-7484 |
| Multiplan | Terry Prudden | (301) 933-3065 |
| VisiCalc | Walt Francis | (202) 966-5742 |
| Sprdsht. 2.0(MagicCalc) | Leon Raesly | (301) 439-1799 |
| SuperCalc Ver. 2.0 | Leon Raesly | (301) 430-1799 |
| **Stat. Packages** | David Morganstein | (301) 972-4263 |
| **Stock Market** | Robert Wood | (703) 893-9591 |
| **Time-Sharing** | Dave Harvey | (703) 527-2704 |
| **Word Processors** | Walt Francis | (202) 966-5742 |
| Apple Writer II | Dianne Lorenz | (301) 530-7881 |
| | Leon Raesly | (301) 439-1799 |
| Gutenberg | Neil Muncy Can. | (416) 298-3964 |
| & Jr. | Harris Silverstone | (301) 435-3582 |
| Letter & Simply Perfect | Leon Raesly | (301) 439-1799 |
| Magic Window and II | Joyce C. Little | (301) 321-2989 |
| Peach Text | Carl Eisen | (703) 354-4837 |
| PIE Writer/Apple PIE | Jim Graham | (703) 643-1848 |
| ScreenWriter II | Peter Combes | (301) 251-6369 |
| | E. E. Carter | (202) 363-2342 |
| Supertext II | Peter Rosden | (301) 229-2288 |
| Word Handler | Jon Vaupel | (301) 977-3054 |
| Word Juggler //e | Carl Eisen | (703) 354-4837 |
| Word Perfect | James Edwards | (301) 585-3002 |
| | Henry Donahoe | (202) 298-9107 |
| Word Star | Leon Raesly | (301) 439-1799 |
| | Dana Reil | (301) 350-3283 |

* Calls until midnight are ok.

# APPLE TEAS

What's an Apple Tea? It's an opportunity for Apple users to get together in small groups (from 3 to 12) to discuss a specific area of Apple computing, or just to ask questions and share tips.

How can you have an Apple Tea?

1. Pick a topic - one that interests you and one that you think might interest others.

2. Obtain a resource person, someone who is knowledgeable in that area. The WAP Hotline is a good place to start for an available resource person.

3. Pick a date a month or two in advance to allow for Journal publication and distribution. Pick a suitable time.

4. Plan to host your Tea with refreshments at your home or another suitable location. (There have been successful Teas hosted in the Training Room of Clinton Computer, and the Computer Lab of the Elizabeth Seton High School.)

5. That's all there is to it. Call Amy Billingsley at 622-2203, or George Sall at 768-0212 with topic, resource person, date and time, place and directions. Start working on your Apple Tea today. It is a great way to share information and learn more about one of your own areas of interest.

The following teas are scheduled for September:



**Washington Apple Pi**
**Northwest Washington, DC Apple Tea**
**Saturday September 13th, 7:30 - 9:30 PM**
**Elementary Applesoft: Fun, Games & Tricks**
**With Hotline Volunteer Louis Biggie**
**at the home of Phil Shapiro**
**5201 Chevy Chase Parkway NW**
**Washington, DC 20015**
**Refreshments - Bring computer if convenient**

Please RSVP to Phil, 686-5465. Directions: Travel South on Connecticut Avenue from the Beltway. Come down to Chevy Chase Parkway, which is about the 5200 block of Connecticut Avenue, about 5 blocks South of Military Road and one block north of Nebraska Avenue. (Phil says his townhouse with its Chevy Chase Parkway address actually faces Connecticut Avenue.) By metro, get off at the Van Ness station. Transfer to the L2 or L4 bus going North, and get off right in front of his house.

# ON THE APPLE /// TRAIL

## by David Ottalini, /// SIG Co-Chairman

I recently made a quick trip out to California (where I grew up) and was able to spend a day at the offices of On Three (in Ventura). As many of you know, this is an Apple ///-specific company which offers a number of unique products for our machine, including a **512K upgrade, Draw On 3,** the **DeskTopManager,** etc. The Editor of **On Three Magazine, Val Golding,** was my tour guide, aided later by Publisher and President of On Three, **Bob Consorti** (who came in to see me despite being very sick...)

Both Val and Bob demonstrated their programs as only folks who developed it (and work with it daily) can. The DeskTopManager is truly an excellent program (like Sidekick for IBM) and its new MacroManager module is well thought out and easy to use. Bob also showed me a new module that will be out this month or next—a **spelling checker** for 3 EZ Pieces. You will be able to call it up from within 3 EZ P's but will not be able to spell-check the file in memory (at least at this point). You are given a catalog of the files on a specified disk and it spell-checks the particular file you select.

I was also shown a program developed by On Three's just-departed programmer **Rob Turner** (who is now at Apple). It's called **RBoot** and allows your Apple /// to boot from a hard disk! The program loads in a few seconds from your internal disk drive and then looks to your hard disk for the program to boot (Selector or Catalyst, for example). Rob has not decided how he will distribute this program yet, but let's all hope it is soon.

What is On Three's biggest seller? Val Golding says it's probably a close tie between Draw On 3 and the 512K upgrade. Another probable winner is the new **Graphics Manager** program written by Dr. Mel Astrahan. It will allow you to manage graphics on the /// like you have never been able to do before. That includes pulling Apple // Print Shop graphics files into the ///, manipulate them and save them as FOTO files.

In the October issue of On Three, by the way, will be an article on how to use the LaserWriter printer with your Apple ///. I was told HP already has a .PRINTER driver for its laser printer, all you have to do is write and ask for it. Apple also supposedly had a 2.0 version of .PRINTER that had a larger configuration file to take advantage of the laser printer.

I am also happy to report that Bob Consorti has agreed to come out to our end of the country to provide a program for our /// SIG. I am looking at October or November and will have more information as it becomes available. I'd also like to remind all of our SIG members that **Ed Gooding,** of the ///'s Company BBS will be our guest this month. He'll be talking about getting the most out of BBS's and anything else you might be interested in.

**AppleWorks-/// EZ Pieces Compatibility**

Many of you know this on the /// end, but we must get the word out to our Apple // brothers and sisters that AppleWorks and /// EZ Pieces are completely compatible where files are concerned. I continue to be frustrated at seeing ads for books, templates, etc. advertised only for AppleWorks and not our own program (which was developed first).

In mid-August, I spent a part of my day off calling a number of vendors offering templates in advertisements in A+ Magazine. While some of them remembered the ///, none knew that they were missing a substantial market simply because they did not include the name "/// EZ Pieces" in their ads. But after talking with them for a while, all became excited at the possibility of being able to reach a larger audience, and hopefully you will see some results of my efforts in the months ahead. Our own WAP PD library, by the way already has some templates you can use. Check out the ProDOS section. (We hope to have some templates in our /// SIG library too.)

One vendor of templates, Richard Rowell, is a WAP member and operates his company, Pacific Technology Systems out of Rockville (Maryland). He's active in the AppleWorks SIG of WAP (how about AppleWorks/3 EZ Pieces SIG?) and has agreed to come by one of our SIG meetings this Fall to show us what he has to offer (among them—a restaurant guide for the Washington DC area and 1986 NFL Football schedule).

Here's a list of the vendors I contacted, with addresses:

ImagiMedia Software,16640 Roscoe Place, Sepulveda, CA. 91343 (818) 891-3707

Pacific Technology Systems, Dept. A; Box 8005, Rockville, MD. 20856 (301) 231-9086

Plume Software, P.O. Box 2209, Altoona, PA. 16603 (814) 942-7508

Practical Computer Applications. 2323 Tucker Ct.. Santa Rosa, CA. 95401

Weber Abstract, Suite 820 One Oxford Valley, Langhorne, PA. 19047 (215) 750-7550

ImagiMedia Software sells three volumes of encyclopedia templates called FactWorks, which covers everything from presidents to geography, animals to history. Plume offers recipe templates while finance files are the forte of Practical Computer Applications. Weber Abstract offers a template for HUD real estate settlement forms. Pacific Technology, as mentioned above, has many different templates available and under development. If you are interested, give them a call. I have heard estimates that 60% of all Apple // owners have AppleWorks (a higher percentage for /// owners of 3 EZ Pieces would not be surprising) so you can expect a lot more templates to come your way in the future.

Richard Rowell also told me during our conversation that A+ was planning an article in the next few months on AppleWorks templates. So I called them to see about getting equal time for 3 EZP's. The woman I spoke with (who is coordinating the project) didn't know the two programs were compatible (she does now, though!). Hopefully, the article will at least mention the compatibility of the two program's files.

**And We Move On**

I truly was hoping that we would have our Apple /// in the WAP office when I wrote last month's column. Unfortunately it has yet to show as of this writing. I have been assured by

contd.

Apple, however, that it is coming. When is the only question.

There are also rumors that the /// may be included in some way when Apple announces its new GS model. That might include letting /// owners trade in their ///s for GS's—but we'll have to wait and see.

Have you noticed that Central Point Software is offering a universal disk controller for the //e that can drive a // disk drive, UniDisk or Mac Drive (400 or 800K)? They are also selling 800K drives from Chinon at $195.00. Unfortunatley, the controller card will not fit into the /// (it's too long) and the 800K disk drive is apparently a Mac drive and can't be driven using the //e expansion kit Liron card. That's too bad, since the Liron card is only $50.00 vs. the CPS card's $150.00. The CPS card will drive any two drives. But their 800K drive can not daisy chain like the Apple 800K UniDisk can.

**Finally**

Speaking of the UniDisk, I have mine up and running and it really is great! I'm using Selector /// with it and the combination is a dream. I'm using my UniDisk as a .PRO-FILE surrogate and have encountered very few problems. By the way, if you name each of your 3.5" disks with the same volume name, Selector will switch between programs on each disk without even so much as blinking an eye.

I keep promising a review of The Filing System for Apple Writer and will try to deliver next month... Until then, Happy /// Trails To You!

# Q & A
## by Bruce F. Field

I have had some feedback on a problem reported a few months ago about losing data in track 0. The reader occasionally got I/O errors when running under ProDOS and usually found bad blocks in track 0. Ernie Cooper and Cyrus Roton have both written to me noting that this problem has been discussed in OPEN APPLE, the newsletter by Tom Weishaar. The problem (not necessarily acknowledged by Apple) is that there are bad power supplies in some of the newer //e's distributed within the past 12 months. Why this causes the problem is not known, but replacing the power supply cures the problem. The problem happens only when operating under ProDOS on an enhanced //e and can occur during any disk access, not just the "write" command. The result is that track 0 and occasionally a few other blocks are destroyed.

Jim Edwards reports that like a previous reader he had trouble getting the FingerPrint interface card to work correctly with Word Perfect v.1.0. The problem was that when trying to print a document, the first page or so worked correctly, whereupon gibberish ensued. He has also had trouble with the Apple Super Serial Card, and the Grappler+ Serial card. (One wonders if seven slots are enough if he has serial cards in three of them, but to each his own.) Jim reports the solution for the Super Serial Card and the Grappler+ are similar to the previously reported solution for the FingerPrint—change status mask byte #1 to $50 in the PRINTER.SYSTEM. (For FingerPrint, change mask byte #1 to $09 and mask byte #2 to $01.) Jim also suggests that people who run into problems should contact SSI and complain—SSI's documentation on how to get into the PRINTER.SYSTEM program to change the status masks is very uneven. Early issues of Word Perfect contained a READ.ME file with detailed information of accessing PRINTER.SYSTEM and changing the variables. Later Issues have a different READ.ME file with no useful information of PRINTER.SYSTEM, and with the statement that Apple Super Serial Cards must be set to 1200 baud which is true only if you don't change the mask byte.

Dick Johnson wrote for help a while ago with Amper Disk Store & Recall, a machine language program (Nibble Express, Vol. 2, pp. 121, 1982) to permit storing and recalling Applesoft arrays on disk. Dick's problem was that the program worked on his Apple ][+ but not on his //e. I subsequently ran it on my enhanced //e and it also worked perfectly. He tracked the problem down by copying the //e ROM to disk and comparing it to the ][+ ROM. Amper... calls a routine at $F7D9 in the Applesoft interpreter to get the name of the disk file storing or loading the array. This routine was absent in his //e. He solved the problem by including the missing routine at the end of the Amper Disk Store & Recall program and changing the JSR address in the program. Specifically, load in Amper..., change addresses $8424 and $8425 to $CA and $84 respectively, and type in the following new code.

```
84CA: A0 04 B1 9B 20 EF E0 A5 94
84D3: 85 3C A5 95 85 3D 60
```

Now save the revised version, BSAVE STORE & RECALL,A$8400,L$DA

I was asked recently if there were any Data Base programs for the Apple that incorporated a command language like, but not necessarily identical to Dbase II. Jim Pirisino of Minute-Ware (the people that publish those manuals on Apple Writer and other stuff) sent me a press release advertising The Filing System for Apple Writer. This works with either the Apple Writer //e DOS 3.3 version or the ProDOS version and is written using Apple Writer's WPL, Word Processing Language. You must already have Apple Writer. It is a text oriented filing system that stores data in normal Apple Writer files with one database per disk. It has capabilities of generating input forms, filling in input forms, search/replacing, report printing and printing mailing labels. The entire program is listed and explained in the documentation. This should be great for those do-it-yourselfers that always want to change the program. It's available from MinuteWare Publishing, 245 Wilde Lake Village Green, Columbia, MD 21044, (301) 995-1166, for an introductory price of $99.95.

**Q.** I would like to know how to turn my Apple //e into a print buffer for my Mac Plus, inexpensively. My printer is an ImageWriter I. My Apple //e has an 80-column card and 2 disk drives, but no extra memory. I doubt I could gain enough selling my //e to purchase a dedicated print buffer; so I'd like to convert it into a print buffer, and yet keep it as an Apple //e, so I'd have it when I want it.

**A.** HEY! That's a good idea, but... First , note that the Mac generally sends characters to the printer as graphic characters. This means that a lot of bytes are being sent to print just a few characters. For example, to print a 7 1/2" by 9 inch page full of text in Standard or Faster quality (one pass) requires (7.5"*144 dots/inch)*(9"*144 dots/inch) / (8 dots/byte) = 174,960 bytes. With Best quality twice the number of bytes are sent. With two 5 1/4" disk drives and the entire Apple memory you could store almost 2 pages of text. Now you begin to see why there aren't very many useful print buffers for the Mac. Second, the Mac usually "generates" the graphics characters at print time and this can take a significant fraction of the total print time, so you may not improve the print time a whole lot. Okay so I haven't discouraged you yet.

The easiest way to make a print buffer is to get a communications program that will accept input and print it to the printer simultaneously while saving the overflow to disk. Of course you need a serial card in addition to the printer interface card. ASCII Express, a popular communications program, will accept input and print it simultaneously but only has a 128 byte buffer. You can also have it accept input to a buffer and periodically dump the buffer to disk. Then later you come back and print the disk file. If anyone knows of better program for this I'd appreciate hearing about it. The alternative solution is to

contd.

write your own assembly language program, but if you knew how to write it you wouldn't have asked the question. Lets hope an enterprising reader will come to your rescue.

**Q.** I'm considering purchasing several hardware and software products. However, I need some advice before making these purchases. Memory Plus Distributors offers Apple compatible drives for $99 and and Apple 80-column card for $49. A Viewmaster 80 card is offered for $139. I have read several letters in your column from people having trouble using AppleWorks and was wondering if Apple (][+) Works from Norwich Data Services would be a good investment.

**A.** You don't say, but I assume you have an Apple ][+ (if you're considering Plus-Works). The 80-column card offered by Memory Plus Distributors is for the Apple //e only and will not work in your ][+. The Viewmaster 80 card has an excellent reputation as does its manufacturer Applied Engineering. When considering disk drives, it is possible that some otherwise compatible disk drives may not work with some protected software. If you have one Apple drive it doesn't seem unreasonable to purchase a non-Apple compatible for a second drive. My personal policy when purchasing from mail order businesses is to use a credit card as it gives you greater leverage if the product is defective or not delivered.

AppleWorks in its latest revision is a good solid program used by many, many Apple owners. Although the documentation appears to be thorough and clear I have gotten a number of questions, usually relating to operating the program with non-Apple printers and interface cards which would indicate a deficiency in either the documentation or the program. I would not let this deter me from purchasing the program, especially if I had a users group handy for help. AppleWorks normally only works on an Apple //e or //c. Plus-Works modifies the program so it will also work on the ][+. Be warned that if you have a ][+ with only a 16K language card and no extra memory you will only have about 10K of working space left after loading AppleWorks. This is only about 2 1/2 pages of text. You also need an 80-column card. For any practical use you'll also need a memory expansion card which will run about $200 (A.P.P.L.E.'s Big Board will work), and then get Plus-Works-XM for $49.95.

**Q.** Can anybody on that side of the country get AppleWorks to run on a ][+ with 64K? As I await a response, I shall polish my buttons (paddle that is). Is it raining?

**A.** To our reader in Connecticut. As I sit in the summer heat, and write this in Maryland; it isn't raining, hasn't been raining, and isn't likely to rain in the near future. To run AppleWorks on a ][+ you can use Plus-Works, $19.95 from Norwich Data Services, PO Box 356, East Norwich, NY 11732-0356, 800-221-3826 orders only. See the prior question.

# The Musical Apple

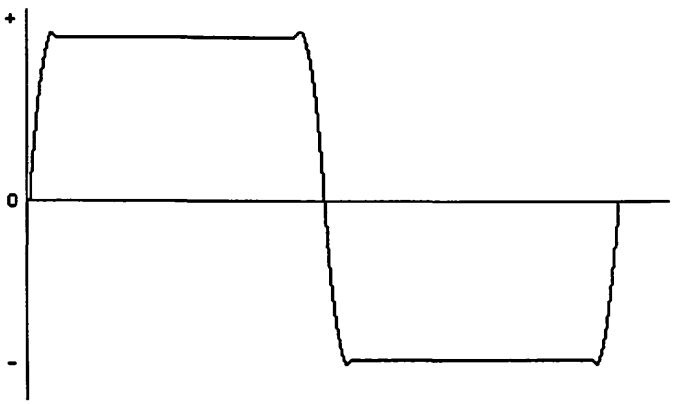
.....by Raymond Hobbs

The buzzword in computer music for 1986 is **sampling.** Virtually a world away just a few years back, digital sampling devices for microcomputers are now available for less than $300. Those of us who were around to enjoy Gary Larson's demonstration of digital samplers last November already have an idea of how interesting and educational they can be, in addition to the musical possibilities they open up. For those who haven't seen sampling in action, let's see what it is, what it can do and how it works.

Regular readers of this column will remember our past discussions of how we can build a table of values which represent the coordinate points of a waveform, then send that data to an amplifier and loudspeaker via a **DAC** (digital-to-analog-converter). The DAC converts the digital data to an analog output (in this case, an electrical current) which is interpreted by the amplifier as high-gain input (as from a tuner) and passed along to the speaker as music. The technical explanation of how the DAC does its job is (as always) way beyond my understanding, but it works.

How does the digital data table get into the computer in the first place? There are several ways to accomplish this:

First, the data table may exist in the synthesizer as a template. Commonly, a square wave table is used. As we have learned in past columns, a square wave is comprised of the odd-numbered harmonics of the fundamental frequency, using the equation $w=\Sigma(hi/i)$,for i=1...n, where w=the composite waveform and hi=the harmonic wave. If we add together enough harmonics, the composite waveform will look like this when graphed against amplitude and time axes:

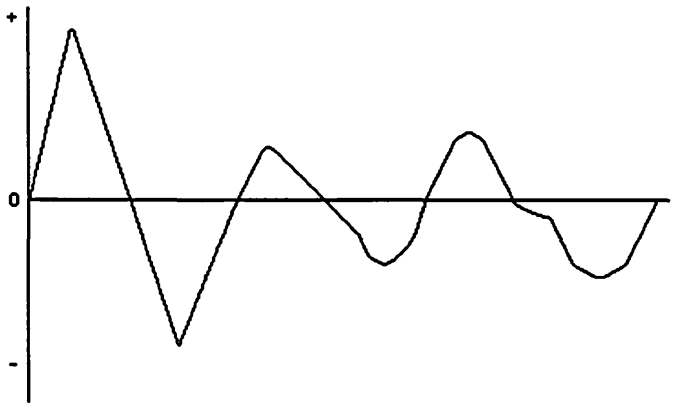



This basic waveform is then modified by the user by damping or filtering out frequencies, which results in the disappearance or muting of some of the harmonics. This can produce a significant variance in tone color, or **timbre.** This method of building a wave table is called **subtractive synthesis.**

The second method is the reverse of the first. Starting with the fundamental wave (usually a sine wave), harmonics are added until the desired composite waveform has been built. In some synthesizers (particularly the FM digital synthesizers built by Yamaha), frequencies which are not harmonics of the fundamental may be added, which contributes greatly to the range of tone coloring available. Appropriately enough, this method is known as **additive synthesis.**

**Sampling** is the third method. In a nutshell, sampling reverses the playing process—we play the tone into the computer through an **ADC** (analog-to-digital-converter) and voila! The wavetable is built!

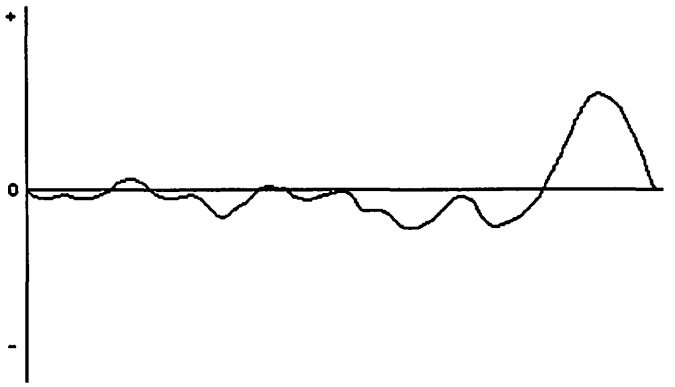
Although in essence it is just that simple, digital sampling also has its own unique bag of idiosyncrasies. They are no more trouble than those of subtractive or additive synthesis methods, but they must be understood if we are to obtain a good wavesample. In exchange, the benefits of digital sampling are substantial. It is much easier to obtain a realistic instrument sound through sampling. In some cases, additive or subtractive methods cannot produce realistic instrument sounds no matter how much we try! For example, in the figure below one cycle of the wavesample of a trumpet is represented. That is, if the trumpet is playing an **A** (at 440 cycles per second) for two seconds, the figure below represents 1/880 second of sound. The waveform is also a composite waveform; that is, it is composed of a number of harmonics.




We can duplicate this particular waveform by additive and (possibly) by subtractive synthesis methods and play it back, but the resulting sound will not resemble a trumpet very closely. Why? Because the waveform pictured above is only 1/880 of the wavesample (it is the part that represents the sustained tone). The trumpet's attack is very complex, and contains numerous waveforms of its own. All of the various waveforms for the attack, sustain and decay of the tone (880 of them, all different, at maximum) are captured in the sampler's wavesample, but are not normally created by standard (additive or subtractive) synthesis methods. To create up to 880 waveforms for one instrument would be a formidable task for any additive or subtractive synthesizer, not to mention the work involved for the hapless musician faced with the task of designing them! The normal course of action for an additive or subtractive synthesizer is to create a sustain waveform and to use it for all phases of the note, modifying it by envelope only. A picture of one of the waveforms in the trumpet attack

contd.

is pictured below. Notice how different it looks from the earlier example, and think how different the waveforms for the decay might look:




This discussion brings up an interesting point. How is a synthesized note sustained? In most additive and subtractive synthesizers, the information in the wavetable (which represents a composite waveform) is merely repeated as long as the key is depressed (many synthesizers have the ability to turn this feature off if desired). This process is known as "looping". In sampling synthesis, we also loop through the wavetable in order to sustain the note, but we also select the beginning and ending point of the loop, in order to catch only that portion of the wavesample which represents the sustained tone. In that way, we can defer looping until after the attack has occurred and the tone has been established and has stabilized—this means that our attack waveforms may differ considerably from our sustain waveforms. It gives our instrument more realism, too. The price we pay for this realism is that we have to learn how to select the loop starting and ending points so that the loop "splice" is undetectable. Is it worth it? Come and hear my trumpet patch!

Other problems must also be overcome in sampling. Since the wavesample is composed of composite waveforms, it is virtually impossible to isolate an unwanted noise and eliminate it once the sample has been taken. This implies, first, that we must capture a "clean" sound for sampling. Actually, this is just another way of stating the "garbage in, garbage out" law. The second implication, is that we must be more careful of **aliasing** than we are used to with additive and subtractive synthesizers. Neither of these potential problems are that difficult to overcome, once they are understood. I'll deal with the first here, and defer the second, since the problem of aliasing is generally imperfectly understood, and warrants a column of its own.

Sampling synthesizers all provide some means of getting a sound into a wavetable. The most common method involves connecting the output of an amplifier to the input of the synthesizer, but it is usually done to sample directly from a microphone as well (this is what Gary Larson did in his demonstration last November). The method I prefer is to record the sample on tape and use the tape output to go into the synthesizer. The things that one must keep in mind in doing this are to keep unwanted noise off of the tape and to include on tape only that portion of a sound that is desired in the wavesample. If more than one note is included on the tape, then the sample will include more than one note (I have sampled solo instrument *glissandos*, several brass instruments playing together and entire orchestras). If the sample includes some silence, then the synthesizer will put silence into the wavetable. The rule is this: WHAT GOES IN, COMES OUT. The wavesample may (usually) be modified in many ways after it has been recorded—sampling synthesizers normally provide for envelope modification and waveform filtering—so the sample need not be absolutely perfect, but the better the sample, the easier it is to produce good, clean instrument sounds.

One of the common objections to sampling synthesizers that I hear is that it is only possible to reproduce existing instruments, and that new and different instruments cannot be created. NOT TRUE! The sampled sound forms the basis for the final instrument, but it may be altered in many ways, and provides for as much creativity and diversity as any additive or subtractive synthesizer I have heard. And if your buddy has created a really bizarre sound on his DX-7 that you covet, just record it and sample it.

After all, isn't that what sampling is all about?


Music Sig meets at 1:30 P.M. on the second Saturday of each month. Meetings are held on both sides of the river, so interested parties should call me (490-7484) or Gary Larson (337-4267) to get the specific location and directions.

Our August meeting was held in McLean, and demonstrated synthesizers with drum machines, using the CASIO CZ-3000 and Sequential Prophet 600 keyboards plus the Roland TR-505 drum machine, MIDIed through a Mac Plus. Adding the drum machine to your MIDI hookup really makes things zip, and freeing up those synthesizer oscillators for more instrument sounds is really great!

The September meeting will be held in College Park, Maryland at Computer Doctors, on Calvert Road. The program will include the usual Q&A session, and a synthesizer demonstration. We may have a duet or trio, too.

Meeting time and date is Saturday, September 14 at 1:30 PM. Call Gary Larson or me for transportation and/or directions.

# THE GRAPHICS MAGICIAN: A Review

by Chris Klugewicz

"The Graphics Magician" from Polarware/Penguin Software is a set of programs designed to make animation on the Macintosh easy, especially for those of us who believe that assembly language is what the instructions for Christmas presents are written in. The system includes two disks (one a program disk, the other containing examples and language interfaces--more on those later) and two manuals (one for the applications, the other for programming). Commendably, nothing is copy-protected: I used the Finder and Apple's Disk Copy utility to copy the programs to working disks, and all function perfectly.

**Creating animation.** The first step in creating animation is creating the "shape" which will be animated. This is done, logically enough, with the Shape Editor application [Figure 1]. The Shape Editor allows you to draw with MacPaintlike tools, including a pencil (with FatBits available), brush (with a variety of shapes and patterns), and eraser. Up to 20 "frames" can be drawn in this fashion, and frames can be duplicated and edited, making slight changes very easy to effect. Frames can be resized, though doing so after beginning an animation erases all subsequent frames--an annoying consequence not mentioned in the manual. Finally, the animation can be examined using the Animate button and the speed scroll bar. Animation is extremely smooth and very

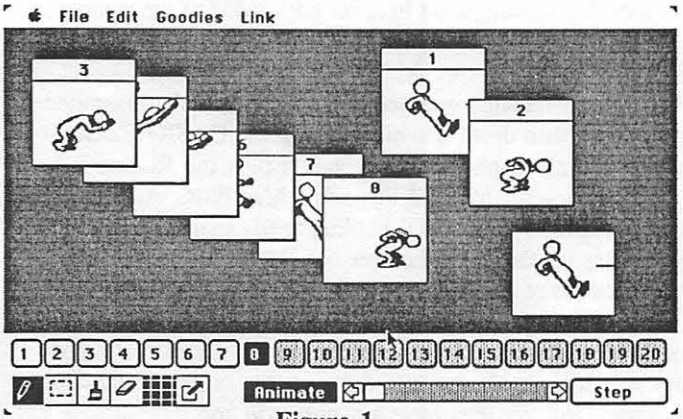



Figure 1

The next step is creating a "path" for the shape to follow. A Path Editor is provided for this purpose. You can set the scale of movement, from one to eight pixels, for smooth, slow animation or for fast, jagged animation.

Finally, you use the Choreographer [Figure 2] to put the shapes and paths together. The Choreographer also lets you use a picture as a background. The only difficulty I had with the Choreographer was learning how to place the objects where I wanted them; you use two separate parts of the program to do this, and it was difficult to figure out where the objects would end up.

**The language interfaces.** "The Graphics Magician" allows you to use its routines in your own programs through the inclusion of several "language interfaces" (libraries, to programmers). Interfaces are included for Pascal and Microsoft BASIC, as well as for several other common languages. Demonstration programs are included for Microsoft BASIC,

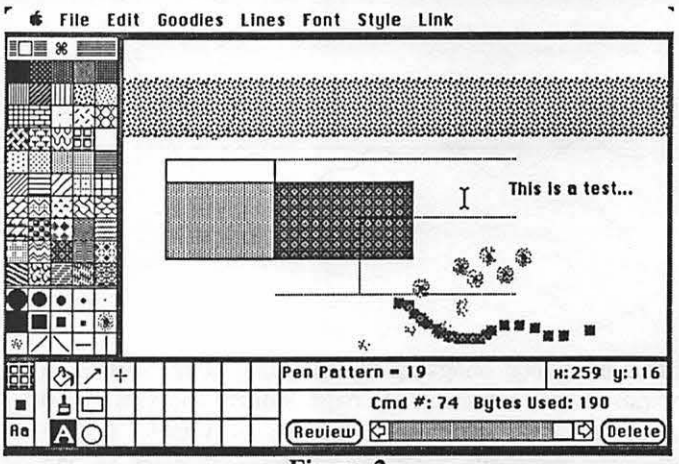



Figure 2

so novice programmers can see how the routines are used.

**The Painter.** The package also includes a shape-oriented graphics tool called "The Painter" [Figure 3]. This program tries to emulate MacPaint using MacDraw techniques, and it does not really succeed. It works by recording your drawing moves (as QuickDraw commands), and allows you to edit your drawing in the same way. Single-bit manipulation is possible, but each bit counts as a move. All things considered, you're better off with MacPaint or MacDraw.

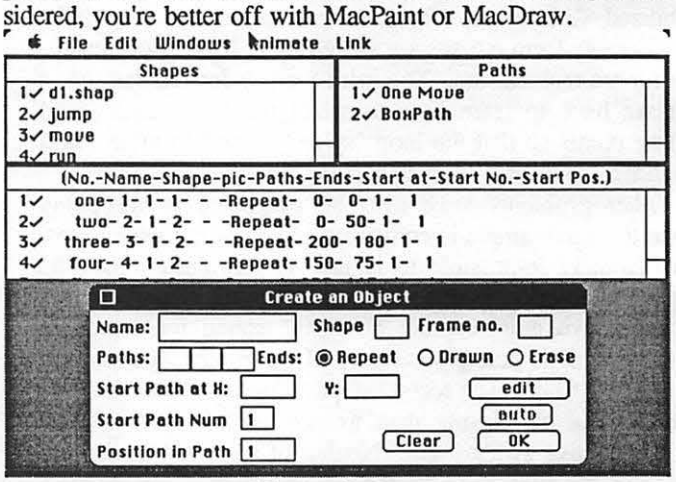



Figure 3

**Strengths.** "The Graphics Magician" is a very powerful graphics tool which makes complex animation very simple. The Shape Editor and Path Editor are very easy-to-use programs. Language libraries are included for use in your own programs. None of the programs are copy-protected, so that it is easy to set up your own working disks. The programs function very well within 128K.

**Weaknesses.** The Choreographer's user interface is somewhat less polished than either the Shape or Path Editor's. Some bugs do exist (I got a bomb error in the Shape Editor, but I don't remember where), and the manual is a little skimpy. The Painter program is difficult to use and somewhat non- intuitive.

**Overall.** I recommend "The Graphics Magician" very highly for anyone interested in working with animated graphics on the Macintosh.

# Smart Computer:

# The Generic PC, Built with Care and Intelligence

## by Bud Stolker

In the IBM PC-compatible world there are good computers and there are great computers. The generic PC's we are custom-building for clients fall into the latter category for several reasons:

- **Software included.** You must see our systems to understand how well-equipped a PC can be. We modestly claim that our hard disk installations are the best in the country, and probably the world. What you can't do with the programs we provide may not be worth doing. All programs and menu options are customized for your needs and your particular hardware, without charge. And software upgrades are always free for clients.

- **Easy to operate.** Each PC comes with a customized start-up disk or hard disk menu system, as well as a personalized user's guide that fully explains your particular mix of hardware and software. The three-level help system with pop-up messages and explanatory graphics keeps you firmly in charge. As you cruise effortlessly from one program to another, help screens describe what's happening and tell you what you can do next. Full details on all hardware and software are integrated into the menu system, and are available by keyword search. And our help system is an open one; we tell you how to expand and further customize it.

- **Strongly supported.** We provide personal training at no charge, and offer telephone and in-person support for our clients days, evenings, and weekends. *Liberal replacement policy:* If you're unhappy with your keyboard or video system, we'll swap it out and give you full credit toward another during the warranty period. (Certain restrictions apply). *Fast on-site service:* We are the first and, we believe, the only supplier of generic PC's to have an area-wide service agreement with TRW, the nation's leading independent provider of computer maintenance and repair.

- **Priced low.** Check our component prices against those of mail-order vendors. You'll find we're as cheap or cheaper, yet we offer fully tested and guaranteed components of the highest quality. Check our prices and features with those of the low-ball discounters. You'll find we are comparable, and we easily beat them dollar-for-dollar on value.

**We're on your side.** We are committed to our clients, not to name brand manufacturers, greedy franchise operators, or pushy sales managers. Landmark Computer Labs is a consulting firm, not a retail store. Our primary interest is in satisfying your personal computing requirements, and in giving you the greatest payback for your hard-earned buck.

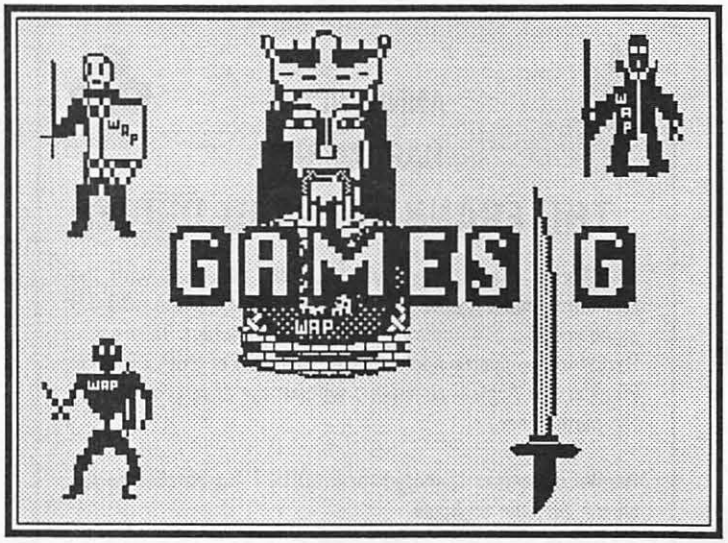
So call when you're ready for a PC, and let's talk about why *a custom-tailored personal computer is the best buy you can make.*

**Landmark Computer Laboratories**
**Suite 1506**
**101 South Whiting Street**
**Alexandria, Virginia 22304**

***Telephone (703) 370-2242 ☎ SourceMail TCB076***

IBM PC, PC XT, and PC AT are registered trademarks of International Business Machines Corporation.

# GAMESIG NEWS
## by Steven Payne




GAMESIG continues to grow; the forty folks jammed into the tutorial room for our August meeting included many regulars and many new faces. Chairwizard Ron Wartow called the group to order (?) with information on new gaming software, a reading of letters received, and additional Wizardry Certificates of Merit for the deserving. Among new programs sent to us for review were:

**GETTYSBURG: THE TURNING POINT** (SSI, Apple II series with 64 K): War game with three difficulty levels, in which the player can recreate the classic Civil War conflict of the title.

**BATTLEFRONT** (SSG,distributed by Electronic Arts, Apple II series with 64 K): Corps level command in World War II. New war game from a club favorite. Includes construction set.

**THE AGE OF ADVENTURE** (Electronic Arts, Apple II series): Includes two classic adventure/fantasy role-playing games, "The Return of Heracles" and "Ali Baba and the Forty Thieves" (previous works by the creator of Adventure Construction Set) with improved sound, graphics, and streamlined user controls, all for only $14.95! ! !

The main part of the meeting was devoted to planning an event which will already be history by the time this column appears, viz. the August main meeting, which will be sponsored by GAMESIG, and features representatives from Avalon Hill, Mindscape, MicroProse, Sir-Tech, and Origin Systems, with Robert Woodhead and Lord British himself on hand to bestow extra hit points on those who pay them due homage. A full report should appear in next month's Journal.

The meeting ended with a demonstration of "Uninvited," Mindscape's exciting new adventure game for the Mac (see the review in the August issue). The next meeting will again be at the Office, on September 4, at 7:30 PM. Meanwhile, this guest editor/columnist must finish his own real-time adventure game by trying to meet the Journal deadline for the present issue. Consequently we have had to omit a review of UNIVERSE II, which should appear soon. Meanwhile, look elsewhere in this issue for the response from Interstel to our earlier review of their STAR FLEET I for the Apple II, as well as the reviews from all our other contributors.

# TELLSTAR II: A Review
## by Matt Nichols

I am thoroughly impressed with the **TellStar® Level II** (version 1.0) program from Spectrum HoloByte, Inc. Although it is not intended to provide scientifically precise astronomical measurements, TellStar II is an invaluable educational and recreational tool. The program provides elegant displays of two types of sky plots: a circular overhead and horizontal sky maps. With the proper entry of longitudinal and latitudinal data, the viewing can be computed and displayed for any spot on the Earth, in either the Northern or Southern Hemisphere. Each view uses different symbols to represent a variety of different celestial objects including planets, stars and Messier objects (i.e., "deep space" objects such as star clusters and galaxies).

In either the overhead or horizontal display, the cursor changes into crosshairs when placed in the display area. Any object in the display can be identified and described by placing the cross hair cursor over the object and clicking the mouse. In addition, other objects can be located by using the "Locate Object" command from the "View" menu and entering the name of the object desired. If it is possible to view the object, it will be indicated by displaying the appropriate horizontal sky map and "blinking" crosshairs (ten "blinks") will be placed on the object. Otherwise, the user will be informed that the object is below the horizon and not visible at this time and location.

Star constellations can be displayed in either the overhead or horizontal sky maps by using the "Show Constellations" command from the "View" menu. However, TellStar places a lowercase "c" next to each constellation, and some may find this to be an unfortunate distraction from an otherwise realistic sky display. In addition, while in the horizontal sky map display, the viewing perspective can be changed by clicking the appropriate orientation on an adjacent compass rose or by using the "Look Right" or "Look Left" commands from the "View" menu.

TellStar II also has a powerful utilities package which permits the user to perform a number of useful astronomical calculations and conversions. For the typical amateur astronomer, the most useful utilities will be routines which allow conversion between equatorial (i.e., ascension and declination) and horizontal (i.e., azimuth and elevation) data.

I use a Mac Plus and have not encountered any compatibility problems with the TellStar II program; however, TellStar II is a large program and requires at least a 512K "Fat Mac" and a few minutes to load.

In conclusion, I recommend TellStar II to anyone who is interested in amateur astronomy. I spent many enjoyable hours working with TellStar II and plan to spend many more.

# PHANTASIE II: A Review
## by David Granite

I liked **PHANTASIE I** a lot: there was plenty of killing, adventuring, killing, questing, killing, a few logic puzzles, and killing (of monsters). So I was looking forward to a sequel; what I got was a clone, insofar as the gaming system was concerned. The commands, set-up, and team that you create are the same as in PHANTASIE I with only minor additions.

**PHANTASIE II** (SSI, Apple II series) is a fantasy role-playing game. It takes place after PHANTASIE I, and you may use your old characters, but it can be played separately from the first game. In this game, since you were victorious in PHANTASIE I, have eliminated Werdna elsewhere, and have gotten rid of your mother-in-law for the weekend, you have been chosen to eliminate evil on the island in PHANTASIE II. You need a team, so you send out the call for maimers, killers, and assembly language program- mers. These guys come in different races (elves, hobbits, minotaurs—you know, the usual) and can become wizards, monks, fighters depending on their various abilities. You then lead this crew into dungeons, castles, caves, and the underworld looking for weapons and the clues written in scrolls to win the game.

The point of the game is to rid the island of Pluto's deadly beasts. Not all these jokers are in general tough. The first ones you meet aren't too much trouble, if you're good at healing and curing the wounded. In fact, you can even wimp out and "greet" them when they show up and they'll greet you back. Should you choose to fight, there is one new option: your party can throw rocks, depending on skill (HINT: don't throw rocks at these babies or you will find yourself owning a piece of the rock.) You have to descend into Pluto's domain to conclude the game. As a result, the game is quite extensive and playing time is several days.

I enjoyed the game a great deal, putting it right up there with Questron, the Ultimas, and Sticky Bear Bop. Naturally, it was not as good as Pixel's Revenge, v. 2.3, but few games can equal perfection.

# FIGHT NIGHT: A Review
## by Paul Gans

"IN THIS CORNER....."

The challenger, Wimpy Wartow, is trembling in his corner. The Champ, Magnificent Moore, can't wait to pulverize this cowering figure across the ring. It's **FIGHT NIGHT** (Accolade, Apple II Series) and you are the one who will decide who wins, if you can.

This game allows the player to choose his fighter and battle a number of opponents ranging from Dip Stick to the Mad Bulldog. If you're quick enough, you can polish off all of your opponents and become the new Champ.

The controls in Fight Night are simple enough once you learn them. There are eight positions your fighter can take, depending upon the position of the joystick and whether or not you depress the joystick button. Confusing at first, but with practice, easy enough. You can jab, hook to the body, block your head or body, fake, and run away (sometimes the smart thing to do).

Not only can you try your hand at the Title, you can also practice with a punching bag or enter a tournament with progressively difficult opponents. The game also allows you to choose the speed of your bout, which makes learning the game a lot easier, but beware, each fighter has a "special punch" that can knock your block off or even send you to your knees in "below the belt agony"!

Once you have been beaten on enough you can depart from the main event and go to the boxing construction set, where you create the fighters. You are allowed to create the fighters graphically (limited) and assign certain characteristics and skills to each. It can make for interesting matches. The graphics of FIGHT NIGHT are acceptable, but not the greatest I've seen. The boxers move well, but the appearance of each is limited.

In summary, if you are a devotee of long involved adventures with maps and secret spells, you will probably not enjoy this game. But if you are interested in a pleasant arcade type of game in which you can vent your violent nature on some poor punch drunk victim, then this is for you.

# SILENT SERVICE: A Review
## by Paul Moore

**Silent Service** is a new submarine simulation game offering from MicroProse. It will run on any of the Apple II family, provided you have a joystick, and it produces some extremely good sound effects when hooked up to a Mocking-board.

I really like this game. It comes with a 47-page "Tactical Operations Manual" with very good and complete instructions and which has a fascinating little section at the end describing the trade-offs that had to be made to get a good game but still one in the MicroProse simulation tradition. The game has five "battle station" screens which you enter and exit with your joystick: the conning tower, the maps & charts station, the bridge & periscope station, the instruments and gauges readout, and a damage control station. It also has four skill levels and five "reality levels" (dud torpedoes, convoy zig-zag, angle-on-the-bow attack input, etc.). These various levels and options can be invoked when choosing one among the game's six convoy action scenarios or five war patrol scenarios. In these you can reenact some of the most famous American submarine exploits of World War II.

What I liked best about this game is its adaptability to the player's skill level. It is emphatically not a war game, yet it could play quite that way if you chose to use it slowly and methodically. It allowed a newcomer like myself to dash out

contd.

into the middle of a destroyer-escorted convoy and blast away. I must admit, however, that when the enemy destroyers quickly arrived, I went into a crash dive, only to find that the ocean depth where I was is forty feet. To make matters worse, I decided to just sit there, seeking to take advantage of the manual's observation that Japanese destroyers during World War II tended to give up the chase rather early. It was only after the enemy had made pass after pass dropping depth charges that irreparably damaged my boat that I realized I had neglected to lower my periscope, thus making the destroyers' task of locating me much simpler. Always, always lower your periscope when trying to hide on the bottom in forty feet of water. The game was flexible enough also to allow a friend familiar with submarine and destroyer tactics to try out some textbook maneuvers.

I think you will thoroughly enjoy this game, whether you are an expert or a novice on the topic of submarine maneuvers. It has my highest recommendation.

# SWORD OF KADASH for the Mac: A Review

**by Barry Bedrick**

Polarware/Penguin calls **SWORD OF KADASH** a "fantasy action adventure", and that seems a good description. Somewhere inside a vast delicatessen is an enchanted pickle —oops, wrong game! Somewhere inside a vast fortress is an enchanted sword which you must recover and use to slay a fierce dragon. Many obstacles, like traps and monsters, and many treasures lie ahead before the quest can be completed.

The game can be played by keyboard alone or, as I did, by a combination of mouse (or Macintosh-compatible joystick) and space bar (for spell casting). Mouse movements do not control the on-screen representation of your character directly; instead, they control an on-screen analog of the character, a point moving around a circle. This took a little getting used to. On the keyboard, you tap keys grouped around the D or L to move, hold them down to fire. Graphics are not spectacular, but are certainly adequate; objects and creatures are easily identified.

When the game is started, it takes about 2 minutes to boot, substantially less if you are restoring a saved game. The game is continuously saved, so you can quit at any time and resume where you left off. However, as with the Apple version of this game, backup of a character is not provided, so you cannot go back to an earlier point in the game.

You start SWORD OF KADASH with 4 lives and 2000 hit points. When you are killed, which happened to me at first with frustrating frequency, you are resurrected in the same location in the fortress and with the original 2000 hit points, but without weapons or armor. After three such reincarnations, dying again means starting from scratch. A display at the bottom of the screen shows hit points, experience, weapon, armor and armor class, level, number of spells, and the last object picked up or touched.

In general, I would recommend SWORD OF KADASH to the more dedicated and patient adventurers among you. The fortress is fun to explore, the traps are diabolical, the combat is exciting. However, I personally found it too frustrating to have to go back to the beginning after being killed four times rather than to be able to restore a saved position, and to lose all weapons, armor, experience, etc. each time my character was killed.

# STAR FLEET I: A Reply

The following letter, dated August 1, 1986, was sent to Washington Apple Pi by Trevor C. Sorensen, President of Interstel Corporation (formerly CYGNUS):

"I would like to respond to the review of our program, **STAR FLEET I - The War Begins!**, which was published in your July issue.

"First off, I would like to correct a couple of minor mistakes in the review. STAR FLEET I was never on the TRS-80. The Officer's Manual ("main rule book") was written for the IBM and TI Professional versions of the program, since STAR FLEET I appeared originally on the IBM PC in Dec. 1983. To avoid high printing costs, we have added supplements for other computers rather than have several editions of the main manual.

"The 'hint book' is actually called the Officers Academy Training Manual and it contains much more than just hints. We have added sections to describe in more detail the universe that the Star Fleet series is set in, which helps players get more involved with the game. There is also material in the training manual (and this is stated in the book) which, although not useful in STAR FLEET I, will definitely be used in STAR FLEET II and subsequent releases. STAR FLEET I is just the first in a series.

"It is my belief that the purpose of a review is to familiarize readers with the major features of a program, so that the readers can decide whether a program is worth buying before spending the money. Mr. Blazina spent one paragraph describing the documentation, three lengthy paragraphs describing the way you start the game (which normally takes less than a minute), one brief paragraph about the displays, and one paragraph summarizing his overall opinion. An actual description of the features of the game itself is absent! Since the review did not describe the game itself, I felt it was only fair to let your readers know some details about it.

"In the review, Mr. Blazina fails to mention that the enemy have strategic and tactical movement, which becomes more extensive at higher ranks. He also failed to mention program features which include the simulation of 13 ship's systems, damage control, four independently controllable defensive shields (having one shield weak or destroyed may

contd.

mean a change in tactics), torpedoes and phasers with both automatic and manual modes, and having the ability to fire at 5 or 6 independent targets respectively, tractor beams for towing disabled enemy ships, internal security control to apprehend enemy intruders who may move amongst your 20 decks trying to destroy your critical systems, invisible Zaldron warships, and mines.

"Besides hunting enemy ships and dealing with intruders, you sometimes have to rescue one of your starbases from attack. You also have long range probes for deep space scouting, and if things get really tough, you can always try the dangerous emergency hyperspace maneuver. If your shields control is knocked out and you desperately need to transfer power back to reserves, maybe the emergency shields bypass trick will work.

"The review states that the only objective is to destroy. Not so! As a matter of fact, you get a higher rating for not destroying enemy ships, but rather capturing them and their crews (which is not easy), and delivering them to starbase. To do this takes extra time. This is part of the overall strategy of the game, which changes as you get higher in the ranks. What works well at low ranks may not work well at high ranks and vice-versa. You continually have to learn and adjust your strategy, as the enemy changes theirs, and you have more difficult conditions to work under. Each player has a permanent service record, and the program will promote you to the next rank (level of difficulty) as soon as you have shown you have mastered the current rank. You can also win awards and decorations along the way for outstanding performances, which are also kept in your service record.

"The point is, that STAR FLEET I is much, much more than just a repetitious shoot-em-up. It may not have dazzling graphics, but it is a strategy game and does not need the fancy graphics, which would leave less room for the simulation itself. On computers like the Atari ST and the Macintosh, the program's graphics are enhanced because these computers have more memory available (the Mac version will be out soon). In the Apple II version, the music tunes (with one exception) are unloaded during the game itself, and do not use memory that would otherwise be available for graphics. The program, which is written entirely in assembly language, is already so large that it has to overlay a few commands from disk.

"I will be the first to admit that everyone is entitled to their own opinion, and I respect Mr. Blazina's opinion concerning our game, although by some of his statements, I doubt that he really played the program very far up through the ranks. Mr. Blazina says that STAR FLEET I is essentially a repetitious game of blasting the enemy, with a simple game plan and no educational value—yet he gave it a strategy rating of 8. You are required to change strategy as you progress up through the ranks in order to be successful. A minimum of 45 games, no two of which are the same, are necessary to complete STAR FLEET I—yet he gives it a Holds Interest rating of 3!

"For other opinions of STAR FLEET I, ask your friends who have played it or ask your GAMESIG chairman about it (he is an experienced Star Fleet player). And consider other reviews. Byte (Jerry Pournelle), Creative Computing, Antic, Computer Gaming World, Computer Entertainment, II Computing and several other magazines have all given STAR FLEET I extremely favorable reviews. This is only the beginning—**STAR FLEET II - Krellan Commander** will be released next year, and it is "light-years" beyond STAR FLEET I!"

# LAPTOP COMPUTERS - Part 10:
## Eliminating Soft Carriage Returns from WordStar Files
### by George Kinal

So, OK, I lied. For some months I've been promoting the idea that lap computer text files are ideally compatible with WordStar. In particular, I pointed out in the "Line Feed Blues" article that WordStar, like many other word processing programs, could readily accept free-flowing text from a laptop. That is a true statement, except that WordStar is different from, say, ScreenWriter in the way that it handles such text. After you import the text (using the ^KR command), it must be re-formatted (^B) with WordStar. The re-formatting process (so that you can "see what you get") changes the text from that point on. If justification is on, spaces are inserted. Regardless of justification, so-called soft carriage returns are placed at the end of each text line. Now if you save this text, these soft returns and accompanying line feeds become a permanent part of the new file. This file is no longer completely compatible with laptop computer TEXT processing. Not that it's very often that the text needs to be transferred back to the laptop.

Worse, though, if you want to "port" a WordStar file over to a different word processor, it may also be incompatible. That's what happened to the "Line Feed Blues" article. I converted the WordStar file to DOS 3.3, so that the WAP staff would have an "easier" time reworking the text. But, as noted in their addendum to the article, the converted file was full of spurious carriage returns as well as extra spaces. The spaces could have been avoided if I had set the WordStar left margin to column 1 and turned justification off. But there seemed to be no easy method of getting rid of the carriage returns.

The advice has been to do a global search and replace under either WordStar or the final, "target" word processor (ScreenWriter, for example). The problem with that is that both the soft CRs inserted by WordStar and the hard CRs that the author typed in, intentionally, are removed by such a process. Also, global S/R is often very slow.

The following simple utility routine, shown as TurboPascal source code, replaces all soft CRs (ASCII value 141, that is 13 + 128) as well as line feeds with a blank character. The compiled form of this program will be contributed to the WAP Disketeria. I would think that many WordStar owners also have Turbo Pascal at their disposal.

Why did I choose to place a blank in place of the characters to be eliminated, instead of some other non-printing character? The ideal character would have been ASCII 0, i.e. the NULL character. But NULL signifies the end of a DOS 3.3 text file, so we cannot insert NULLs if the target system works under DOS 3.3. If this is not a consideration for you, change the last assignment in line 26 from Buffer[I] := 32 to Buffer[I] := 0. Under the current scheme of replacing both soft CRs and line feeds with spaces, there will be gaps in the text with as many as 3 spaces. Furthermore, a minor problem of indentation by one space will occur after each hard CR (because the LF that followed the CR was replaced by a space). These remaining format glitches can be manually fixed without too much difficulty. A better program would actually delete the unwanted characters and move up all succeeding text to fill the gap. But such a program would run much more slowly that this very simple replacement routine.

(Tutorial Note: What is a "soft" carriage return? It's one that WordStar puts in so that the next line of text appears correctly on your screen, and in the printout. While a hard or real carriage return, explicitly typed on the keyboard, has the ASCII value 13 (CHR$(13)), the soft carriage return has its high bit set, with a value 128 higher, i.e. 141. When the file is converted to DOS 3.3, or transmitted via modem with only seven significant bits, soft and hard CRs become indidtinguishable.)

(Ed. Note: Thank you, George, for this useful utility. The spaces introduced by removing the soft carriage returns can be removed by ScreenWriter, or in our case by MacWrite, doing a global replacement of two spaces by one, and then a second pass if necessary for fine tuning.)

**Listing of: NOSOFTCR.PAS**

```
  1  PROGRAM StripSoft_CRs ;
  3    VAR
  4      FVar, FilVar: File ;
  5      FName,FileName: STRING[14];
  7      Buffer: ARRAY[1..128] OF BYTE;
  8      Remaining, I : INTEGER;
 11  BEGIN
 13   Write ('Enter Name of File to Convert : ')
 14   ReadLn (FileName);
 15   Assign (FilVar, FileName); Reset(FilVar);
 17   Write ('Enter Name of Target File : ');
 18   ReadLn (FName); Assign (FVar,FName);
        Rewrite (FVar);
 19   Remaining := FileSize (FilVar);
 22   WHILE Remaining>0 DO
 23     BEGIN
 24      BlockRead (FilVar, Buffer, 1) ;
 26        FOR I := 1 TO 128 DO BEGIN
 27            IF (Buffer[I]=141) OR (Buffer[I]=10)
                THEN Buffer[I] := 32;
 28            END;
 30      BlockWrite (FVar, Buffer, 1);
 31      Remaining := Remaining - 1 ;
 33     END;
 35   CLOSE (FilVar); CLOSE (FVar) ;
 37   END.
```

# THE GREAT INTERNATIONAL PAPER AIRPLANE CONSTRUCTION KIT

by Henry Herzfeld

The Great International Paper Airplane Construction Kit, marketed by Simon and Schuster, is a software package that is fun to play with. It can be enjoyed on a variety of levels, from very simple printouts of a number of different paper airplanes to sophisticated color design-your-own markings, decorations and "hardware" for the airplanes.

The program is written in ProDOS. It is compatible with a limited number of standard brand printers (Apple, Epson, Okidata and several others) as well as with a number of different printer interfaces (including the Apple //c).

I experienced no trouble with the set-up and print menus and commands. It should go without saying that you cannot get anything valuable out of this software package without having a printer hooked up to your system that is compatible with the software. (I tested the version written for the Apple ][+, //e and //c. It is also marketed in versions for the Macintosh, IBM PC, and Commodore computers.)

The program is menu-driven, and after booting the program disk a selection of different styles of paper planes is offered. You can select blank plane designs (except for the lines drawn to facilitate proper folding), or from a selection of completely designed airplanes, ready for additional decorations, modifications, or just folding and flying.

In order to put computer enhanced decorations, markings, designs, color, or other customizing on the airplanes, a ProDOS version of a paint program is needed. (An example would be MousePaint.) This requires a significant amount of disk switching. The instructions recommend having two disk drives, although all functions can be operated with one. It would have been much more efficient if Simon and Schuster had included some form of paint/graphics capability with the airplane design software.

The book that comes with the software is essential to have. It shows the plane design options (you are limited to the thirteen types of planes on the disks), illustrated steps for folding the planes, and a photograph of the folded plane. The plane designs are based on winners of a 1966 Scientific American contest on paper plan designs, and are also found in a book version that does not contain the software.

In fact, it is possible to study the instruction book, take a blank sheet of paper and fold a plane to specifications without the aid of the computer generated fold lines. However, the beauty and fun of this program is experimenting with custom designs that can be made with the aid of other software graphics packages. I would recommend not purchasing the software version unless you already have a ProDOS graphics drawing program in your library.

The book's instructions (mainly picture illustrations) for folding the planes are often not crystal clear. In particular, for folding already designed planes the book does not specifically indicate which side should be up (or down) to show the graphics properly. The book's instructions are not consistent for indicating which folds are to be made in what order. Surprisingly, some planes have clearly numbered folds and other planes leave it to your imagination. The editor could have done a more careful check for consistency. It seems that they simply took the folding instructions from their non-software version and reproduced it without taking into account the computer generated graphic enhancements. You have to practice and gain experience by trial and error before you get the knack of folding many of these planes.

The instructions for running the program in the computer are vague and, as the manual states, "assume that you are familiar with such functions and operations as disk handling, cutting, pasting, copying from a file to your work area, and using the system to select commands." Since it is menu-driven and is booted similarly to most other programs, this caused me no problem at all. A beginner would feel a lot more comfortable if better step-by-step instructions had been included.

A phone number is given for technical and customer support. However it is not toll-free.

In summary, this program is worth having for the enjoyment of both the ability to custom design markings and pictures on the paper airplanes and for the paper airplanes themselves. But, the software would be vastly better if it had a self-contained graphics drawing program.

# A BUTTON-DOWN GUIDE TO THE APPLE
## Part II: Operating Systems
by Raymond Hobbs

An operating system is a program which controls the way the computer interacts with the outside world. The "outside world" in this case means the keyboard, screen (monitor), printer, disk drives, modems, any other device connected to the Apple via a card in one of the Apple's eight slots, joystick, or any connected rodent. It's a tough job, but somebody's gotta do it...

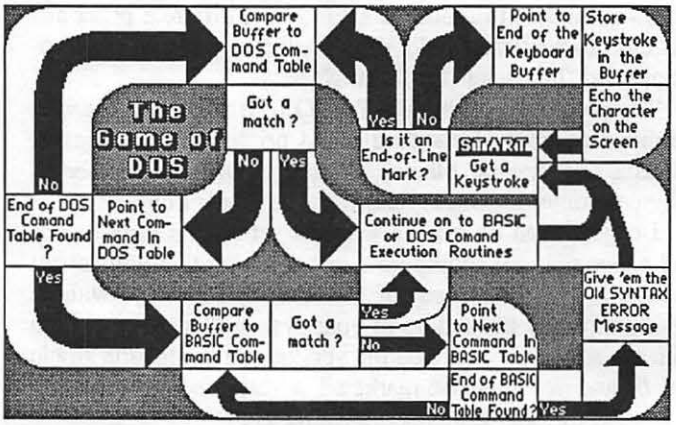
The Apple's operating system is written in machine language, to be as fast as possible. The basic operations—on keyboards, monitors and gameports—are contained in ROM (Read-Only-Memory), located way up in the top 2,048 memory locations. Assembly-language programmers, who are dangerous mutants with 8 fingers on each hand, know this area as locations $F800 through $FFFF—the top of memory. We commonly call this area "The Monitor".

The second part of the operating system, the part that deals with disk drives (or anything that acts like a disk drive) is called "DOS" (Disk Operating System), and is not located in ROM, but instead is loaded into RAM (Random-Access-Memory) whenever a disk is booted up on the Apple. Why not include DOS in ROM along with the Monitor? Because changes in disk technology or other card-connectable devices may make DOS obsolete, if the DOS code can't handle the new technology. By having DOS booted up from disk, the DOS code can be updated and kept current—or it may be completely replaced (with ProDOS, for example). This flexibility in DOS allows for easy modification on the part of those who know how to do it, and incidentally is also the principal manner of implemention of copy-disabling for programs on disk. The Monitor, on the other hand, deals with that part of the Apple that is built into the computer itself, and is not so subject to obsolescence. We shall find out in a later article how even the Monitor can be updated and even replaced!

There is another area of ROM, just below the Monitor, which we can also think of as the third part of the operating system. It is the BASIC Interpreter, whose job is to translate your BASIC commands and to get the desired functions performed. (If you make a typing error, the Interpreter's code tells it to beep and give you the infamous "SYNTAX ERROR" message, as well).

Both DOS and the BASIC Interpreter feel free to call upon the Monitor whenever necessary, to complete the execution of user commands. In this way the three parts are quite interactive. Although it is not necessary to know how the operating system works in order to use the Apple, it is both educational and fun to study the methods (and madness) of the operating system. Today we will take a kind of overview of the operating system's handling of commands that we type in on the keyboard. Commands performed under program control are more complex with regard to handling, but the process is basically the same.

When we type a command to the Apple, the operating system reads it, interprets it, and takes appropriate action. Overall, the way this is done is similar to plotting a course through a children's board game:

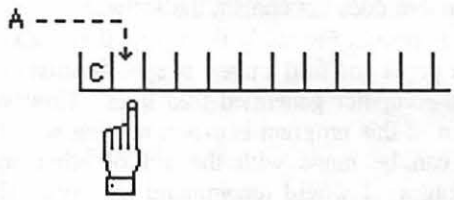



In the figure above, we can see how the operating system handles our commands. Please keep in mind that this is just an overview, and contains no details of the operations. In particular, the execution of DOS and BASIC commands is left to our fertile imaginations. However, the picture includes enough to see how the operating system goes about its business.

Let's assume that we want to see a catalog of the contents of the currently logged disk (the most recently activated drive). Find **START** on the game board and follow along as we type "CATALOG" at the keyboard.

The first keystroke is "C" - not an end-of-line mark (which would be a carriage return <Cr>), so we move along the arrow pointing up and to the right. we are instructed to point to the end of the keyboard buffer (a 256-byte area of memory located at $0200 in RAM), and store the "C" there. Since the keyboard buffer is currently empty, "C" will be stored in the first space. The "C" is then displayed on the screen, and we go back to **START**. We type in an "A", and the character is placed in the keyboard buffer after the "C", as pictured below:

**KEYBOARD BUFFER**

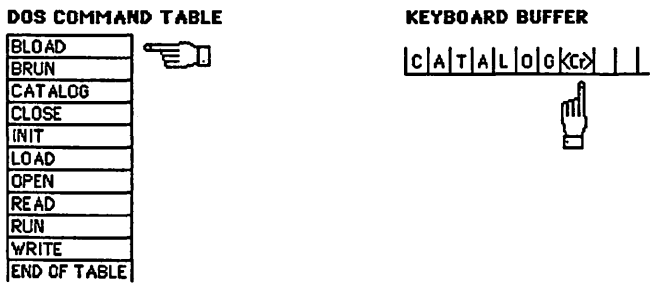



Finally, when we have finished typing the command, we hit the **RETURN** key. At this point, the keyboard buffer has the command "CATALOG" stored in it. The <Cr> we just typed in is recognized as the end-of-line marker, and we move along the arrow pointing up and to the left. It is at this juncture that DOS (which we remember has been loaded into RAM from disk) will intercept the Interpreter and will ascertain whether or not what we have typed in is a DOS

contd.

command. We know that it is, but the Apple doesn't yet have the foggiest idea of what it is.

In DOS, the command which is sitting in the keyboard buffer is compared to a list of valid DOS commands. We start out pointing to the first command in the list, which, in our example (a very limited example—DOS has many more commands than this), is "BLOAD":




We now have two pointers operating—the first one is pointing to the end of the keyboard buffer, and the second one is pointing to the first entry in the DOS Command Table. Since this first entry doesn't match the contents of the keyboard buffer ("CATALOG"), we move along the arrow pointing down and to the left. We then move the DOS Command Table pointer to the next entry ("BRUN"), check to see if we have come to the end of the DOS Command Table (which we haven't), then move along the arrow pointing up and to the right, to repeat the comparison process. This compare fails again ("BRUN" <> "CATALOG"), and so we point to the next entry and loop again. This time the comparison is a success, because our pointer now points to "CATALOG", so we can move along the arrow pointing down and to the right, where we will encounter routines to execute the "CATALOG" command (discussion of which is deferred to a later column). After those routines have performed a CATALOG, we move along the arrow pointing back to **START**, where the whole process begins again.

What would happen if we had typed in "HGR" instead of "CATALOG"? We would never have found a match in the DOS Command Table, but we would have hit the end of the table, so we would move along the left-hand arrow pointing down and to the right. This would return us to the BASIC Interpreter, which would look for "HGR" in its own Command Table. Eventually we would have gotten a match, and would fall into the BASIC Interpreter's routines to execute the command. In the end, though, we would still have been routed back to **START**.

If we had typed "CATALOF" instead of "CATALOG", we would never have found a match in either table, and we would have been routed (eventually) to the "SYNTAX ERROR" routine. As before, though, we would end up again at **START**. The operating system is a closed loop.

One final question remains in this (simplified) picture. What happens to command parameters? In other words, if the command had been "CATALOG D2", instead of just "CATALOG". The picture becomes just a little bit more complex. You see, when the operating system compares the keyboard buffer to its command tables, only that part of the buffer up to the first SPACE character is compared. Whatever follows ("D2") is ignored until a command match has been found. After the match is located, the routine which executes the command picks up the rest of the buffer (the parameter "D2" in this case) and uses it to clarify what has to be done. This, incidentally, is why we are told that commands start with a verb—that first word is the word the operating system will try to match up (there is an exception to this rule—can you figure out what that exception is?).

We will continue to look at how the Apple works, adding detail all the time, until we have a (more or less) complete picture of what goes on inside the box (or lose our minds, whichever comes first). I want to thank the people who wrote to the editor to encourage continuation of these articles. For my part, I'll try to be faithful in meeting publication deadlines.

By the way, did you name the exception? It's "LET", as in **LET A = B**. The "LET" is optional. If it isn't present, the BASIC Interpreter will find the "=" as the second term. So long for now.

**Mac Disketeria News** contd. from pg 70

In the BackDown Stuff folder:

**BackDown** - A background X-Modem downloader DA.

**CISB0629** - BackDown documentation using the Boston II font. If you do not own or do not intend to pay for the Boston II font, please use the version of this manual that is in Geneva font, **CISG0629**.

In the Idles folder:

**Zoom Idle** - Pretty Idle DA showing moving star pattern.

**Stars 1.3** - Like Zoom Idle but allows you to control the speed of the stars, like a Trekkie.

**LockOut** allows you to lock out others from using your Mac by putting up a password protected idle screen.

In the MiniWriter DA folder:

**MiniWriter** - A good text editing DA which has some nice feature such as font selection and a Find command.

. **imageWRITER Font** - A special font that keeps the same proportions and size on the screen as when it prints out on the Imagwriter printer in draft mode.

**Documentation** and **Examples** are included, as is **mWRT TMPL**, a ResEdit template that allows you to customize MiniWriter.

**Mac Disk 59: CE Sampler II**

CE Software provided this disk which contains **Mockpackage+ 4.3.2** the "classic" set of desk accessories. It incorporates **MockChart**, the graphics-producing small spreadsheet; **MockWrite**, the great super note pad; **Mock Terminal** which now supports XModem telecommunications; and **MockPrinter**, the rapid print facility. Also included is a unique **MockPackage Utilities 1.02** program which permits you to open menu items without holding down the mouse, and **Documentation** for the whole package. Works well on all Macs.

**Mac Disk 60: DesignScope Demo**

Astounding demo of the program **DesignScope** which allows you to construct huge circuts and then view their output through oscilloscopes and different kinds of meters and tests. You can vary the amount of current and a bunch of other things that we don't really understand. Have fun with this one. Even if you aren't into electronics, it's pretty neat. Please note that this disk contains an Altered Finder 5.3, (downloaded from MAUG,) which has full keyboard control commands. This Altered Finder is how Apple should have done it in the first place.

# APPLEWORKS SIG NEWS
## by Peg Matzen

Again, an attentive group showed up for both AppleWorks SIG meetings, before and after the regular July 26 WAP meeting. Questions abounded—and so did answers! There is a real spirit of sharing and helping at these meetings. Ken De Vito and George Sall, Chairmen of the 8 and 12 o'clock sessions, honor all questions and evoke lots of enthusiasm for AppleWorks and the //c. This enthusiasm soon becomes contagious—makes you want to keep poking at your problems.

Lou Pastura again brought his //c with LCD screen and 12-second copy program to the meeting for the purpose of copying disks containing the Desktop Utility (by Sam Bauer) and all TAWUG sides for members.

Donald Fortnum, professor at Gettysburg College, told of a student who had lost the first few tracks on his thesis disk. Fortnum had tried to edit it block by block and byte by byte using ProZap. To reconstruct the disk, the group recommended: Probyter from Eagle Works, Bag of Tricks from Beagle Brothers, and a 3.3 DG RAM card. The disk had "seen" much usage; too, it might have "blown" because it was not full. Stuart Spransky stated that the magazine Scarlett Letter, published monthly by the Big Red Apple Club (1105 S. 13th St., #103, Norfolk, NB 68701), provides a byte-by-byte dissection of the AppleWorks file. This information could help Don and others interested in the technical side of AppleWorks.

Joseph Hasson asked why the number of K's shown to be available in the middle of the screen does not agree with the number shown in the lower right-hand corner of the screen. The answer: the middle number shows the K's available on that disk; he lower right-hand number shows the RAM memory available on the desktop.

Bea Donovan asked if there is any way to find out which other files are on the AppleWorks data disk when you are in AppleWorks. The several answers included:

- Call up Item 5, Other Activities, choose List Files on the Disk—the top of the screen will show whether the files are in AppleWorks or Other; and
- Joe Hasson reminds us that non-AppleWorks files on your disk must be converted to ProDOS. The files are then transported over to AppleWorks. Be sure to use the same pathname. (The manual covers this function as does your System Utilities disk.)

Ken De Vito asked who manufactures the clock on the Apple //c. The answer: CPU for Applied Engineering. (Ken says if the peel-off label is missing, you'd never know who made it!)

Other good tidbits: An APL card is a good connection between Apple //c's and Epson printers. Jay Heller makes cables for attaching a modem to the //C.

Macros were discussed at length. A macro, or "command string," is "one or two keystrokes that replace a group of given strokes"—definition by Lou Pastura. The macros are ideal for repetitive work.

Ken De Vito stressed the need to make back-up disks of important material—save desktop files to disk as you go along. Ken recommends using both sides of disks—he considers them both certified because the disk-maker does not know in which disk drive the disk will be used and drives are not consistent in which side they write on.

A quick demonstration of Telecommunications with the Apple //c and the Avatex 1200-baud modem was given. MCI Mail, an electronic mail service, lets one send messages all over the country. The message you input is received at one of their destinations of your choice: it can then be laser-printed and mailed. You can pay for extra fast service. There is also a Telex service available all over the world. You pay a small yearly subscription rate (less than $20) up front, your monthly fee is based on usage. DOW JONES NEWS RETRIEVAL SERVICE is also available.

With great enthusiasm, Ken demonstrated how to access the Dow Jones through MCI Mail and showed the shortcuts he has developed to get information as quickly as possible. To input repetitive data, he has used AE Macros, which save him much time on-line, and therefore money, during this process. Several of us came away from the demonstration "lusting" for such a set-up!

Stuart Spransky referred the group to an earlier article by Joe Chelena in the WAP Journal describing the WAP Bulletin Board System.

Linda Van Zee offered to head a committee that would gather information for beginning telecommunicators.

Further information for users who plan to get into Telecommunications: Request a password from the WAP Office (Note: Saturdays are the busiest days on the BBS systems). There are many different local BBS's one can access. Use Long Distance only to access specialized or really great out-of-town BBS's. Get the list of BBS's from the Main Menu of the WAP Telecommunications System. Clinton Computers has documentation files available on their BBS's. Apple Crate, Renton, Washington, is an excellent Apple board.

AppleWorks SIG desperately needs volunteers for:

- Librarians (disk & hard-copy)
- Demonstrators during AppleWorks SIG meetings
- Virtually any service you can provide

We have lots to do—and only a long list of volunteers willing to share their knowledge and experience(s) will get it all done—to the benefit of everyone!

The next meeting will be a general Q&A session to wrap up a hectic summer. Bring your questions/problems and unsolvable ventures--we'll all try to help you out.

# PINPOINT, AN EXPANDED APPLEWORKS, AND AN AUTO-START RAM DISK

by E. Eugene Carter

AppleWorks has become the best-selling program for the Apple II computer. Although there are arguably inexpensive superior individual programs for database management, word processing (Apple Writer //e or Screenwriter II), and spreadsheets (Supercalc 3A or Flashcalc), AppleWorks' price compares favorably with the combined price of these three functions. The program is easy to learn, and the many Open-Apple commands have great commonality across the three functions. The desktop of the program permits many files to be available to the user at the same time. This common availability is exploited further by the option to cut and paste data using a "clipboard" area of memory, which permits moving materials not only from one document to another, but also from one function to another. AppleWorks is copyable, allowing backups without the need to wait on replacement disks. Finally, many third-party products have vastly expanded the use of the program. Expansion memory boards from manufacturers such as Applied Engineering and Checkmate Technologies have accompanying software to reconfigure the standard AppleWorks copyable program disks to use up to 6 megabytes of memory. Co-processors, such as the Accelerator //e or Applied Engineering's Transwarp Board, speed up the Apple's main processing speed. Other products permit graphing, spelling checkers and mailing lists. Finally, there are special function products such as Pinpoint and Fingertips.

Pinpoint, one of several packages for the Apple that acts like Sidekick on the IBM-PC, provides a calculator, notepad for quick idea recording, automatic log-ons for vendors such as Compuserve, automatic phone dialing, a quick label-maker for addressing envelopes, an appointment schedule/calendar function, and a typewriter option, which prints each line in various styles immediately after a screen line is completed. A graphmerge program permits you to mix a high resolution display with a word processing document. Unfortunately, it works only with Imagewriter printers, unless one purchases an $8 graphmerge enhancement disk. The benefit of these programs is that they are readily brought to the screen using Closed Apple-P (CA-P) without disturbing what is currently in memory or on the screen. After using them, one returns to the primary task with a single keystroke. Pinpoint runs only on a //c or an Enhanced //e, which has the same display chips as the //c.

**The Problem**

Unfortunately, there are a number of problems encountered when trying to fully exploit Pinpoint with AppleWorks. First, when Pinpoint is called, there is an annoying wait for the disk operation as the program loads the appropriate Pinpoint accessory program. (See Henry R. Hertzfeld's review in the April, 1986, **Washington Apple Pi Journal** for elaboration.) Second, a RAM disk, which puts many of the accessories in memory so they can be accessed without the annoying disk input/output time, is not easily created. It is hard to partition the Apple's memory for both the RAM disk and the expanded AppleWorks desktop. Creating the RAM disk initially is fruitless, for most expanded AppleWorks programs clobber any RAM disk. "Locking out" memory to protect it from the expanded AppleWorks is not trivial. Third, there are inconsistent versions of the various AppleWorks expansion programs and the Pinpoint versions. Even the latest versions of each do not necessarily work together. The difficulty arises in part because both Pinpoint and the expansion utilities write changes to AppleWorks' basic program, tripling its file size. Fourth, not readily decipheral are the supplemental Pinpoint manuals and the sophisticated options available with the various utilities from Applied Engineering and Checkmate Technology. They are general in purpose, in an attempt to let users operate many programs in many ways. Deciphering just what is needed to exploit Pinpoint and an expanded AppleWorks with a RAM drive is difficult.

Finally, one wants the smallest possible RAM disk, given that the point of the expanded AppleWorks program is to have a large desktop, with all of AppleWorks itself in memory if possible. That total loading of AppleWorks avoids the disk input/output time and disk switching to go from the spreadsheet to the wordprocessor, or to print a file, for example. Yet a fully loaded AppleWorks will take about 130K from the desktop space (although it is not shown on the screen and will be overwritten by files on the desktop if needed), and each 64K of RAM disk eliminates roughly 47K of desktop space. Moreover, for various reasons, memory use will always exceed what is shown as block size for a file stored on a floppy, and desktop space used by a given AppleWorks file will in turn exceed even its designated memory size, in part because of borders and record factors. Thus, a system for the loading of AppleWorks and Pinpoint automatically is not readily constructed given the programs and the manuals since neither the techniques nor the trade-offs are presented directly.

In this note, I indicate how to configure AppleWorks to a large desktop size, and load AppleWorks into memory. I then show how to load most of Pinpoint into a compact RAM disk, so that it is readily accessed from AppleWorks. Even hard disk users could profit from this use of memory. Finally, I show how to auto-load the entire system, creating the RAM drive, loading the accessories and the expanded AppleWorks, and permitting operation of the system with a single disk drive.

For those not familiar with Pinpoint and its accessories, an Appendix briefly outlines the functions and their uses. See also Ken Landis' review, "Pinpoint versus Jeeves" (A+, April, 1986, page 70).

I use the utilities from Checkmate Technologies to customize AppleWorks, preferably with at least 192K on the extended-80 card). I next customize Pinpoint's system program to recognize the specifics of the printer, modem and

contd.

accessories; and indicate the likely path to find the programs using the Pinpoint Installation disk. After the system is configured, it will store the customized program or make it part of the AppleWorks.Startup disk.

Finally, the Multiram Utilities disk has a program which customizes its RAM program to partition the memory. This program, Copy.All, can become an auto-start program. Renamed Startup with some line changes and stored on the recreated AppleWorks Startup disk, this program can automatically load the Pinpoint files into RAM after creating the RAM disk.

**Set-up**

Below and in Table 1, I describe the customization process necessary, and outline how I use the system on a 640K //c and an enhanced 384K //e and 640K //e, with three different expansion boards from Applied Engineering and Checkmate Technologies. I do not copy many of the Pinpoint programs because I do not want to take the time to load all the files, nor do I want to use a 128K RAM drive. Instead, I use only a 64K RAM drive given my preference for the extra 47K of AppleWorks desktop space. In the case of the smaller RAM drive, all these programs would still be available, but would require that a floppy disk copy of the remaining Pinpoint Accessories be handy.

In the steps shown in Table 1, I have not minimized disk swapping, nor outlined the fastest means of creating this auto boot RAM disk with the Pinpoint and expanded AppleWorks. Rather, I have sought to outline the steps to make the logic clear, and to prevent a user from some easily made mistakes. Remarks follow on using Pinpoint's enhancement disk and Applied Engineering's Prodos RAM drive utilities. They can accomplish most of the tasks shown here, but not as readily, nor are they as easily outlined.

Steps 1 to 3 in the Table involve creating an expanded AppleWorks Startup disk, customizing it to recognize a call to Pinpoint, and creating the RAM disk. Step 4 adjusts the Multiram Copy.All program, based on the remarks in the program itself. I tell it to skip certain programs on the disk when it loads the files into the RAM disk. The final changes to Copy.All in Step 4 will cause it to run AppleWorks itself, once the RAM disk is created and loaded with the Pinpoint Accessories. In Step 6 with the Filer program, use the File Copy commands and copy from /Multiram.Util/? to /BLANK00/?.

After copying the expanded program for fully loading AppleWorks to the new disk in Step 7, you must decide what Pinpoint accessories to use in Step 8. Remembering that two blocks equal 1K and that there is roughly 140K on a ProDOS floppy, or 280 blocks, decide what accessories to put in RAM by looking at the block sizes on the screen for the Pinpoint/Accessory disk, and copy them. APLWORKS.-SYSTEM is only 14 blocks originally, but the expansion programs typically increase it to around 28, and Pinpoint increases it to around 55 blocks. These Pinpoint files will go to BLANK00, which currently has the expanded Pinpoint APLWORKS.SYSTEM (55 blocks), Seg.00 (9), and ProDOS (30) on it, plus the other files copied above in Step 6. Sizes of some accessories are as follows: the Calculator.PP (7), Typewriter.PP (8), Quicklabel.PP (8), Comm.PP (28), Log-onmac (4) and Notepad.PP (18). These five accessories take a total of 73 blocks, or 37K. The Calendar.PP program is 21, and the Appointments.PP is 11 (but this one is a simple demonstration Pinpoint data disk; created when one uses Calendar, it will grow). Graphmerge is 73 and is too large for our purposes here. Most of the accessories may be copied, but all take time to load. Moreover, if the RAM drive is limited to the 64K RAM drive suggested here in order to conserve memory for the expanded AppleWorks desktop, then some Pinpoint accessories must be dropped. I suggest copying only the notepad, calculator, typewriter, quicklabel, communications, and logonmac files. The automatic dialer is integral to the system and will always be there.

To use the calendar and appointment functions, the changed appointments must be written to these files. Thus, any changes would be lost with the files in a RAM disk when the machine is shut off. Hence, copy them to a separate disk which is kept available. The program will prompt to insert the disk when the required files are not found in the RAM memory. The notepad creates files which can be saved and used in AppleWorks; saving those items is discussed later. Also place the Graphmerge program on another disk, and do not load it into the RAM disk unless used often enough to make the time worthwhile.

Finally, switch to Volume commands and rename /BLANK00 as /AppleWorks. Place a copy of the Apple-Works Program disk on the other side of the new Startup disk, or keep it on a separate disk.

**Operation**

This AppleWorks Startup disk loads Pinpoint into the RAM disk, expands the desktop, and provides a desktop utility which permits loading one or more of the three AppleWorks functions, or all of them plus the printer utility. BASIC.-SYSTEM looks for a file called Startup, which is the automatic RAM disk creator, Copy.All. The end of this Startup program calls AppleWorks, loading APLWORKS.-SYSTEM, the expanded program which has been configured for the Pinpoint menu.

You can load all of AppleWorks into a huge RAM drive, using the same autoload features of Copy.All, with a change at the end to a new pathname to call in the program part of AppleWorks. This does NOT expand the desktop, however. Its benefit would come if other applications programs, such as a spelling checker, etc. were also being used between AppleWorks runs.

In general, note that on a ProDOS disk, programs with the suffix .system will be executed one after another, in their order in the volume. However, once BASIC.SYSTEM is executed, it will first look for a program called Startup, and will run it. That program can terminate the auto-execution of all System files. When BASIC.SYSTEM does not find Startup, I assume the next System file would run after BASIC.-SYSTEM.

For spelling checkers and other copy-protected programs, create an auto-RAM drive disk which loads all the dictionaries into RAM initially. Again, once they are loaded, you would specify the proper path (recorded if necessary in Copy.All cum Startup at line 9020 on) to load the spelling checker program disk, following a message to insert the disk and an automatic change of prefix within Startup. Thus,

9020 HOME:PRINT "Place the Sensible Speller

contd.

```
        disk in the drive and hit Return"
    9030 GET A$
    9040 PRINT D$; "PREFIX/SENSIBLE001"
    9050 PRINT D$; "-BASIC.SYSTEM
```

Alternatively, the system will end and one can manually enter some Basic statements to accomplish what is included above as part of the Startup cum Copy.All program. In this situation, notice that the Users.Disk filer utility has volume commands, to display all the volumes available anywhere including RAM, and also has a listing of all files. Startup is always the lead program from BASIC.SYSTEM as noted earlier.

When using the notepad, the Open Apple-Save (OA-S) for saving notes permits changing the path, which by default is where it is now found, /MRAM. Hence, with each note, the AppleWorks WP file must receive a name, and it is small effort to change the path to assign a real disk drive.

If you want to have a larger RAM drive, and to include the Calendar and Appointment files, then a version of ProDOS' Filer which can copy to and from RAM should also be included. I place Filer, which is 51 blocks, on the AppleWorks Startup disk, copying it from the Multiram Utilities disk under Step 6. I change line 1070 in Copy.All to SKIP = 9 and add Filer to the list of files in statement 3040, since I do not want it on the RAM disk. When exiting AppleWorks, I specify the /MRAM prefix and then Filer as a path. I then use Filer to copy from the RAM disk, MRAM, to the AppleWorks Startup floppy the Calendar and Appointment files, if they have been changed. Again, this seems like more trouble to me than simply keeping the Calendar and Appointment accessories on a separate disk. I copy Logonmac in the event the macros have been altered with the communications package.

Applied Engineering's software for expanded AppleWorks parallels the Checkmate Multiram described above. Thus, a Partition program locks some of the Apple's banks from the RAM disk, which is created by a program called ProDrive, similar to the Multidrive.Pro customization process described above. Copy.Files from AE functions as Copy.All, and you indicate the files to be copied and to be excluded from the RAM drive. Renamed Startup with BASIC.SYSTEM on the disk first, it functions as described above. What is not clear from the description found listing the programs, however, is how to prevent AE's expanded AppleWorks from clobbering the RAM drive. You expand the AppleWorks disks prior to installing Pinpoint in all cases, but there is no clear way to prevent the expanded AppleWorks from taking all the memory; creating the RAM disk later is not possible, either.

Pinpoint's $8 RAM Enhancement Kit provides a menu-driven disk which creates the RAM drive with many different expansion cards, allows the user to specify which programs are to be placed in it, and creates the auto-start AppleWorks disk. It does not permit a RAM disk of less than 128K, however, and the Apple Memory board partition cannot be adjusted at all. Contrary to the manual and even the menu in the program, moreover, the kit CANNOT configure the system for Checkmate's Multiram card. The program also presumes you will leave a copy of the Pinpoint Accessory disk available in one drive, or insert it as needed when initially loading AppleWorks each time. If you copy the accessories to the AppleWorks Startup disk, as I have suggested above, then some prefixes and options must be changed in the Enhancement menu, with instructions to that end not included. As is true for most of the manuals accompanying the RAM disks, however, this one is similar to Boston street signs. If you know where you are going, you do not need them. If you do not, then a sufficient number of signs to direct all drivers to appropriate locations gives information overload. The need to present materials for many users with different ideas and different backgrounds in ProDOS make the manuals difficult to quickly grasp, let alone create a given type of auto-start RAM disk described here.

As confirmed by my own trials, Beagle Brothers' new Macroworks cannot coexist with Pinpoint, even though both programs can work with an expanded AppleWorks. Macroworks is a valuable utility, since it adds a series of pre-set and user-definable macros callable with the Closed Apple key. Perhaps both vendors will settle on standard rewriting of AppleWorks so that they can coexist. As indicated above, however, the record in this regard between Pinpoint and the two desktop expansion products has been mixed. From my use, I have also found that Applied Engineering's Transwarp speed-up card will not work with the RAM drive created on the Multiram RGB board when the Multiram desktop expanders prior to the latest, version 4.4, have been used. The Accelerator board does work with the Multiram RGB board regardless of the desktop expander version.

With an AppleWorks loaded in memory accompanied by Macroworks or Pinpoint, the advent of the new static RAM package from Checkmate Technologies promises to make the wait for loading AppleWorks itself a memory. A similar board and battery pack from Applied Engineering, Ram Factor, is available and can be in any slot except Slot 0. These battery packs maintain the RAM data indefinitely, even with the machine off for an extended period. Such a feature obviates the need for a hard-disk to some degree, at least insofar as that "need" was motivated by a wish for more rapid program loading.

*E. Eugene Carter holds a PhD from Carnegie-Mellon University, and is a Research Fellow with the Lincoln Institute of Land Policy in Cambridge, Massachusetts. He is involved with the development of expert systems in finance.*

**Sources**

Applied Engineering, P. O. Box 798, Carrollton, TX 75006. Ramworks II and Z-Ram expansion boards may include utilities at dealer option. Ram Factor includes utilities. Suggested list prices are $199 and up. 214-241-6060.

Checkmate Technologies, 509 South Rockford Drive, Tempe, AZ. Multiram, Multiram C and CX boards include utilities. Suggested list price for 64K RGB board is $199. 602-966-5802.

Pinpoint Publishing, 5901 Christie, Emeryville, CA 94608. Pinpoint ($69), Pinpoint Enhancement ($8), plus other accessories. 415-654-3050 sales; 415-654-0286 technical support (usually busy).

**Appendix - Pinpoint Accessories in Use**

As a quick introduction to the features of Pinpoint and the use of the various Open Apple (OA) commands, note the descriptions below. In all cases, once Pinpoint is installed on AppleWorks or any ProDOS application software package, it

contd.

is called by Closed-Apple P. The Pinpoint menu appears on the existing screen as an overlay. Cursor arrows or the initial letter of the option, followed by return, calls the appropriate function. With most of these activities, Open-Apple-? will bring up help screens and additional commands, if applicable. ESC or OA-Q (for quit) backs out of most functions.

A Tutorial can be run from the Installation side of the Pinpoint disk, although it will use some of the accessories from the other side. This tutorial is a good introduction to the product. With the well-written Pinpoint manual, it guides the user through all the functions in a thorough way.

**CALCULATOR.** OA-C clears a number in the display; C clears the calculator, Delete clears last digit, and OA-D and arrows move the calculator around on the screen. In this way, one can have an AppleWorks display or text or numbers visible while using the calculator.

**PHONE DIRECTORY (COMM and LOGONMAC).** Eight numbers with pauses, leads or access codes, billing codes, touch/pulse, phone lines, etc. You select the one to use and it will automatically go ahead with log-on macros. LOGONMAC is a data file created by COMM with user input.

**DIALER.** System seeks first phone-number-type digits on screen, and can be moved to others with arrow keys. A space and commas are ignored. It can ignore area codes in one area and add 1 or 9 as access or dial out codes to numbers, for example. Minimum number of digits can be specified, (e.g., 7). Thus, a user might call up data base with the phone number of the person sought, hit Closed-Apple P, D for the dialer, and it will dial number. For this and other items, you must have a modem and must have specified the slot, conventions, etc. in the Installation program originally. Any changes require reinstallation on a clean copy of AppleWorks.

**MODEM.** Can transmit data as entered or from an AppleWorks WP file.

**NOTEPAD.** Can be saved as 32-line AppleWorks WP file.

**QUICKLABEL.** Grabs whatever looks like a label on screen. Arrow keys move around to another one if desired and can edit the highlighted field with arrow keys. Then call print, and move the label around on the screen page "envelope." System will print label at desired location if printer has its top just under the roller bar. Can do both return and address labels in two passes.

**TYPEWRITER.** OA-O for options. Prints a line after it is entered at the keyboard and return is pressed..

**GRAPHMERGE** will take a hi-res or double hi-res picture, crop it, expand, etc., and paste it to a wordprocessor document, which cannot be edited again at this point. Move the + cursor up/down with arrows, then hit return to place the picture whose file name has been given.

**CALENDAR** provides a three-month display, with help codes beside them. The initial highlight is the date entered when AppleWorks is booted. One can insert up to eight appointments per date and have appointments for over 144 dates. Scrolls forward to future months and years with arrow keys. Days with appointments are marked with asterisks. The appointments are written to a data file, APPOINTMENTS, which must be saved to a floppy after any changes if the calendar is in the RAM disk. contd.

# 7 Meg IIe/1 Meg IIc

Don't buy an over-hyped over-priced card that rams itself down your throat with overpowering advertising. You can buy **Checkmate Technology's State-Of-The-Art MULTIRAM RGB RAM CARD™ from Coit Valley Computers w/BATTERY BACKED-UP STATIC RAM** options that can load & save programs like AppleWorks for 10 years! It's a **FASTER CHEAPER REPLACEMENT FOR HARD DISKS, is USER EXPANDABLE TO 7 MEGABYTES,** compatable with all (100%) 3rd party software/hardware, has an optional 16-Bit 65C816 slot saver Co-Processor card ($157), sharp 80 columns, super Double Hi-Res, & FREE RGB*! It's a direct substitute for Ramworks II™ or Apple 80 col cards, has a 5 yr warranty & **FREE AUTOMATIC SOFTWARE UPDATES ONLY FROM US!** Unlike Ramworks II, which can cost $13000+, MultiRam fits ALL (even Euro) Apple IIe's, can't interfere w/ slot 1 cards, has no soldered chips & costs less!

**MultiRam RGB expands to 1 Meg RAM + optional 4 Meg's battery protected piggyback RAM + optional 2 Meg's STATIC RAM. MultiRam IIe expands to 768k and can piggyback w/ MultiRam RGB.**

**FREE APPLEWORKS EXPANDER SOFTWARE WITH EVERY MULTIRAM CARD** — loads ALL (even printer routines) or PARTS of AppleWorks, runs faster, expands Desktop over 2048k, stores 23,000+ records & 4,800+ word processor lines, auto-segments large files onto multiple disks! **FREE** APPLEWORKS TIME/DAY/DATE ON-SCREEN w/ clock, AUTO-COPY TO RAM, ULTRA-FAST PRODOS/DOS 3.3. RAM DISK & RAM TEST. Optional CP/M & Pascal Ram disk ($20/ea)!

| | MultiRam RGB Card | MultiRam IIe Card |
|---|---|---|
| 64k **MULTIRAM** | **169.** | **129.** |
| 128k **MULTIRAM** | **179.** | **139.** |
| 320k **MULTIRAM** | **199.** | **164.** |
| 576k **MULTIRAM** | **229.** | **199.** |
| 832k **MULTIRAM** | **254.** | **234.** |
| **1024k MULTIRAM** | **279.** ← ← ← ← ← | |
| 1344k **MULTIRAM** | **419.** | - |
| 1600k **MULTIRAM** | **449.** | - |
| 1792k **MULTIRAM** | **479.** | - |

| | |
|---|---|
| **Apple IIe Enhancement Kit** | **62.** |
| **Cermetek 1200 Baud internal modem IIe/II+** | **209.** |
| **Incomm 2400 Baud external univ. modem** | **359.** |
| **Clockworks Clock (Thunder/Time HO™ comp)** | **89.** |
| **13" Teknika RGB Monitor*** | **324.** |
| **Accelerator IIe-350% speedup card** | **227.** |
| **Pinpoint Program or Spelling Checker (ea)** | **49.** |
| **ProAPP 10 & 20 Meg Hard Disk Drives** | **Call** |
| **Pico™ Slimline Drive IIc/IIe/II+** | **158.** |
| **256k Memory Chips-1 yr warranty (8)** | **45.** |

**Terms:** Add $4-Ground or $6-Air shipping & phone # to each U.S. MultiRam card order (foreign orders/FPO/APO extra). Add 3% for MasterCard/Visa (include #/expir) & P.O.'s. For fast delivery send Cashier's/Certified check, Money Order. C.O.D. (add $6) & personal checks accepted (allow 16 days). **Tex res add 6 ⅛% tax.**

Ramworks II/Timemaster II H.O./Z-ram II, Flipster, respective trademarks of Applied Engineering, Cirtech. ***Call for RGB Connectors/cables (not included).**

**Checkmate Technology's MultiRam CX** card easily expands your IIc to 640k and next month has a **CX+ Piggyback to add another 512k (over 1.1 Meg total)!** It's 100% compatible with all IIc software/hardware & unlike Z-Ram II™ & other IIc cards, can be upgraded with a 65C816 kit ($129) to likely run new technology software! It comes with the **SAME FREE SOFTWARE, UPDATES & 5 YR WARRANTY AS IIe CARDS** (see above).

- **UNLIKE Z-RAM II, THERE ARE NO MOTHERBOARD JUMPER WIRES OR CLIPS TO ATTACH, OR DRIVE REMOVAL REQUIRED FOR INSTALLATION. USES ABOUT 50% LESS POWER** than Z-RAM II causing less power supply strain or battery drain.

OUR LOWEST PRICE

| | |
|---|---|
| **256k MULTIRAM CX** | **189.** |
| **512k MULTIRAM CX** | **222.** |
| **512k MULTIRAM CX+** | **CALL** |
| **1200 Baud IIc Modem (+$20/cable)** | **159.** |
| **Clip-on IIc Rechargable Battery** | **129.** |
| **IIc Flat Panel Display** | **379.** |
| **IIc System Clock (Same as A.E.)** | **66.** |

**WHY BUY FROM COIT VALLEY COMPUTERS RATHER THAN SOME MAIL ORDER HOUSES?** Only we offer a **15 day MultiRam money back satisfaction guarantee,** double software, more support, **free automatic software updates,** free 64k w/ each 256k/512k/768k IIe card. We know the products, & stock them for fast shipping! CALL FOR QUESTIONS, PRICES, DISCOUNTS. SCHOOLS & GROUPS WELCOME.

## ORDER FORM

**COIT VALLEY COMPUTERS** (214) 234-5047
14055 Waterfall Way Dallas, Texas 75240

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE ( ) _____

SIGNATURE WA

| QTY | DESCRIPTION | PRICE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

MC/VISA _____ SHIPPING

_____ EXP _____ TOTAL

**COIT VALLEY COMPUTERS**
**(214) 234-5047** MCI 2969684 Telex 6502969684 (WUI)
14055 Waterfall Way
Dallas, Texas 75240

**Table 1**
**Pinpoint, an Expanded AppleWorks, and an Auto-Start RAM Disk**

E. Eugene Carter

| Step | From | To | Task |
|---|---|---|---|
| 1. | Multiram Desktop Expansion v 4.1 or later | AppleWorks Startup | Expand a copy of AppleWorks Startup disk.<br>Load all AppleWorks into memory, assuming 192K minimum on expansion card. |
| 2. | Pinpoint Installlation v. 1.2B or later | AppleWorks Startup | Specify printer, phone, and modem data, following menu<br>Seek accessories by path, /MRAM.<br>Save to AppleWorks disk. |
| 3. | Multiram Utilities v. 4.1 or later | Multiram Utilities | Run Multidrive.Pro, Option 3, "Customize," then Option 2.<br>a. Set location of /MRAM as Slot 7, Drive 1.<br>b. Partition memory at 64K for MRAM.<br>c. Save changes (Option 3) to Multidrive.Pro.<br>d. Exit to BASIC. |
| 4. | Multiram Utilities | Multiram Utilities | a. Load Copy.All<br>b. Change line 1070 (1060 v. 1.1 or 1.2) to SKIP = 8.<br>c. Add line 3040 DATA "BASIC.SYSTEM", "APLWORKS.SYSTEM", "SEG.00", "STARTUP"<br>d. Change line 9020 to PRINT D$; "PREFIX/AppleWorks"<br>e. Change line 9030 to PRINT D$; "-APLWORKS.SYSTEM"<br>f. Save as Copy.All2 on the Multiram Utilities disk. |
| 5. | Users.Disk FILER | New Disk /BLANK00 | Format a blank disk as /BLANK00 |
| 6. | Multiram Utilities | BLANK00 | Copy from the Multiram Utilities disk:<br>Basic.System<br>Multidrive.Pro<br>ProDOS<br>Copy.All.Obj<br>Copy.All2<br>Then change P(refix) to /Blank00<br>R(ename) Copy.All2 to Startup |
| 7. | AppleWorks Startup (expanded) | BLANK00 | Change Prefix to AppleWorks.<br>From the expanded AppleWorks Startup disk, copy:<br>APLWORKS.SYSTEM<br>SEG.00 |
| 8. | Pinpoint Accessory | BLANK00 | Change Prefix to Accessory, and copy:<br>Notepad.PP<br>Calculator.PP<br>Logonmac.PP<br>Comm.PP<br>Quicklabel.PP<br>Typewriter.PP (see text comments on capacity limits) |
| 9. | | BLANK00 | Change to V(olume) commands<br>R(ename) /BLANK00 as /AppleWorks |
| 10. | AppleWorks Program | Notched backside of STARTUP (old BLANK00) | Copy the Program part of AppleWorks to the notched backside of the BLANK00/APPLWORKS Startup disk, or another disk. |

# THE FAMILY HOME MONEY MANAGER: Part 5

## Working One's Way Through an Applesoft Program

by Brian G. Mason

(Ed. Note: This is the fifth article in a series of nine, which began in the May 1986 issue of the Journal.)

Last month we progressed through our "ENTER DATA" program to the point where we had listed out to paper all our budget categories and the amount spent in each or alternatively, one budget category at a time to the screen. If we had listed a screen full of data or had gotten to the end of our data while listing the budget categories to the screen, we were to the point where we were confronted with a menu at the bottom of the screen which would allow us to continue listing, change the data, delete the data, list a new budget category, or return to the Main Menu. We showed last month how we continue listing the data in the category we were currently working on by pressing <RETURN>. Load "ENTER DATA" so you can continue typing the program.

```
2622 IF C$ = "C" THEN L% = 7: GOTO 3000
2623 IF C$ = "M" THEN 1500
2624 IF C$ = "D" THEN 3200
2625 IF C$ < > "L" THEN 2615
2626 POKE 34,0: GOTO 2500
```

Now if we don't press one of the other keys required by the menu, we return to line 2615 where we print the menu out again. If <L> is pressed, however, we reset the top of the scrolling window to the top of the screen, and then GOTO line 2500 which is where we ask what category the user wishes to see listed next. If the user presses <M>, we simply return to the Main Menu at line 1500. If the user presses <C>, however, we are in for some fun. We GOTO line 3000, eager for what lies ahead.

```
3000 T1 = 1: VTAB 19: HTAB 1: CALL - 958:
     PRINT "TYPE DESIRED KEY:"
3001 PRINT "'>' = ADVANCE  '<' = BACK UP"
3002 PRINT "'^' = UP  ']' = DOWN  'E' = EXIT"
3004 INVERSE : PRINT "*HIT SPACE BAR
     BEFORE ENTERING NEW DATA*";:
     NORMAL
3005 VTAB L%: POKE 36,2
```

We now have a new variable, T1, which we will use to keep track of our horizontal tab position. (You'll see, you'll see.) We immediately erase the menu from the bottom of the screen and present the user with some new choices. You can use any keys you want to here for cursor control, but I find it very easy to press the shift key, and then use what look like direction pointers on the top of the "N", ",", and "." keys, with the right bracket, which you get when you press Shift "M", serving as the "down" arrow.

We next move the cursor to the first line, L%, which we preset in line 2622, and to the third column position from the left margin of the text window. (Just another POKE for you to be aware of, that's all. POKE 36,0 puts the cursor at the left margin of the window.)

Now there is one thing I have not told you yet. We will use this same subroutine when we want to change things after listing the data out by check number. We will use the flags BU and CH to keep track of which part of the program called this subroutine.

In fact, maybe I'd better leave this for awhile, and take you to that part of the program which lists data by check number, so you will know how we get here from there as well.

### LISTING OUR CHECKS

So let us go back to the Main Menu, where we see that by choosing Option #10, "LIST/CHANGE/DELETE CHECKS", we are taken to line 2700. Don't worry, this won't take long.

```
2700 R = 0: HOME : VTAB 23:CH = 1:BU = 0
2702 IF NS = - 1 THEN 152
2705 PRINT "ENTER THE CHECK NUMBER
     YOU WOULD LIKE  THE LIST TO START
     WITH.": PRINT : INPUT "(ENTERING '0'
     DISPLAYS ALL DATA, NOT JUST
     CHECKS) ?";S1
2706 LH% = 0: INPUT "ENTER THE LAST
     CHECK NUMBER YOU WISH TO SEE
     (ENTER 9999 TO SEE ALL DATA).";S3:
     IF S3 < S1 THEN 2700
2707 HOME : INVERSE : HTAB (4): PRINT
     " LIST CHECKS/CHANGE/DELETE
     ENTRY ": NORMAL : GOSUB 40:
     GOSUB 29: B = - 1: LB = 0
  40 VTAB 2: PRINT " # CHK# MO/DA TO/
     FROM WHOM" TAB( 30)"AMOUNT CAT"
  41 PRINT : POKE 34,3:L% = 4: RETURN
```

First we initialize R, clear the screen, and set our flags. Of course, if there is no data in memory, we will simply leave this routine by way of line 152. Otherwise, we first ask for the lowest check number we would like to see. Since items purchased with cash have no check number, the check number will be 0. Hence, entering a zero here will permit the display of all cash transactions.

Next we ask for the highest check number we wish to see. Since 9999 is the highest check number permitted, typing 9999 will allow the display of all the checks with numbers higher than the lowest check number requested. We do a quick check to make sure that the "highest" number is at least equal to if not higher than the "lowest" number selected (permitting just one check number to be listed), and then we go on to clear the screen, print a title at the top, protect the title from the scrolling window, and then initialize the variables B and LB.

```
2709 IF LH% = - 1 THEN LH% = 0
2710 FOR R = LH% TO NS
2711 GOSUB 29
2712 IF CN%(R) > = S1 AND CN%(R) = < S3
     THEN 2715
2713 NEXT R: GOTO 2756
2715 GOSUB 180
```

LH% is another new variable introduced here. It will be used to keep track of which data element corresponds with which line or item number when we are deleting records.

contd.

Anyway, we immediately go into a FOR...NEXT loop to extract all the records which we wish to display. The GOSUB to line 29 is the subroutine to allow the user to hit the space bar to stop the listing. We check to see if the check number is within the limits we set. If it is, we GOTO line 2715. Otherwise, we get the next record. If there are no more records, we GOTO line 2756.

```
180 HTAB 1: GOSUB 162
181 C = CN%(R):T% = 7: GOSUB 50
182 C = MO%(R):T% = 10: GOSUB 50: PRINT
    "/";
183 C = DT%(R):T% = 13: GOSUB 50
184 HTAB 15: PRINT VEN$(R);
185 RETURN
```

The subroutine at line 180 is used to place the data in the record on the screen in the proper locations, including the item number, the check number, the month, the date, and the "vendor".

```
2717 GOSUB 16
2720 C = AMT(R):T% = 31: GOSUB 70
```

Next we check to see if we are dealing with a deposit or not (by looking for the "#" sign as the first character in the vendor code), and then we print the amount.

```
2745 HTAB 36: PRINT CD$(CT%(R))
2748 L%(B) = R
2749 LB% = B
2750 L% = L% + 1:T2 = L%:Q = 2: GOSUB 160:
     IF R > NS THEN 2756
2751 IF L% < 18 THEN NEXT R: GOTO 2756
2755 VTAB 19: CALL - 958: PRINT "THERE
     ARE MORE CHECKS IN MEMORY,
     NOW...: GOTO 2761
2756 VTAB 19: CALL - 958: PRINT "THAT'S
     ALL THE CHECKS IN MEMORY, NOW...
     <C> CHANGE;": GOTO 2762
2761 VTAB 20: PRINT "<C> CHANGE;
     <RETURN> CONTINUE LISTING "
2762 B = 0: PRINT "<D> DELETE;      <M>
     RETURN TO MENU   <L> LIST FROM
     NEW CHECK #";
```

Finally, we print the budget category. There is a lot that happens in the next few lines, but it is very similar to what we had to do when we were listing out the data by budget category. First we set our array L%(B) equal to the current value of R. Also, we set the variable LB% equal to the current item number. Next we increment L%, then set T2 equal to that new value. (We will use all these variables for something as we move through the program.) Remember Q in that part of the program when we listed the data by budget category? At that time we set it equal to one. Here we set it equal to two. Line 160 is where we actually test for the press of the space bar (though, again, remember it could be any key.) If the space bar is pressed, the ON...GOTO command will take us to line 2755. (List lines 160-161, which you have already entered, to see what I am talking about.)

Otherwise, we go to line 2751 where we check to see if we are at the bottom of the screen or not. If not, we go back to get the next record. Otherwise, if there are no more, we GOTO line 2756. Otherwise, we tell the user there are more records in line 2755 and then jump to line 2761. By the time we have all the options printed out that we want to present to the user at this point, we have reset our item counter (B) to zero.

```
2763 INPUT C$: IF C$ = "" THEN L% = 3:
     VTAB L%: CALL - 958:B = - 1: GOTO 2750
2765 IF C$ = "C" THEN L% = 4: GOTO 3000
2766 IF C$ = "D" THEN 3200
2768 IF C$ = "L" THEN POKE 34,0: GOTO
     2700
2769 IF C$ < > "M" THEN 2761
2770 GOTO 1500
```

We ask for user input in line 2763. Hitting <RETURN> will reset L%, clear the screen, reset B again, and go back to line 2750. Finally, in line 2751, we ask for the next record and continue the listing.

Just like when we presented the user with these options after listing out the data by budget category, if "M" is hit, we will go back to the Main Menu at line 1500. If "C" is hit, we will be taken to line 3000. Hitting "D", will take us to line 3200, the difference being, of course, that if we want to list from a new check number, we have to be taken back to line 2700.

**POSITIONING THE CURSOR**

Anyway, now you can see why I wanted to cover the listing out of the data by check number before we went any further. To change or delete items, we use the same routines no matter which way we listed out the data.

```
3010 GET C$:A = ASC (C$): IF A = 32 THEN
     3100
3011 IF A = 94 THEN 3040
3012 IF A = 93 THEN 3035
3013 IF A = 62 THEN 3020
3014 IF A = 69 THEN 1500
3015 IF A = 60 THEN 3025
3016 GOTO 3010
```

Here we have another way of taking input from the user. We use the GET command to set up the computer to wait for input from the keyboard. Then we translate the character that is typed into its decimal ASCII equivalent by using the command ASC(, and we set the variable, A, equal to that value. On pages 138 and 139 of the Applesoft II Basic Programming Reference Manual is a table of the ASCII Character Codes. There you will see that 32 is the decimal code for "SPACE", 94 is the decimal code for "^", 93 corresponds to "]", 62 corresponds to ">", 69 corresponds to the letter "E", and 60 corresponds to "<". If the key we pressed does not return these ASCII values, the program takes us back to line 3010.

```
3020 T1 = T1 + 1: IF CH THEN 3023
3021 IF T1 = 6 THEN T1 = 1
3022 IF T1 = 2 THEN T1 = 3
3023 IF T1 = 7 THEN T1 = 1
3024 GOTO 3030
```

So let us look at what happens if we press ">" to move to the right. Very simple, we increment T1 by one. Remember T1 is being used to count the number of tabs. If we are listing out the data by check number, we GOTO line 3023, where we indicate that if we have already tabbed over 6 times, then we have to go back to the beginning because there are not 7 tab settings. In the part of the program when we are

contd.

listing the data by budget category, there are only five tab settings, so if T1 equals 6, we reset it to T1 = 1. Also, as you will see, there is no second tab setting when listing the data by budget category, so we immediately skip to the third tab setting.

```
3025 IF T1 = 1 THEN 3010
3026 T1 = T1 - 1
3030 IF CH THEN 3033
3031 IF T1 = 2 THEN T1 = 1
```

If we press "<" to go to the left, we decrement T1 by one. If T1 already is one, we go back for another keypress at line 3010. If we are listing by check number, we go to line 3033. Otherwise, we take care of the missing second tab position when listing by budget category and moving to the left by setting T1 to 1 in line 3031.

```
3032 HTAB 4 * (T1 = 1) + 11 * (T1 = 3) + 15 *
     (T1 = 4) + 33 * (T1 = 5): GOTO 3010
3033 HTAB 3 * (T1 = 1) + 8 * (T1 = 2) + 11 *
     (T1 = 3) + 14 * (T1 = 4) + 27 * (T1 = 5) + 35
     * (T1 = 6): GOTO 3010
```

Lines 3032 and 3033 take care of the tabbing function for the listing by budget category and by check number respectively.

These work by using Boolean expressions. Looking at line 3032, for example, if we are at the third tab position, the T1 equals three and the computer gives the expression "T1=3" a value of one. All of the other expressions, such as "T1=4", are false, and therefore have a value of zero. Since multiplying anything by zero yields zero, line 3032 evaluates to HTAB 4 * 0 + 11 * 1 + 15 * 0 + 33 * 0, or HTAB 11. Neat, huh?

```
3035 IF L% = 19 THEN 3010
3036 B = B + 1: IF B > LB% THEN B = B - 1:
     GOTO 3010
3037 L% = L% + 1: VTAB L%:SG = 1: GOTO
     3010
```

That takes care of tabbing across the screen. If <]> is pressed to move the cursor down the screen, line 3012 takes us to line 3035. Here we first check to see if we are already all the way down as far as we can go, and if we are we are sent back for another keypress. Next we increment the line number. However, if the line number is greater than the last line number printed, we are again sent back for another keypress. This would happen if, say, we listed out only 5 items on the screen. We would not be on line 19 yet, but we still would not want to allow the cursor to go below the bottom of the data printed out. If we get to line 3037, L% is incremented by one, and then we VTAB to L% and go back to line 3010 for another keypress.

```
3040 IF CH = 1 AND L% < 5 THEN 3010
3041 IF BU = 1 AND L% < 8 THEN 3010
3042 L% = L% - 1: VTAB L%:B = B - 1:SG = 1:
     GOTO 3010
```

If we press <^> to move up, we are taken to line 3040 or line 3041 where we check to see if we are already as far up the screen as we are allowed to go. If not, then L% is decremented and then we VTAB to L%. We also decrement the line number and then go back for another keypress.

**CHANGING THE DATA**

```
3100 D = L%(B)
3101 SS = 0
3102 ON T1 GOSUB 3110,3150,3120,3130,3140,
     3160
```

If we hit the space bar, we are taken to line 3100 where we introduce another variable, D, which will hold the current record number we are working on. Also, since we are about to make a change to the record, we set the flag SS equal to 0. Line 3102 sends us to the proper subroutine depending upon which tab we are currently at.

```
3110 INPUT C: IF C > 9999 THEN 3114
3111 GOSUB 26
3112 CN%(D) = C: RETURN
3114 HTAB 4: VTAB 24: PRINT "CHECK #
     TOO HIGH";: HTAB 1: VTAB L%: GOTO 3110
```

The first tab is the check number. This all should be very easy for you to figure out by now. Note, however, that we set the array variable CN%(D) equal to the number we INPUT in line 3110.

```
3150 INPUT C: IF C < 0 OR C > 12 THEN 3154
3151 GOSUB 26
3152 MO%(D) = C: RETURN
3154 GOSUB 25: GOTO 3150
```

If we are changing data in the checking part of the program, we have the ability to change the month and the array variable MO%(D) is set to the value we INPUT in line 3150. If we are in the budget part of the program, we do not have that tab setting. If we make a mistake, the line is cleared in subroutine 25 so we can try again.

```
3120 INPUT C: IF C < 0 OR C > 31 THEN 3124
3121 GOSUB 26
3122 DT%(D) = C: RETURN
3124 GOSUB 25: GOTO 3120
3130 R1 = R:R = D: GOSUB 30:VEN$(D) =
     VEN$(R):R = R1: RETURN
3140 GOSUB 18: GOSUB 60:AMT(D) = C:
     RETURN
  18 IF LEFT$ (VEN$(D),1) = "#" THEN SG = - 1
  19 RETURN
3160 T% = 35: GOSUB 80
3162 CT%(D) = J: RETURN
```

We move the value of R into R1 and the value of D into R in line 3130 so we can use the subroutine at line 30 to change the Vendor. Then we move everything back when we are done. If we are changing the amount, we use the subroutines at lines 18 and 60 to enter the data, and then put the value into AMT(D). And we use the subroutine at line 80 to change the budget category if we are in the checking part of the program.

```
3103 HTAB 1: VTAB L%: CALL - 868:
     IF B + 1 < 10 THEN PRINT " ";
3104 IF BU THEN 3107
3105 PRINT B + 1;".";:T% = 7:C = CN%(D):
     GOSUB 50:C = MO%(D):T% = 10:GOSUB 50:
     PRINT "/";:C = DT%(D):T% = 13:GOSUB 50:
     PRINT TAB(15)VEN$(D);
3106 GOSUB 18:C = AMT(D):T% = 31: GOSUB
     70: PRINT TAB(36)CD$(CT%(D));:
     GOTO 3109
3107 PRINT B + 1;".";:T% = 9:C = CN%(D):
     GOSUB 50: PRINT TAB(12)DT%(D)
```

contd.

```
TAB(16)VEN$(D);
3108 GOSUB 18:T% = 36:C = AMT(D):
     GOSUB 70
3109 VTAB T2 - 1: CALL  - 958: GOTO 3000
```

Our next task is to print out the data now that we have changed it so we can see what we've got. We start in the leftmost column (HTAB 1), on our current line (L%), clear the line, then print the item number. If we are in the budget part of the program, lines 3107 and 3108 take care of the printing task. If we are in the checking part, lines 3105 and 3106 do the job. After printing the revised line, we tab down to the area below the last line printed (VTAB T2-1) and clear the screen below that point, then go back to line 3000 where the change menu is presented again for further editing.

We have come a long way this month. We started with the menu we were given after listing out our data on the screen which allowed us to continue listing the data, to list from a new beginning, to return to the Main Menu, to change, or to delete the data. We have shown how we change the data. Our next task will be to show how we delete it. Comparatively speaking, this is an easy task.

**DELETING DATA**

```
3199 REM *** DELETE DATA
3200 VTAB 18: HTAB 1: CALL  - 958: PRINT
3202 POKE 34,19
3205 PRINT "ENTER ITEM # TO BE
     DELETED": INPUT "ENTER '0' TO RETURN
     TO MENU"; C: IF C > (L% - 4) THEN 3205
3206 IF C < 1 THEN 1500
```

We start by clearing the screen below the data and printing the instructions to enter the item number to be deleted. If the item number is larger than the last one listed, the message is printed again. If the user types 0 (or a negative number), the program returns to the Main Menu via line 1500.

```
3207 IF CH = 1 THEN  POKE 34,3: GOTO 3210
3208 POKE 34,6
3209 B = C - 1:L% = C + 6: VTAB L%: HTAB 1:
     CALL  - 868: GOTO 3212
3210 B = C - 1:L% = C + 3: VTAB L%: HTAB 1:
     CALL  - 868
```

Again, we are dealing with both parts of the program. First we set the top of the scrolling window. Then we set B and L% according to which item it is we are going to delete, and then we erase that line from the screen.

```
3212 D = L%(B): GOSUB 45
  45 VTAB 22: HTAB 1: CALL  - 958: PRINT :
     INVERSE : PRINT "WAIT!";: NORMAL :
     HTAB 1: VTAB L%: RETURN
```

Remember, we are keeping track of which record number it is we are dealing with in the L%(B) array. So we set D equal to that record number. Deleting records from the data base takes some time. I'm afraid I do not know of a faster routine than the one I use here.

It is the same procedure we used when we deleted a budget category in our BUDGET 1/85 program. (See June WAP Journal.) Anyway, we need to print a message on the screen to warn the user to be patient. That is what the subroutine at line 45 is all about.

```
3214 FOR R1 = D + 1 TO NS + 1
3216 CN%(R1 - 1) = CN%(R1):DT%(R1 - 1) =
     DT%(R1):MO%(R1 - 1) = MO%(R1):VEN$
     (R1 - 1) = VEN$(R1):AMT(R1 - 1) = AMT
     (R1):CT%(R1 - 1) = CT%(R1):R(R1 - 1)
     = R(R1)
3217 NEXT R1
3218 NS = NS - 1:SS = 0: IF (D = (NS + 1)) AND
     CH THEN 2756
3219 IF (D = (NS + 1)) AND BU THEN 3225
3220 IF CH THEN LH% = D:B = B - 1:
     CALL  - 958: GOTO 2709
3225 LH% = 0:B =  - 1:L% = 7: VTAB L%:
     CAL  - 958: GOTO 2540
```

After moving all the records which follow the one being deleted down one, effectively writing over the one being deleted, we reduce the total number of records by one, and set the SS flag to 0. If we deleted the very last record, we will get into trouble if we try to list the records from the deleted one to the end of the file, so we go to the appropriate line in the program that says that that is all the records there are. Otherwise, we reset LH%, B, and L%, clear the screen, and resume listing the data— from where we left off if we were listing checks, from the beginning if we were listing budgeted expenditures.

We have finished the program module called ENTER DATA. You can save your program to disk now if you haven't done so already under that name.

The next module will take care of four options from the first part of the Main Menu—sorting the data, running a checkbook balance, reconciling the checkbook to the bank statement, and deleting reconciled records. It will also handle the printing of two reports from the second part of the Main Menu—the Year-to-Date Detail and the Year-to-Date Summary. We will get to these parts of the program next month.

# KYAN PASCAL VERSION 2.0: A Review

by Rob Calhoun

Recently a large number of advertisements for Kyan Software's Kyan Pascal have appeared in computer magazines. I never did like the restrictive feeling that Apple Pascal's menu command structure has, and I've really come to like using ProDOS, so I bought it. The language is ProDOS based, not copy protected, and is supported by a growing family of software utilities. It comes with a 400+ page manual and sells for $69.95 by itself or $99.95 with KIX, a new ProDOS operating shell to replace BASIC.SYSTEM.

As a program for learning standard Pascal, Kyan Pascal scores very well. The latest version, 2.0, is full implementation of ISO Pascal and should run almost any standard Pascal program without any trouble. Although standard Pascal is good for transferring programs, it isn't terribly useful, so Kyan Pascal also includes useful, although non-standard, commands for using hi-res graphics, string handling, chaining programs together, moving the cursor. The only major difficulty I experienced in this area is apparently a result of the ISO certification, for it did not occur in the previous, non-ISO version. I had created two types of variables,

```
var matrix: array [1..3,1..3] of real;
  vector: array [1..3] of real;
```

and a function matmult, which required a vector and a matrix as inputs and returned a vector. In version 2.0 this returned a "Function cannot return a structure in ISO Pascal" error. Apparently, functions in ISO Pascal can only return ordinal values, i.e. reals, integers, booleans, and chars. Although easily corrected through the use of a procedure, this was quite annoying since it worked in the previous version and since it is a very useful and powerful programming technique.

I found a few other minor problems. The random number function provides an unlimited set of well-distributed reals; unfortunately the series is exactly the same each time the program is run! The routine needs to be seeded somehow with a pseudo-random value from the keyboard counter or something similar.

These considerations actually fall more in line with my second consideration, Kyan Pascal as a development language. The random number problem is definitely unacceptable for a game based on chance, but it illustrates nevertheless one of Kyan's strengths. Only the ISO commands are "hard wired" into the language; the "bonus" functions are all in the form of assembly language subroutines which are then included into the Pascal source code and assembled into the final object code by the compiler/assembler. This makes it much easier to add needed functions (I found a pdl(x) function, which returns the value of game controller "x" useful) and makes it possible to manually optimize the assembly language code generated by the compiler and then evoke the assembler later. The manual does a fairly good job of explaining the process of linking assembly language to Pascal, but it is not a simple process and requires some work to understand it. Once understood, however, this feature allows you to build up a library of routines that can be used in any of your Kyan Pascal programs.

Kyan has already put out several of these libraries. I haven't ordered any of them because they are quite expensive. For those with unlimited budgets, however, the following toolkits are now available:

**System Utilities Toolkit $49.95**

Contains a large number of ProDOS file handling commands as well as mouse and joystick control, better screen management (ScrollUp, ClrEOLN, etc.), better random number generators (aha!), and routines that convert strings to everything else. Since string handling is notoriously weak in Pascal and since this looks like it would clear up a few of my complaints, this might be worth getting.

**MouseText Toolkit $49.95**

Apparently "Kyanized" versions of Apple's Mousetext routines, these subroutines allow you to easily maintain windows, pull-down menus, and so forth.

**MouseGraphics Toolkit $69.95** (available 9/1/86)

MouseGraphics are much like MouseText except that they use double hi-res graphics to produce more versatile displays, although probably at a much lower speed. Again, the routines are apparently licensed from Apple. They say it also includes routines to place program segments in the upper 64K of a //e or //c.

**Advanced Graphics Toolkit $49.95**

This allows you to create hi-res and double hi-res displays and manipulate two and three dimensional objects in space. I have always been very interested in this area and I wrote a conventional Pascal program that scaled, rotated, and translated a tetrahedron. This kind of program is calculation-intensive and would greatly benefit from dedicated machine language subroutines.

**TurtleGraphics Toolkit $29.95**

Not sure why anybody would want this, but it does have all of turn, move and angle commands that Logo has. It also comes with a rather pathetic collection of four sounds (beep, note, click, and phaser) and some routines that help you draw charts and graphs. It is cheap, though.

**Code Optimizer Toolkit $149.95**

This is by far the most expensive of the toolkits. Personally, I believe that these type of utilities should be made available free, or at least at a reasonable cost, to the owner of the compiler. You get a code optimizer which crunches the program down and increases its speed. (They say execution speed can be doubled, and size cut in half.) You also get the sources to the system library. I didn't mention this, but you must have a 12K Kyan Pascal library file on the disk when executing a file. This is good in some ways, because it cuts down on the amount of disk space used by programs, (they share the common library file) but prevents the user from wrapping the program into one nice executable file when it is all done. The best solution, of course, is to give away the source code to the library so that once the program is in its final form it can be combined with the library. While it is nice that Kyan Software makes these last

contd.

tools available, it is not nice that they charge $150 for them.

That's all of the toolkits that are in the catalog. Kyan obviously stands behind their product, judging by the number of utilities available. They maintain a non toll-free number as well as accounts on numerous electronic mail services (CompuServe, MCI Mail, etc.) and the booklet says that they have a technical support staff.

Although I have never called for support, (they're in California) I called for the update to version 2.0 and it arrived in less than a week. Apparently, updates are usually free, although I had to pay $30 for this one, which is not surprising because it included a new (and hefty) manual. The best source of information, however, is their newsletter, Update...Kyan, which runs about twenty pages every two months and costs $9.00 a year. It is a must, for it keeps you abreast of updates and patches to the system.

Speed of execution is a major concern of mine; otherwise I wouldn't fret about the cost of the optimizer. I like my Apple and I would like it to run rings around other computers. Unfortunately, its processor is clocked at just 1 MHz and this became very apparent when I collected execution times for a benchmark program on the WAP Telecommunications System. The benchmark involved finding the first 1899 prime numbers ten times; Kyan Pascal 2.0 did it in about 160 seconds, nearly 25 times faster than an Applesoft version of the same program (which took an agonizing 65 minutes) but six times slower than Turbo Pascal CP/M running on a 6 MHz Applicard, about fifty times slower than a VAX 11/780, and 40 seconds slower than even Kyan Pascal version 1.2. Although I expected the 6 MHz Z80 to win, I thought it would be more on the order of a three-to-one margin, due to the higher efficiency of the 6502. Kyan's graphics routines have been criticized for their slowness; recently I discovered that the supplied routines automatically clip lines; for example, a triangle made up of three points (100,100) (200,100) and (150,-10) would not generate an error under the Kyan routines and would plot the upper two segments to the top of the screen. If speed is desired, however, there is a way to use the same ROM routines used by Applesoft. Although faster than the Kyan routines, these are still not very fast.

Compilation and editing time largely depends on the hardware that is being used. I have a fascination with Ramdisks; I place as many programs as I can fit on mine, and jump between them with a ProDOS selector program, and end up leaving the computer on all the time because I am too lazy to want to copy the files back onto the Ramdisk the next day. Kyan Pascal thrives in this environment; the editor, compiler, and assembler are all on disk and running the system on floppies roughly doubles compilation times. Another reason to use a Ramdisk or hard disk is KIX, Kyan's UNIX like system interpreter.

ProDOS itself doesn't have any commands like "catalog" or "exec [pathname]." These commands are interpreted by a system program called BASIC.SYSTEM, and they are commonly encountered when using Applesoft. For an extra $30, Kyan Software will throw in KIX.SYSTEM and a myriad of file management commands. Without it, only the commands dealing with the editor and compiler work. I highly recommend getting KIX IF you have a Ramdisk, hard disk, or UniDisk.

Like UNIX, KIX is disk based. The actual commands are files which are stored in the /BIN subdirectory of the root directory. The advantage of this is that KIX.SYSTEM uses only 2K of RAM compared to the 11K used by BASIC.SYSTEM, and that more commands can easily be added in the future and seldom used commands removed to save space. The disadvantage is that it means going to the disk drive every time a KIX command is executed. Although this is hardly noticeable when using a Ramdrive, the wait is annoying when using floppies. 5.25" floppies are also just plain not big enough to hold all of the KIX files and the editor, compiler, and assembler. They will easily fit on two disks, but the time spent loading the various files off of the disk is still considerable.

The advantages of KIX, however, are enormous. Although KIX is obviously incapable of supporting UNIX's multi-tasking, it does an excellent job of mimicking its file handling ability. UNIX hackers will feel at home, right down to the "%" prompt. For the rest of us, KIX is a learning experience. Few commands in UNIX are even remotely similar to those encountered in Dos 3.3 and ProDOS under BASIC.SYSTEM. With this newness comes power; KIX allows you to move a whole floppy onto your current working directory just by typing "mv /floppy1/* ." It allows you to redirect output from commands to other files, just like UNIX. (One glaring omission, however, is the inability to redirect input from the keyboard to a file, allowing batch processing.) 5.25" floppies can be formatted on the spot. Whole volumes can be searched for a specific file, or even for a specific string. Files can be appended to one another, and printed to the printer or screen with one command. Wildcards are supported on nearly every command. Once you get used to KIX you won't want to go back to BASIC.SYSTEM.

Getting used to KIX can be a problem. There is, however, a menu command in KIX which allows you to edit and compile your programs without ever touching KIX until you get confident enough with those parts of the system. It is possible for a beginner to use Kyan Pascal, although it takes some prior knowledge and some studying to get the most out of it. Version 2.0 comes with a 440 page, Laserwriter printed manual, which is divided into sections on the various parts of the system (compiler, editor, KIX, assembler, etc.), a tutorial on the Pascal language itself, a reference guide, and a four page index. Also included is a laminated quick-reference card to help you remember all of those weird UNIX commands, the Wordstar-like commands that the editor uses, the assembler directives, and the reserved words of ISO Pascal. All of this comes in a three ring binder similar to those used by IBM. (There are even one or two "This page intentionally left blank." pages for IBM fans..

I realize this review is longer than most, but I feel that Kyan Pascal is a very important product, for several reasons. It is one of the first major, non-Apple Computer language that runs in the Apple's native 6502 mode. Kyan Pascal is completely compatible with ProDOS and will function fine with any storage device that can be interfaced with ProDOS, as well as with numerous ProDOS compatible clock cards. (One bug in KIX, which caused it to overwrite any user installed ProDOS QUIT routine, has just been fixed. The free update also includes better compatibility with Appleworks

contd. on pg 41

# The View from Durham

**by Chris Klugewicz**

Howdy! Unless you've picked up your Journal at the August main meeting, by the time you read this, I'll be back in sunny (and scorchingly hot) Durham, North Carolina! It was great to be back in DC for the summer, and I really enjoyed hearing from many of you--by mail, telephone, and BBS--and meeting quite a few of you at various WAP meetings. I'll be back a few times during the year, though I can't give dates for certain, since many of my vacations may be occupied with medical school interviews. (At least, I'm *hoping* they will...)

**About that surprise I mentioned last month...** At the beginning of last month's column, I wrote, "...here I am, the proud owner of a Thin Mac..." Well, that's no longer true: I sold my Skinny Mac in the middle of July (almost two years to the day after I bought it), and for two weeks, I was Mac-less! (And computerless, as well! It was a thoroughly rotten experience--I was reduced to writing drafts of this column on loose-leaf paper!) This particular problem has been remedied...

**Ta-dah!!!** I'm typing this final draft on my brand-spanking-new (four hours old) Macintosh Plus! Unless you've suffered with a single drive, 128K Mac for as long as I had, you really can't appreciate just how "insanely great" (to use an infamous expression) the Mac Plus is. I'm still trying to get used to RAMdisks, the Switcher, having empty S P A C E on my disks... The best change of all, though, is the fact that MacWrite no longer beeps at me and tells me that I am "Almost out of memory! This operation cannot be undone." All in all, a wonderful experience. More on this fun next time.

**Mail and such.** All of the mail this month is electronic! **Travis Dixon** of Mt. Airy, Maryland (I wasn't aware that there was such a place--the only Mt. Airy I know is in North Carolina) wrote to say hello and pass on some encouraging words about this column. **Steve Taylor** wins the prize for being the first MCI Mail subscriber to send electronic mail to my CompuServe mailbox. Steve wrote to say that he'd heard of a "GREAT deal that is going on in this area now." He reports that Andrew Bilski, the SYSOP of the Mainframe BBS, is selling Avatex 1200 baud modems for $89! "If you can, call it up at 654-2554 [data, not voice] for more details," Steve says. (FYI, Steve: many--but not all--external modems have volume controls. I forgot to put that in my reply to your letter. --CJK) Keep those cards and letters coming in, folks! I love hearing from you, and I *will* write back!

**Rumor from the July meeting.** Tom Warrick, our illustrious leader, informed the membership at the last meeting that September's main meeting would be a good one NOT to miss--whatever type of computer you owned. Tom stressed this, and it was repeated in the Q & A sessions. This sounds slightly fishy to me; makes one think of *next generation products*, doesn't it? Not to give away secrets or anything...

**Topic of the month.** Telecommunications! Having been deprived of access to my modem for the past two weeks, I realized just how dreary life is without bulletin boards. Washington is blessed with an abundance of excellent bulletin board systems (BBS's), most of them free for the calling. But I get ahead of myself...

**What's a modem and why do I need one, anyhow?** For those people who delight in technical jargon, a modem is really a "modulator-demodulator," which is actually just a fancy way of saying it produces two different tones. (The two tones correspond to the binary 0's and 1's of the computer's internal electronics.) The practical application of such a device is that you can use it to send data over ordinary, voice-quality telephone lines. Thus, with a modem, you can use your computer as a terminal for some other, remote computer. (Of course, since your "terminal" is really another computer, you can do all sorts of neat things that real terminals can't. More on that in a moment.)

**Well, what good is it?** Okay, a true-to-life example of what they're good for (taken from my own experience last November): You have a zoology lab report to turn in tomorrow morning, and it's after midnight. Your roommate is pointedly getting ready for bed, but you're just looking over the experimental data for the first time. A graph is obviously required, but you're out of graph paper--and besides, your eyes are fuzzy from lack of sleep. (You really shouldn't have spent four hours in the Oak Room at dinner...) Aha! You remember the graphing program that you have on one of your disks! A quick search reveals that the program has somehow made its way to the Trash. Blast! Now what?? Since the idea of digging around for graph paper doesn't appeal to you (and since the engineer across the hall, whose supply you dip into occasionally, has gone to bed), you remember your trusty modem. Dialing up CompuServe, you bring up one of its Data Libraries. You search the Library for "graph" or "chart," and lo! A program name appears! You quickly call up the description, and, seeing that it's what you need, you order the CompuServe computer to send it your way. Five minutes later, you have the program stored on your disk, and you hang up. A few minutes after that, you've entered your data and produced the desperately needed graph!

**Big deal: I don't write zoology reports.** Okay, fine! But you can do other things with a modem, as well. The best use for a modem, I think, is calling the area BBS's. These wonderful places let you send messages back and forth with other computer users; many of them have files available for downloading, too. Once you've gotten electronic mail, addressed to you personally, you'll be hooked. I know I was.

**What BBS's are the best?** Well, the only list I could give would be kind of Macintosh-oriented, since Mac BBS's are the ones I call. But, since you asked... (or even if you didn't--remember: it's my column, I can do whatever I want!)

•***Washington Apple Pi Telecommunications System*** -- This board is actually 32 boards, running on three Apple //e computers. There's something for everyone here, and the novice as well as the expert will feel at home. At the beginning, there were a lot of hardware and software problems

contd.

with this BBS, but it seems most of them have been remedied...I hope.

• ***The Apple Pack*** -- This board is a highly active, Apple //-oriented board (though recently, a Macintosh section was added and is becoming quite active). An excellent SYSOP (SYStem OPerator) and a large files section make this a very enjoyable board. (370-4223)

• ***Falcon's Eyrie*** -- This board is fast becoming another hangout of the DC Mac crowd. A large files section and an active message base are highlights. The SYSOP is conscientious and likes to interact with his users. Recommended. (341-9070)

• ***TTMMABBS*** -- The name of this board changes frequently, at the whim of the SYSOP, Terry Monks. It is a messages-only board, and it is one of the best in the area. Computers are often a peripheral topic, and just about everything has been discussed at one time or another. The one link all members of the board have is a Macintosh. (471-1378)

• ***The Twilight Clone*** -- This board has one of the largest files sections in the country, with present files occupying about 30 MB (yes, that's megabytes). Most files are Macintosh-specific, though there are some IBM PC programs, as well. The message section is also superb, with many of the TTMMABBS crowd to be found here also. Two excellent SYSOPs keep the system neat and up-to-date. (To my knowledge, this board is also the only board in the area which is registered with Apple Computer and has permission to distribute Apple proprietary software, such as system updates and technical documentation.) Access to the files section costs $25/year and is well worth it. (946-5032)

**Well...** That's enough to get you started. Many boards have a list of other area boards available, and one of the first things you should do is get such a list--half the fun of starting out in telecommunications is trying to find interesting BBS's!

**My apologies...** that this is so short. The combination of my being without a computer for most of this month and the early editorial deadline (as well as my having to go to New York tomorrow morning on very short notice) forces me to end this column here. September's installment will be more substantive, I expect.

**Next month...** Fun and sun in Durham, NC! A look at some engineering software, TML Pascal (maybe--it depends on my finances), and my Mac Plus meets my roommate!

**Last words.** Recommended reading this month is *Structures: Why Things Fall Down* by J.E. Gordon. This is a very readable book about engineering--and it's far from being dry! (A book in a similar vein is Henry Petroski's *To Engineer is Human: The Role of Failure in Design;* I haven't read this one yet.) Recommended viewing: *Aliens.* As terrifying as promised.


my address:

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

CompuServe ID: 72437,3267


**Kyan Pascal contd. from pg 39**

The advantages of KIX, however, are enormous. Although KIX is obviously incapable of supporting UNIX's multi-tasking, it does an excellent job of mimicking its file handling ability. UNIX hackers will feel at home, right down to the "%" prompt. For the rest of us, KIX is a learning experience. Few commands in UNIX are even remotely similar to those encountered in Dos 3.3 and ProDOS under BASIC.SYSTEM. With this newness comes power; KIX allows you to move a whole floppy on to your current working directory just by typing "mv /floppy1 /* ." It allows you to redirect output from commands to other files, just like UNIX. (One glaring omission, however, is the inability to redirect input from the keyboard to a file, allowing b

(I can be reached for comments or questions through MCI Mail, under the name Robert Calhoun.)

**THE BENCHMARK:**

```
program prime (input,output);
const size=8190;
var
  f:array [0..size] of boolean;
  i,k,prime,count,iter:integer;
begin
  write ('Hit <return> to start...');
  readln;
  for iter:=0 to 10 do
    begin
      writeln ('Iteration number ',iter);
      count:=0;
      for i:=0 to size do
        f[i]:=true;
      for i:=0 to size do
        if f[i] then
          begin
            prime:= i+i+3;
            k:=i+prime;
            while k <= size do
              begin
                f[k]:=false;
                k:=k+prime
              end;
            count:=count+1
          end
    end;
  writeln (count, 'primes.',chr(9))
end.
```

# MAC Q & A
## by Jonathan E. Hardis

**Q: What's the best way to get System 3.2 and Finder 5.3? It's hard for me to get to a dealer.**

A: If you prefer to buy them as a product (with printed instructions), you can order Apple Product M0546. If you use purchase orders for transactions, this may be the easiest way. You can still get free updates by asking your dealer to rerecord over your old master disks.

**Q: I got a letter from Spectrum Holobyte saying that Gato didn't work on a Mac+ because the ROMs were buggy (and that Apple had suspended production of the Mac+). What gives?**

A: They were wrong. Gato didn't work on a Mac+ because of their copy "protection" scheme. Gato version 1.4 is no longer copy blocked, and works fine.

**Q: Which of the new Macintosh hard disks is the best?**

A: Most of the Mac's hard disks have been greeted with rave reviews and glowing comments. Many new owners, of all brands, have said "this disk is great, I've had no problems with it." In reality, it's taken at least a year of experience for the "good" disks of the past, and their vendors, to show their true colors. Because there really is no way to know which of the new crop of hard disks will keep their shine, don't worry about it. With the price of hard disks falling so quickly, you can consider them to be an operating expense (for a couple of years of use), rather than a capital expense.

**Q: What about the HyperDrive?**

A: This is a tough one. After being beset by hardware reliability problems, a current crop of HFS System software compatibility problems, and morale problems related to layoffs and the competition by the new SCSI hard disks, GCC is not flying as high as it used to.

**Q: What software compatibility problems?**

A: GCC's HyperDrive software was unduly specific to System 3.1. When 3.2 came out, HyperDrive owners couldn't use it. As this is a complicated and fast changing area, HyperDrive owners should contact their Hyper dealer (Ed. Note: Oh, I don't know.),who can get the information from AppleLink, or GCC for the current story. The situation doesn't speak well for GCC.

**Q: What about the new 30 Megabyte hard disks?**

A: Recent advancements in electronics allow the current crop of "20 MB" disk drive mechanisms to hold 30 MB. Expect most major vendors, including Apple, to rerelease their hard disks in 30 MB versions. Some vendors (notably Micah) may also offer an upgrade. (You would have to erase and reformat a 20 MB disk before you could rerecord on it at a higher density. Back up your files, twice, first.)

**Q: Is an external floppy drive more reliable than a hard disk?**

A: I know of no well supported answer to that. But in either case, you should keep backup copies (on floppies) of all your files.

**Q: Help! My calender clock doesn't keep the date and time.**

A: If the date and time go to weird numbers after you turn the power off, suspect a bad battery or a dirty contact to the battery. If the battery is good, it may be a bad clock chip on the digital board. However, if the problem is just that the date and time don't advance, that's not uncommon. The clock on the Mac can be a bit hard to start "ticking". Remove the battery for an hour, then replace it. If the clock doesn't restart after trying this a few times, bring it to the attention of your Apple dealer. (You will have to reset your Control Panel and Chooser settings whenever you remove the battery. Mac+ owners have to reset the clock with the Alarm Clock desk accessory.)

**Q: How can I get a screen dump (Cmd-Shift-4) when using a LaserWriter?**

A: Do Cmd-Shift-3 instead. That will create a MacPaint document called Screen0. Print it from within MacPaint. (You can make up to 10 screen dumps, Screen0-Screen9.)

**Q: Is it true that Cmd-Shift-3 and Cmd-Shift-4 don't work with all programs?**

A: They do not require the acquiescence of any normally written Macintosh program. However, they do require the presence, in the System file, of the resources FKEY 3 and 4, respectively. If your system disk doesn't have them (say, if a software vendor deleted them from his System file) then the keys won't work. In such a case, copy the application to a disk with a System you got directly from Apple.

**Q: Can I use a 400K external disk drive with the new ROM (Mac+, 512E, and upgraded 512)?**

A: Robert Marder reports a killing bug when using this combination along with System 3.2 (and Finder 5.3). Unless you don't mind losing data until the problem is straightened out, don't do it! (You should be able to get away with using System 3.1 instead.)

**Q: Argh! I've been using some new public domain programs, and one must have a "worm" (a deliberately damaging feature). Even when I change disks, the Mac continues to act abmormally.**

A: Subsequent discussion during Q&A revealed that the problem may just have been an honest bug that occured only on a Mac+. In general, carefully evaluate all software of unknown origin on scratch disks. (Even things on WAP Mac disks may not have been tested as

contd.

thoroughly as commercial software, particularly on many different configurations.) If trouble develops, to totally reset your Mac, leave the battery out for an hour.

**Q: Help! I'm not able to print on the LaserWriter, except in Times and Chicago, since installing the new system software.**

A: The best thing to do is to make a clean start. Get from your dealer copies of the disks that come with the Mac Plus and the LaserWriter (this is important:) Plus. Copy fresh disks, not ones that customers have played with. Then, using ONLY what's found on these disks, recreate the System file as you like it. Bury in a deep hole any old copies of the Font/DA Mover (prior to version 3.2), System, LaserWriter, and the Laser fonts that you have. If you get System 3.1 in this process, once you get it up and running, make a backup copy and try running the System 3.2 update against the backup copy.

**Q: What are the latest versions of the LaserWriter and LaserWriter Plus ROMs?**

A: Versions 23.0 Rev. #0, and 38.0 Rev #2, respectively. Next month, I hope to tell you how to find out what your LaserWriter has. (In the meantime, you can check the back of the Adobe PostScript manual, which I don't have handy, to look up how to do it.) (Thanks to Phil Williams of Apple for this information!)

**Q: How can I send PostScript commands directly to a LaserWriter?**

A: With the new LaserWriter driver, if you create a new font, or rename an old one as "PostScript Escape", text in that font will be passed on to the LaserWriter directly as PostScript. If you know what you're doing, you can mix special PostScript in with normal document printing. Otherwise, there are utilities to send files entirely of PostScript commands to the LaserWriter.

**Q: When printing to the LaserWriter from MacWrite, why is the printing wider than the ruler says it will be?**

A: MacWrite normally treats the ImageWriter as an 80 dot per inch device. That's how the ruler is set up. If you print "Tall Adjusted" on the ImageWriter, you'll see that the ruler no longer fits. That's because the ImageWriter is used at a pitch of 72 dots/inch instead. When using a LaserWriter, you get the same effect as printing on the ImageWriter at 72 dots/inch. That is, the distortion will be the same in most cases. There is an additional complication that arises when you send bit-map pictures to a LaserWriter. Since the LaserWriter is physically a 300 dot/inch device, and since 72 doesn't divide evenly into 300, the LaserWriter driver ends up mapping one inch of dots to 288/300 of an inch on the LaserWriter paper. (That is, four dots to one.) In summary, if the printing on the LaserWriter is wider than you expect (1 inch goes to 80/72 (=1.111) inch), it's the Tall Adjusted effect. If the output on the LaserWriter is narrower than you expect (1 inch goes to 288/300 (=0.96) inch), it's the bit-map effect.

**Q: Help! How do I get the whole Header (and Footer) of a MacWrite document to print in the (Laser) font I want it to?**

A: The font and font size of the Header comes from the first text character in the body of the Header. If you change it, the page number, date, and time will follow. (The first character may be a Return, which is a bit tricky to select.)

**Q: Is a LaserWriter version of the Bodoni font available?**

A: Yes, on the Fluent Laser Fonts disk, from Cassady Company, (800) 331-4321.

**Q: Can I get a Dvorak keyboard on the Mac+**

A: I know of two utilities to get Dvorak keyboards on a Mac: MacQuerty from Paragon Courseware (619) 481-1477, and Keymap, on Quick and Dirty Utilities Volume 2 from Dreams of the Phoenix (904) 396-6952. While I don't know why these shouldn't work on a Mac+, you can call the vendors to find out for sure if they do.

**Q: Help! FEdit (WAP Mac disk 21) doesn't work with HFS volumes (double sided disks).**

A: Right. FEdit Plus is a commercial program (as opposed to FEdit, a shareware program) that can handle HFS and hard disks. While John Mitchell wrote both, he was not satisfied with the shareware response rate. It's a $10 upgrade for registered FEdit owners (including a new disk and a new manual), and $40 at better computer stores. You can also order directly from John by writing to the address found in FEdit.

**Q: Do any RAM disks work on the Mac+?**

A: Yes, there is one that does on WAP Mac disk 53.

**Q: What's the latest on the 4 Megabyte Mac+?**

A: The U.S. and Japan have just reached an agreement on semiconductor trade. Among other things, it will keep the price of the new 1 Megabit RAM chips (needed for such a product) prohibitively high in the foreseeable future.

**Q: What's the latest on the "Open Mac"?**

A: I expect a major new product to be out in January. It will be both much faster and much more expensive than present Mac products, which should continue to be sold. An informant in the audience claimed the machine will have 5-6 slots, a 68020 processor, an optional MS-DOS coprocessor, 2 internal 800K floppies, and cost from $3500-6000, depending on the configuration. In order to fulfill their promise of "more new products in the next 6-12 months than in the preceding 9 years", Apple may have yet more Mac models in the pipeline.

**Q: What about Unix?**

A: Apple has bought out Cadmus Computer, which currently sells 68020 based engineering workstations that both run Unix and support portions of the Mac toolbox. (They demonstrated their Cad Mac at WAP last year.) Apple officials have said publically that the "Open Mac" will have a Unix option. The Cadmus design, should Apple

contd. on pg 45

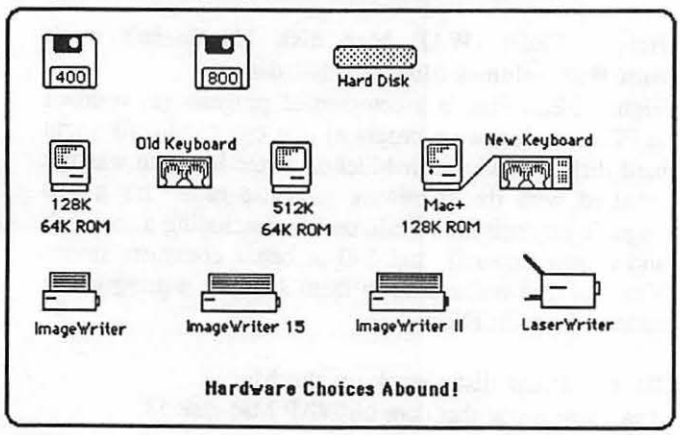
# MacNovice Column

by Ralph J. Begleiter

## Is Macintosh Really User-Friendly?

If you're just getting into the Macintosh world, you've probably bought a Mac Plus or at least a so-called "Fat Mac" (with 512K of memory). It's hard to find the original ("Classic"?) Mac these days, with its mere 128K of memory. (That's considered "puny" by current Macintosh standards.)

In sharp contrast to the Mac's "salad days," there are now literally hundreds—perhaps more than a thousand—Macintosh software titles to choose from. And by now there's a bewildering array of hardware add-ons available. What was once a simple system consisting of the Macintosh, an Imagewriter printer and, perhaps, an external disk drive has become a complex world of peripherals and software choices.




While these developments have undoubtedly improved the Macintosh, they have also taken some of the bloom off Apple's original promise of the Mac as a computer for "the rest of us." Remember the Apple commercials which suggested that if you could point your finger, you could use a Mac? That's not really true any more, because developments have outstripped Apple's ability to keep things simple.

Recently, an obviously-new Macintosh user, writing a book on his 128K Mac, wondered why he was unable to write more than about eight pages in MacWrite before running out of memory. He had tried everything, including stripping his disk of virtually everything surplus to free space.

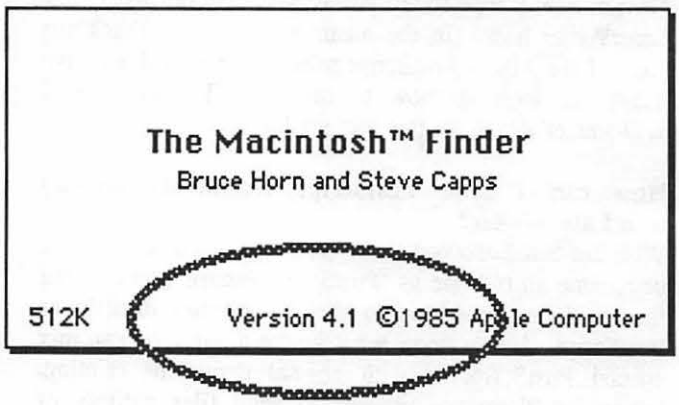
The answer, as older Mac users will remember, is that he was using an original version of MacWrite (2.2). That was the version which held an entire document in memory while it was open. Apple, of course, issued the MacWrite "upgrade" in the spring of 1985. Version 4.5 holds most of a document on disk, storing chunks at a time in memory when those portions of the document are being used. The newer version of MacWrite allows virtually unlimited documents (actually, limited to the amount of available space on a disk).

The MacNovice was directed to his computer store, where the new version of MacWrite was available free of charge. Problem solved.

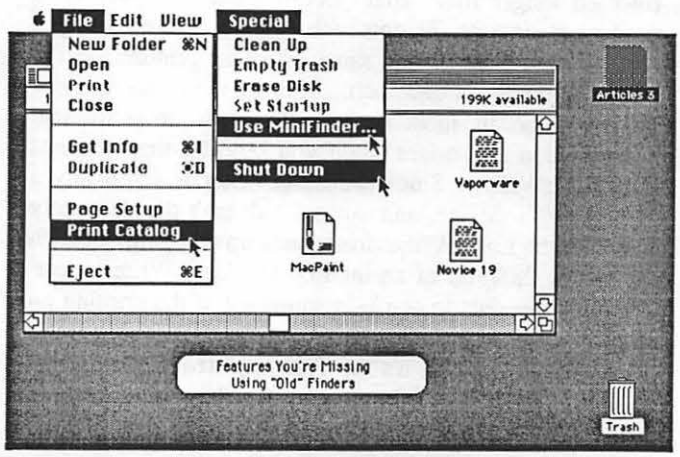
But—why wasn't this Macintosh user aware of the MacWrite upgrade? To this day, Apple has never notified its registered users of the new version of MacWrite. (Most other software firms eagerly notify users when an upgrade is available, seeking to charge more money for the same product with its "bugs" removed).

Think of the "Finder" for a moment. That wonderful innovation created with the Macintosh to help novices find their way around the "electronic desktop." (The Finder is the computer program which makes the Mac's screen show the trash can, the disk icons and the files, folders and documents which are contained on disks.) Do all MacNovices know that the "Finder has been improved ("upgraded") at least three times since the original version was issued with the Macintosh?

*Are You Using THIS Finder?*




Not only has it been improved, but there are now at least two distinct versions of the Finder for use with the two "classes" of Macintoshes (the Mac+ and the "lesser" Macs). The Mac+ version of the Finder incorporates a whole new system of displaying folders and files called "Hierarchical File System". The improvement is wonderful and critical when used with a Mac+, but unnecessary for other Macs.



Believe it or not, there are still MacNovices who are using the original Finder. They're missing the speed and special features (such as the "shut down" command) on the newer version. Why? Because Apple has never to this date informed its registered users of the significant changes!

Mac+ owners—many of whom are MacNovices by definition (because the Mac+ is just a few months old)—are facing monumental problems acclimating themselves to new problems created by the change in filing systems and the switch from 400K disks to 800K disks. The hardware is different. The software is different. Even the internal "permanent" (ROM) software in the Mac+ is new. That's not saying it's not better, just new.

And the problems are compounded for Mac+ owners who have upgraded from "lesser" Macs. Many .old Macintosh software programs don't work well—or the same—on the Mac+. It doesn't matter whose fault that is.

But the fact is, all these problems are the result of a poor user-help system. (In computerese it's called "user-support.") Once most dealers sell you the computer, they really don't want to see you again. Many dealers will help novices overcome some problems. But they don't think to tell users of the MacWrite upgrade. Or the improvements in the "System" software which were also made available free of charge at the same time. They don't like to answer questions about using MacWrite and MacPaint, because they didn't get paid for those programs.

Even with software sales, dealers are often unhelpful. Many dealers just don't familiarize themselves with the products they sell, so they're simply unable to help a MacNovice choose software in the first place, much less solve problems after the purchase.

Apple displays no interest in user-help after the initial sale. In the two years since purchasing my Macintosh, I have received not one mailing from Apple announcing software changes. Nothing about MacWrite. Nothing about the MacPaint upgrade. Nothing about System or Finder improvements. The only mail Apple sends its users is advertising for hardware upgrades. New disk drives, new computers, bigger memories, and so on.

If a user relied solely on the company which sold him his computer, he'd still be struggling with original versions of important basic software, unaware that significant improvements are available, often at no cost. Other improvements are available at low cost, created by users and software firms.

MacNovices would do well to subscribe to one or more publications to stay abreast of developments in the Macintosh world. Even if, as a MacNovice, you have no interest in reading technical articles about how your computer works or about glitzy "cutting-edge" programs involving "artificial intelligence" or three-dimensional graphics, these publications offer basic information about improvements you can use in daily tasks such as word processing, spreadsheet work and graphics. Of course, if you are interested in the "cutting edge," reading current publications is essential.

User group publications such as this one also offer an invaluable "tip sheet" on changes in software and ways to get around problems. These publications can help you decide whether you need new software, new disk drives, more memory, a "hard" disk or even whether you're fine just the way you are! And, of course, the "hotline" volunteers, who have agreed to take phone calls when you're stuck with a "bomb" or with a hardware problem, are equally invaluable resources for new developments in the Macintosh world.

Yes, the Macintosh IS "user friendly". But you must invest some time and interest to be sure your problems haven't already been solved without your knowledge!

Mac Q & A contd. from pg 43

release it under their own brand name, is a high end product that costs in five figures.

**Q: Any other juicy rumors?**

A: In the fall, look out for a new product from a new company called Radius. Radius is made up of former Macintosh designers and other enthusiasts. The product will have a 64K ROM written by Andy Hertzfeld, who calls it probably the best work he's ever done. The nature of the product is still secret, but its purpose is to "shatter all of the existing limitations and remove every possible reason for not buying a Macintosh."

**Q: Speaking of Andy, what's happening with Servant?**

A: By the time you read this, a test and demonstration version should be out. It will self destruct after a period of time. A commercial version will follow. Contrary to published reports, it will not be published by MicroSoft.

**Q: What's the TOPS network, and is it any good?**

A: TOPS is a product that uses AppleTalk to put both Macs and PCs on the same local area network. Any machine can freely use the files on any other. For example, you could run a Mac application that's actually kept on a PC hard disk, or get at a 1-2-3 file on a PC from within Excel. On the PC side, Mac folders appear as directories, and PC programs can use them. The initial reports I've seen are generally positive, although the PC side is said to be a bit buggy. At $149/Mac and $398/PC (including an AppleTalk card), this product begs for a through review in an upcoming Journal!

**Q: Is there any such thing as a surge supressor for the whole house?**

A: Charles Romaine brings to our attention a product from Square-D company. Their J9200-10 Secondary Surge Supressor is installed at the fuse box (by a licenced electrician!). I don't know how effective it might be, but you can get information from Square-D distributors, such as Dominion Electronics.

**Q: After reading June Mac Q&A, can you really put a Mac in the overhead compartment on an airplane?**

A: It depends on the airline. Some airlines allow items up to 70 lbs in the overhead compartment. Others disallow anything except hats, coats, and what won't cause injury if it falls on someone's head.

# VIEW FROM THE HILL
## by Rich Norling

I have been meaning for some time to start writing a regular column for this Journal, but never sat down to write the first one. Finally, this is it. I'll do my best to keep it coming on time every month. As you might guess, the column is called "View from the Hill" because I live on Capitol Hill.

By occupation I am a professional software developer. I write Macintosh software for the retail market (coauthor of StatWorks and Cricket Graph). I also wrote a book on Macintosh BASIC, the language that Apple never officially published. This column will contain a wide variety of information, analysis, and opinion—a little of it mainly for programmers, but most of it for everyone.

The column will have a Macintosh orientation, since I am fully committed to implementing and extending the Macintosh user interface. But I reserve the right to talk about the Apple II family, and even to comment once in a while about hardware from other manufacturers.

**New System Files**

If you have any Macintosh (or Lisa) larger than 128K, you should now be using System 3.2 and Finder 5.3 and the other system software that came on the same disks with them. If you do not have the new system yet, most Apple dealers will copy them to your disks free of charge. Take <u>two</u> disks to your dealer—one for the new System and Finder, and one for the new Printer Installation disk. If you run the Install application on these disks, you can update your existing System files without changing your collection of special fonts and desk accessories.

The new system files fix a lot of bugs that were present in previous versions. Since I made sure StatWorks and Cricket Graph both print in color on the Imagewriter II (if you put in the color ribbon, of course!), I can tell you first-hand that the only Imagewriter file that works fully with the Imagewriter II is the version 2.3 that comes with the newest system software. For the record, here are the exact problems with each version:

Imagewriter File Versions

2.0 - handles ImageWriter II sheet feeder, but no color
2.1 - handles color only if there is at least one black spot on the page
2.2 - sometimes forgets it is talking to an Imagewriter II, and then ignores sheetfeeder and color
2.3 - no known bugs

So, if you have an Imagewriter II connected to your Macintosh, make sure you are using Imagewriter 2.3 before calling software publishers to report problems with their software.

**Apple's Version Numbering**

Speaking of version numbers, this seems like a good time to refresh everyone's understanding of how Apple assigns version numbers to software. Ever wonder why that copy of ResEdit you found was called version 1.0d12? Which is newer—Switcher 5.0a3, Switcher 5.0b1, or Switcher 5.0?

Here is the secret. If there are <u>no letters</u> in the version number, then you have an official, shipped version of the software. Switcher 5.0 (don't get excited, anyone, I haven't seen 5.0) would be an official, shipped version. Switcher 5.0a3 and 5.0b1 would be versions issued informally during development of Switcher 5.0. As far as I know, Apple uses only three letters in version numbers:

d for Developmental
a for Alpha
b for Beta

The letters may be either capitalized or not. Within each category the versions are numbered sequentially, so 1.0d12 is the 12th Developmental version, and is newer than 1.0d3.

Software starts as Developmental, becomes Alpha, lastly becomes Beta, and then ships. Developmental usually means that things are still under construction. Alpha usually means that all (or almost all) the intended features are there, but performance still needs to be optimized and tested. Beta usually means that the software is finished except for testing and debugging.

To answer the earlier question, Switcher 5.0b1 is newer than Switcher 5.0a3, and ResEdit 1.0a1 is newer than ResEdit 1.0d12. Not all publishers use this numbering system. Many publishers use numbers between 0 and 1 to designate versions prior to 1.0.

**A Warning: Beware of Bent Disks**

Perhaps I am braver than some, but I have sent and received those 3 1/2 inch disks by U.S. Mail in normal envelopes with no padding. Until last week, I never had any problems. The problem last week was a disk I received that had a bent metal slide. The envelope containing the disk was apparently dropped underneath something heavy while in transit. I put the disk into the internal disk drive of my Mac Plus before I noticed anything wrong. The disk's contents were read just fine, but the disk would not eject, even with help from a paperclip.

The next morning (why does hardware go bad only after 5 PM?) I took the possessive Mac to a dealer, who had to open the case to get the disk out. It seems that the metal slide was catching on a read/write head, preventing the drive from ejecting the disk. Worse, the drive's efforts to eject the stuck disk damaged something in the drive, so the internal disk drive would no longer eject <u>any</u> disk and had to be replaced.

When you get a disk in the mail, or from anywhere else where it could have been damaged, look carefully at the metal slide. If the edges of the metal slide are sticking out away from the plastic cover, or the metal slide looks bent or crushed, <u>do not</u> put the disk into your disk drive. It may never come out! If you absolutely need to read the information on the disk, it's better to sacrifice a $2 disk by pulling the metal slide completely off than to get it jammed in the drive and pay $150 for a new drive.

The new 800K drives are probably more sensitive to bent metal slides than the 400K drives, because the 800K drives have read/write heads both above and below the disk—twice the number of things to catch on the slide.

contd. on pg 69

**9 AM To 9 PM**
**7 Days A Week**
**By Appointment Only**
**Rush Jobs And Overnight Service Available.**

# MacTography
**Laser Printing Service For The MacIntosh**
*...What are the advantages...*

MasterCard VISA

**Call For Appointment And Directions**
***(301) 424-3942***
**702 Twinbrook Pkwy Rockville, MD**

# MacTography Services

## Desk Top Publishing

- Laser Printing Service
- Optical Scanning-300 DPI
- Custom Laser Fonts
- Work Station Rental $10.00 Per Hour/Includes Software
- IBM File To Macintosh
- Photo Copier Service
- Self Service GBC Binding

## Support

- Consulting/Training
- Laser Fonts Sales,Image Club Century, Zap, Casady
- Laser Screen Fonts
- The LaserSampler II Sample of all Laser Fonts
- Customized Laser System Disks For Proper Screen Formating

## CADD for The Mac

- EZ-Draft 2D $2495.00
- M.G.M. Station 2D $799.00
- VMI 13" & 19" Color Monitors Works with EZ-Draft & M.C.A.D
- Try our demo packages before you buy. $10.00 per hour.
- Training on 2D and 3D packages
- Pen Plotting on the DMP 52-MP.

***MacTography Now Prints From Over 150 Different Laser Fonts On The LaserWriter Plus***

## Other Laser fonts

### Downloadable fonts

- Willamette • MicroFonts
- Styx • Congo • Thames
- Devoll • Spokane • Columbia
- Cumberland • Manistee
- Shadow Effects • Neosho
- Potomac • Rhine • Hudson
- Yukon • Bodoni • SanSerif
- Calligraphy • Regency

## LaserWriter Plus

### ROM based Laser fonts Available for Use

- Times Roman • Zaph Chancery
- Narrow Helvetica • Helvetica
- Zaph Dingbats • Palatino Roman
- New Century Schoolbook
- ITC Bookman Light
- Avant Garde Gothic Book
- Courier • Symbol

## Adobe fonts

### DownLoadable Laser fonts

- ITC Garamond Light
- Glypha Roman • Optima Roman
- ITC Benquiat Book
- ITC Friz Quadrata
- ITC American Typewriter
- ITC Machine • ITC Lubalin
- ITC Souvenir Light

NEW! **LASER PLUS** NEW!

MacTography Now Prints On Hammermills New Laser Plus Printing paper. This paper was designed to produce camera ready copy from the LaserWriter.

- **90% Opacity • 90% Brightness**
- **Smooth Surface • 24# weight**
- **Coating for no wax bleed through**

***...It's Here at Last!...***
## Abaton Scanner

The Scan 300 digitizes drawings, graphics and photographs into the Macintosh. Its 300 DPI resolution matches the LaserWriter. Saves files in Pagemaker, MacPaint and PostScript formats.

- **300 DPI • Fast-Typically under two minutes**
- **Selfservice operation or by Our Operator**

## IBM files Printed

***...Avaliable Soon...***
***Abaton Drive 5.25***

To Help our IBM Friends enjoy the same pleasures of the Mac that we have, we have taken the first steps to make it a little less painful to transfer files between the two systems.

## Laser Sampler II

***...Over 280 Pages...***
***$19.95***

The LaserSampler II has just recently been updated to show all the fonts from Adobe, Zap, Century Software, The Image Club, and Casady. A very Handy Reference Guide.

## Custom fonts

If we do not have the Laser Font that you need we can now produce fonts with the Fontographer from Altsys. Also avaliable are custom logos and special symbols. Any offen used symbol or special charachters can be designed.

# MICROPHONE™, RED RYDER, and SMARTCOM II: A Comparative Review

by Jonathan E. Hardis

I'm setting out to do a difficult task. I've had the opportunity to use and to critically evaluate three recently released Macintosh communication programs, MicroPhone (version 1.0), Red Ryder (9.2), and Smartcom II (2.2B). The big name Mac magazines can give you glossy, glowing articles telling you about the wonderful features of these products. They'll be mostly correct, and I can't compete with their coverage.

Instead, imagine new car reviews by an auto mechanic. He would tend to kick a few tires, and to look for defects that might cause trouble later. He would be less interested in the upholstery and the tilt wheel, and more so in the engine and the brakes. Likewise, this review has a different focus than the others.

These programs invite comparison because they have certain similarities. They all claim "VT100 simulation", they all are tuned for use on the Mac+ as well as the Mac, they all have extensive, well written manuals, they are all reasonably priced, and none of them are copy blocked. Most importantly, they have a common goal of automating your work.

The Competition

**MicroPhone** is the first product released by Software Ventures, the new software arm of Hearst publishing. The program itself is very much the work of Dennis Brothers. If that name strikes a familiar chord, Dennis is also the author of early Basic programs which played music on the Mac (WAP Mac Disk 2). MacTEP, the first communication program for the Mac (Mac Disk 4) is also to his credit, a fact brought home in MicroPhone's magazine ads. Dennis attended MIT during the era of CTSS, the first remote, multi-user, time sharing computer. Since then, he has maintained a professional interest in data communications.MicroPhone sells for about $75. It has a 30-day, money back guarantee of satisfaction.

**Red Ryder** and Scott Watson are almost synonymous. Scott is an entrepreneur in the best sense of the word. Starting with little but good ideas, ambition, and salesmanship, Scott has made Red Ryder into a widely used and popular product. New versions appear frequently, and 9.2 is just the latest (at the time this review was written) in a long series of releases.

The origin of the name "Red Ryder" is a closely held secret. But my guess is that it has to do with Bicycle "Red Rider" poker cards. Red Ryder is not a traditional product. Scott sells it through an honor system. You are free to get a copy from anyone who has it, from electronic bulletin boards, and from user groups (WAP Mac Disks 17.2a&b). You are encouraged to evaluate it and to send Scott $40 if you continue to use it.

As you can imagine, Red Ryder is widely used, both by enthusiasts and by people less than honest. But registrants receive extra services, extra software (most notably a BBS system), and the approval of their peers. One of the ways that Scott maintains this as a viable means of distribution is by his level of personal involvement in after-sale support. More on that later. He is also supurb at projecting guilt to those who don't pay up. While the number of registrants is another closely held secret, by Scott's offhand remarks on CompuServe, I estimate the number to be at least 5000. Not bad for a couple years of work!

In contrast with the other two products, **Smartcom II** by Hayes Microcomputer Products is identified with a corporation, not with an individual. (In truth, Smartcom's authors also frequent CompuServe, where they discuss and support their work.) Hayes made a name for themselves by selling top-quality modems to microcomputer users, leapfrogging the vendors who had been selling modems to the mainframe and minicomputer markets. However modems, like buggywhips, are a doomed commodity. Modern telephone systems—being installed now in businesses and some day in homes—don't require them. So Hayes has a strong corporate motivation to develop a name and a product base in related areas of data communication.

Smartcom II is one such product. Although it shares a title with a product that runs on PCs, Smartcom II for the Macintosh is an original program, structured around the standard toolbox. Smartcom II for the Mac can be bought at discount for about $90.

The Game

I'll be brief as to why one might want to buy a communication program, since this is so widely discussed elsewhere. But a bit of history is important. Before microprocessors, in the '60s and early '70s, computers were big and not at your desk. One means of letting people use them involved a device called a "computer terminal". It wasn't a computer itself, but it connected to one by wire. One device usable as a terminal was a teletype machine, such as you would find at the telegraph office. Only instead of exchanging messages with another teletype machine, it would exchange them with the computer.

As electronics improved, computer terminals were designed with more features. Instead of printing on paper, they could display characters on a screen. And they displayed them on the screen in different manners, such as bright vs. dim. A standard was written (a real one, by a standards committee) in order to allow different manufacturers to make terminals with many features that acted uniformly. However, few vendors promoted their "ANSI x3.64" terminals that way. Instead, they followed the lead of Digital Equipment Corporation (DEC), which developed an ANSI x3.64 terminal (with extensions and omissions) and sold it as their model VT100 terminal. The VT100 was a popular product, and VT100 equivalence became the buzzword.

Soon, personal computers entered the scene. It was immediately obvious that one could program them to function as a computer terminal. And such a program could be simple, letting the personal computer act as a teletype (TTY) did, or

contd.

be complicated, letting it act as a VT100 would. But now, we are dealing with two computers, not just one. Communication software for personal computers not only has the goal of simulating terminals, but also of allowing transfers of disk files between the two computers. Further, they take advantage of the programmability and local storage of the microcomputer to allow you to avoid repetitious typing.

Nowadays, communication software isn't promoted so much as a substitute for the office terminal. You hear of calling Mac to Mac, of electronic bulletin board systems (BBSs, such as the Pi has), and of "information utilities" and electronic banking. Still, good communication software should be true to its roots. When you push a key, that character should be telegraphed out quickly and without complication. Likewise, any arriving text should be displayed promptly and accurately. If a program claims to have the features and behavior of a TTY or a VT100, it should be held to that claim. And then, having accomplished what is old, it should be judged on how effectively it handles what is new.

The Pitch

Each of the programs, MicroPhone, Red Ryder, and Smartcom, has many capabilities. But each emphasizes different things. Emphasis comes from the style of on-screen display, a concentration of similar features, and by what is promoted in advertising.

**MicroPhone's** display is much like a standard window, which substitutes for the screen of the terminal. There are (initially) few distractions; the "terminal" is the focus. If you've used MacTerminal, there is a lot of dèjá vu, until you get to issues of file transfer and "scripting".

Dennis is the godfather of the "MacBinary" format, a now standardized way that many Mac communications programs transfer complete Macintosh files along with some descriptive information. MicroPhone combines MacBinary with XModem and 1K XModem, a recent variant. Additionally, there is particularly great flexibility in handling the transmission of plain text files.

The real hook of MicroPhone is the "scripting". You compose a script to direct MicroPhone to take certain actions in a certain order, automatically. You can sequence the actions you would do manually, subject to the character traffic from the remote computer. In other words, it is a programming language. But don't let that scare you.

For non-programmers, the "Watch Me" feature attempts to write scripts automatically. It makes a transcript of your actions, and of the cues you received from the remote computer that caused you to take them. When you invoke such a script, your actions are simply replayed, subject to the same cues.

For more experienced users, you can compose and change scripts with a special mouse-based editor. All operations are chosen from lists and menus. And you can organize complicated scripts as procedure blocks, as you would organize instructions in a high level language.

Scripts can be used for specific, simple tasks, or they can be long, detailed, and involved. Scripts can be involked by choosing them from a menu, by a command key of your choice, or, if you wish, by an on-screen button. They can also be involked automatically when a MicroPhone document is opened.

MicroPhone documents are organized somewhat differently than you find with other terminal programs. Each document has a single collection of attributes: baud rate, file transfer preferences, terminal options, etc. But each document can contain the phone numbers and scripts for many "services". So, for example, you can easily log into Dow Jones News Retrieval via either Tymnet or Telenet from within the same document, with access to the same scripts.

**Red Ryder** has three main attractions: Scott Watson, Features, and More Features. Though few Red Ryder users have actually met Scott, most would likely count him as their friend. Using the Red Ryder documentation and the national BBS services as vehicles, Scott displays an irreverent excitement about his product and about his customers. To quote from the manual, "I have poured my soul (and most of my assets) into this package, and have released it in this manner to provide you with an alternative to this industry's bad habit of jacked-up prices, unreasonable evaluation and upgrade policies, and copy protection. It's my way of giving them the finger, if you follow me."

Red Ryder has the largest collection of features of the three programs. It is the only one that supports the Kermit file transfer protocol, the only one that allows you to move the VT100 cursor with the mouse, and the only one to implement ACK-ahead XModem downloads (also known as the Turbo, or Fast-Track method). And for CompuServe users, it is the only one to support Vidtex graphics and "B" file transfer protocol. On top of the active window you have a "status bar". Status bars are the keys to many of the features such as an on-screen timer and macro keys (which lets you store typing you must do often).

Red Ryder is also programmable though a feature called procedure files. Unlike MicroPhone, a procedure is written long hand with a text editor (such as the desk accessory MockWrite). But similar to MicroPhone, Red Ryder offers a "write a procedure for me" feature. It discusses options with you as you demonstrate what you want done.

Perhaps more important than the cavalcade of features is that Red Ryder owners are invited to propose yet more features that they'd like to see. Red Ryder attracts followers who want to "join the party", discuss the project with Scott, and participate in (and suffer through) its testing.

**Smartcom II** is distinctive in that it's the most visually oriented of the three. Major functions—dialing, file transfer, printing, and so on—are initiated by clicking on large icons that take up the bottom 1/6 of the Mac's screen. There are animated cartoons when the program is first opened, and when phone calls are placed.

Smartcom has three principle features not found in the others. It is the only one with on-screen help, the only one that allows you full access to the fine points of Hayes brand modems through dialog boxes, and the only one that can transmit real-time pictures, as well as text. (Red Ryder is said to have such a capability too, but it isn't documented yet.) Pictures can be composed ahead of time and pasted into Smartcom for transmission, or they can be drawn interactively, in real time, with MacPaint-like tools. Two people, connected and both running Smartcom, can alternately discuss or modify the figure.

Smartcom automates your work though Autopilots. Like MicroPhone, autopilots are created and modified though a

contd.

mouse-based, special purpose editor. Icons are selected to signify what operations you wished performed. It is not easy to make complicated and intricate Autopilots; they are at their best when specifying straight sequences.

The Score

I evaluated each of the programs two ways. First, I sampled each program in a mix of circumstances that I personally would use a terminal program for. By no means did I test out every feature and claim; that would take prohibitively long to do. Secondly, I composed standardized tests to quantitatively compare the behavior of the programs.

The first test is intended to show how fast each program can "paint the screen". Some mainframe programs are full screen oriented, and don't need to spend time scrolling text from the bottom to the top. The test consisted of sending to the Macintosh the VT100 command to erase the screen, followed by 24 lines of 80 characters each. The cycle was repeated 100 times. The host was a dedicated minicomputer, which also timed the test. The communcation link was at 9600 baud. While every effort was made to reduce delays inherent to the minicomputer, residual delays had the effect of lowering the scores of the fastest programs. The numbers, therefore, are only estimates, not to be quoted out of context or to more than a few percent of accuracy.

The results are expressed in "effective baud". Modem speeds that we are familiar with are expressed in "baud rates", where most often 10 baud is 1 character per second. Here, "effective baud" (a made-up unit) means characters per second, times ten.

The test was repeated four times for each program. Alternately, a 512K Mac and a Mac Plus were used, each saving and not saving the incoming data to disk.

| | Old ROMs | | New ROMs | |
|---|---|---|---|---|
| Program | No-Save | Save | No-Save | Save |
| MacTerminal 2.0 | 7060 | 4430 | 7600 | 5500 |
| MicroPhone 1.0 | 2130 | 1910 | 2430 | 2380 |
| Red Ryder 9.2 | 2230 | 1980 | 2420 | 2340 |
| Smartcom II 2.2B | 8360 | 7910 | 8360 | 8360 |

MacTerminal, another VT100 simulation program is included here for reference. Additionally, DEC VT131 and VT240 terminals ran the benchmark at 8370 and 7350, respectively.

The second test is intended to compare how each product handles scrolling text. This is what one normally encounters when using dial-up services and bulletin boards. The test consisted of sending 2400 lines of 60 characters (plus carriage return and linefeed) and timing how long it took.

| | Old ROMs | | New ROMs | |
|---|---|---|---|---|
| Program | No-Save | Save | No-Save | Save |
| MacTerminal 2.0 | 4150 | 3070 | 4690 | 3620 |
| MicroPhone 1.0 | 1840 | 1660 | 2110 | 2060 |
| Red Ryder 9.2 | 2050 | 1830 | 2270 | 2160 |
| Smartcom II 2.2B | 5290 | 5000 | 6130 | 5650 |

The VT131 and VT240 scored 8370 and 7690, respectively. A detailed discussion of each Macintosh program follows.

Of the three programs, **MicroPhone** is the only one in its first release. It would be natural to expect some number of cosmetic and off-beat bugs. But even as a first release, MicroPhone was a disappointment.

The tests speak for themselves. MicroPhone was substantially slower than the competition, and well below the magic 2400 baud figure. Additionally, MicroPhone had a sluggish and unresponsive feel to it when used at speeds greater than 1200 baud. During periods of continuous transmission from the host, what you see on the screen is well delayed from when it was actually sent. So when you signal the host to stop, your command has a delayed effect.

Of the three programs, MicroPhone was also the most prone to crash. The addendum to the manual warns 128K users that they might experience "unforeseen memory failures resulting in loss of information". But since MicroPhone held all received data in memory, and since there was no way to clear it periodically, I attributed some of my crashes after periods of heavy use to unforeseen memory allocation failures, even on a 512K machine. Further, as I watched MicroPhone go about its business, it was clear that it had unusually complex and intricate internal mechanics. I attribute many of the random and unrepeatable crashes to the difficulty of debugging such a dynamic program.

One of the things MicroPhone tried to emphasize was the VT100 simulation. However, there were problems. MicroPhone defines VT100 very narrowly as the base model of the VT100, without the common "Advanced Video Option". This means that you can't get bold (bright) style highlighted text. The competition implements more of the ANSI x3.64 standard. I was very surprised that MicroPhone did not respond entirely correctly to the demonstration of DEC's Electronic Store, by now a standard benchmark of VT100 equivalance. And an on-screen "No Scroll" button wasn't synchronized with the Control-Q and -S keys. By habit, I tend to go for the keys.

I was particularly bothered by the way MicroPhone handled the VT100 command to go into 80 column mode. In addition to doing what needed to be done (twice), it did a lot of needless work while showing off how well it could juggle more than one task at a time. In MicroPhone's favor, it was the only one of the three programs to respond correctly (eventually) to this VT100 command, as MacTerminal does.

MicroPhone was chock full of other nuisance bugs. Item: when I backspaced through text, the blinking cursor stayed in the off phase, so I lost track of where I was. Item: in the first test, the last line of each screen was not saved to disk, and was lost. Item: MicroPhone did not handle uninitialized disks properly; if you insert one, you lose the use of the drive until you exit the program. Item: uploading and downloading with a one disk system failed because excess disk swapping was required. Item: Enter and Return in some dialog boxes didn't dispose of the dialog, as per Apple's User Interface Guidelines. Likewise, sometimes double clicking meant to confirm a selection had an unintended finality.

Microphone's scripting is by far the most elegant in concept. But I have doubts about how useful the "Watch Me" feature will be to non-programmers. The nature of remote computing is such that many unexpected things happen. The more complicated the script, and the more novice the user, the

contd.

greater the chance that the script will fail or have an unintended effect. Further, MicroPhone must necessarily make assumptions (which may or may not be correct) as it composes a "Watch Me" script. I found it good practice to make my own decisions and to edit the scripts.

While MicroPhone may indeed develop into the "power user"s automated communication program, there will still be no substitute for skill, experience, and human intervention. I also believe that it will take at least another revision to get there.

**Red Ryder** has undergone considerable improvement on the way to version 9.2. Of the three programs, it is the easiest for you to evaluate for yourself since it is so widely available. But despite Red Ryder's widespread acclaim and loving following, I have serious reservations about the nature of the product.

Overall, Red Ryder was also sluggish and unresponsive at speeds greater than 1200 baud. It was better than MicroPhone in that it was quicker to signal the host computer to slow up. So commands that you type take effect nearer to where you intended them to. However, it was not as well thought out as MicroPhone in that you don't have a Pause/Resume (No Scroll) button to immediately stop scrolling. (Although that is the intent of Red's ^Q/^S button, Red requires the host to act, which may take a few seconds.)

Of the three programs, I liked Red Ryder's organization and layout the least. It's the only one of the three that didn't allow for multiple documents in which you could save different settings for different hosts. (You can get a similar effect, indirectly, by creating procedure files meant for different hosts.) The paradigm of the "Status Bar" replaced the Mac's traditional pull-down menus and dialogs for things which need not have had a continued presence on the screen, such as the baud rate and tab stop settings. And there was no good way to capture to disk a transcript of an on-line session. The transcript you get is illegible since it includes your typing errors and corrections, which are not seen on the screen.

Red Ryder tended to work the way Scott thought it should, rather than the way the outside world expected. The way he handled carriage return and linefeed characters in "TTY" mode, for example, was nonstandard and unlike a real TTY. MacBinary and Kermit text transfers did not follow their respective standards. In particular, this made Red's Kermit incompatible with Kermit-32 in the VAX world.

Scott writes in the manual, "A lot of terminal programs purport to emulate a DEC VT100. I can guarantee that many don't even come close." His remark was prophetic because, of the three programs, Red's VT100 simulation was the poorest. My PDP-11 at work has a command shell that uses VT100 features. Red Ryder not only didn't respond to them correctly, but they give Red Ryder the visual equivalent of a nervous breakdown. (The screen would fill with garbage from a random section of memory, and other irregularities would develop.)

Red Ryder did not crash as often as MicroPhone did, but it did bomb (irreproducibly) on occasion. It seemed to be weak on "defensive programming". For example, the manual warns "All procedure command lines must be 80 characters or less. Having a line longer than this can cause serious and unpredictable errors." As another, Red has a feature which can transfer control to another application. However, "If this (application) doesn't exist, you will probably get a system crash - so be careful." It would be trivial for Red Ryder to check for the existance of the application, and to do something more graceful.

I'm bothered, too, about the development cycle of Red Ryder. Scott has relied more heavily than most developers do for feedback and bug reports from the general population. I'm reminded of Detroit's propensity for letting the car dealer, and hence the consumer, be the final quality control inspector. In the words of my brother-in-law, "I wish they'd finish building it at the factory."

Scott's policy is simple—if you find a bug, he will fix it or refund your money. In a way, that's fine, and I'm not one to knock developers who rapidly fix bugs. But on the other hand, a reviewer must report that Red Ryder is subject to frequent revisions, which must be downloaded or obtained at your own expense, and tends to be not fully tested upon release.

**Smartcom II** was quick and very well polished. Of the three, it was the only one that never crashed while I used it, and I used it more than I did the others. It was hard to find faults that were not there by design, and the serious bug I did find (involving doing operations in a funny order) was intercepted gracefully.

In an attempt to be helpful and informative, Smartcom aquired a strict and authoritarian flavor to it. Small missteps, such as clicking in useless places, led to beeps, rather than being ignored. Minor errors, such as typing before the phone was dialed, led to alerts. And you don't have complete freedom to set things like stop bits and parity. Smartcom enforced against "illegal" combinations, which are "highly unlikely" to be used by a host.

Smartcom was specialized for Hayes modems and others that were strictly equivalent. Unlike the others, there was no generic "Dial" command that worked on modems that implemented only a portion of the Hayes features. Smartcom will, in fact, work with any modem. But for the novice, it's a bit frustrating to figure out how. (See the Mac Q&A Column in last July's Journal.)

While being prim and proper about some matters, Smartcom was too loose about others. Like the previous two programs, Smartcom's VT100 simulation wasn't perfect. Most notably (and by intent) bolded (highlighted) characters appeared as reversed (white on black) characters, what should have been a separate and distinct VT100 attribute. Like Red Ryder, Smartcom did not follow the plain text MacBinary standard. And again like Red Ryder, Smartcom's capture files did not reflect the typing corrections as seen on the screen.

Smartcom did not allow protocol file transfers while capturing the on-line session to disk. I feel that this is an arbitrary restriction. And Smartcom did not implement the CRC version of XModem, which caused delays on hosts that offered it.

Smartcom had a fixed window to represent the terminal. It was a bit more cramped than the others in order to accomodate the oversized icons at the bottom of the screen. Smartcom did not support concurrent DAs, such as MockWrite or Q&D Editor, since there was nowhere open on the desktop to leave them.

Recommendations

Which program to buy depends a lot on where and how it will be used. If VT100 equivalence is important, you would

contd. on pg 54

# FREDERICK APPLE CORE

## A SLICE OF THE WASHINGTON APPLE PI

**OFFICERS & CHAIRMEN**

| | |
|---|---|
| President | - Scott Galbraith |
| Vice President | - John Lee |
| Secretary/Treasurer | - Bruce Taylor |
| Librarian | - Tony Svajlenka |
| Newsletter Editor | - Kathy Kenyon |
| Newsletter Chairman | - Lynn R. Trusal |
| SIG MAC Chairman | - Lynn R. Trusal |
| SYSOP | - Scott Galbraith |

---

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

Upcoming Programs
September 11 - Program to be announced

**HOTLINE MEMBERS**

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

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

---

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

SIG MAC Upcoming Programs
August 26 - Boston Mac Expo Discussion
September 23 - Desktop Publishing

# APPLETALK, LASERWRITER AND HARD DISK SERVER

## by Lynn R. Trusal (Frederick Apple Core)

In the May issue of the WAP Journal, I discussed Macintosh communication with the rest of the computer world. Part of that article dealt with AppleTalk. In this article, I will discuss in more detail my experiences with the AppleTalk network and its peripheral devices. I will not go into detail about why we selected the Macintosh as the microcomputer of choice. You may refer to past articles in the September,1985, and February, 1986 WAP Journals for that answer.

I installed the AppleTalk network to connect eight Macintosh computers with a LaserWriter printer and hard disk server. Once all the computers were hooked together by AppleTalk connectors and cabling, I added the LaserWriter and 70-megabyte Sunol hard disk to the network. Both of these peripherals were located in a central computer room. I will discuss each component of the network individually.

AppleTalk Network

The most useful guide for installation of AppleTalk was the "AppleTalk Personal Network" booklet (28 pp.) contained with each "AppleTalk Connector Kit." One connector is required for each Macintosh or peripheral device connected to the network. I discussed in some detail what was involved in the installation of the network in the May Journal article. Basically, anyone can do the necessary wiring by following the instructions contained in the "AppleTalk Custom Wiring Kit".

Throughout the network, all AppleTalk connectors have two cables attached except for ones at ends of the network. This is true because AppleTalk is not a continuous loop network, but has discrete beginning and ending points located at the last Macintosh or peripheral at each end of the network. Except for someone disconnecting the cables or not pushing them in all the way, we have had no problems with the AppleTalk network itself.

LaserWriter

The LaserWriter was easy to install and was operational in a matter of minutes. All that was required was connection of the AppleTalk connector, setting one switch and insertion of the disposable toner cartridge.

The LaserWriter is clearly the most fun computer peripheral that I have ever had the pleasure of working with. The output is of such high quality that you almost look for new applications for its use. By now, I am sure that people in the Institute are tired of me coming to them with my latest creation. So far the novelty hasn't worn off!

As most of you know, the original LaserWriter has four fonts in ROM. These include Helvetica, Times, Courier, and symbol fonts. I have found Helvetica and Times the

contd.

most useful. I use Times for letters and manuscripts even though Courier is the most typewriter like. Why use a font that looks like a typewriter when you have the LaserWriter at your disposal? I find Helvetica best for posters, announcements, office memo's, etc. Unless you are using it primarily for desktop publishing, I doubt that you will have a need for the capabilities of the LaserWriter Plus.

The LaserWriter has been largely trouble free. We did have an initial problem with smearing at one spot of each page but this was quickly corrected by the local Apple dealer.

Even though each investigator has an Imagewriter printer, I am finding that most users prefer to use the LaserWriter even for draft output. The major disadvantage is its location at one end of the hallway which is not always convenient. Even though the printer has separate cassettes for legal and letter size paper, it is still necessary to place letterhead paper in the cassette prior to printing a letter. It would be nice to have two separate paper trays that could be software controlled. Are you listening Apple? The placement of another Macintosh in the computer room allows users to print from that computer without having to walk the hall several times.

Some writers feel that the LaserWriter is slow executing printing jobs. I have not found this to be true, and its speed is much preferable to the relatively slow Imagewriter, which is also noisier. Most print jobs execute in about 20 seconds if the LaserWriter fonts are used. If you combine graphics and text on the same page or use fonts such as Fluent Fonts, a one page print job may take 20 minutes to execute. Geneva font defaults to Helvetica, New York to Times and Monaco to Courier if "font substitution" is selected. It is not necessary to change on screen fonts to LaserWriter fonts but you can not always be sure how the final output will look if you do not change to the LaserWriter fonts before printing. Spreadsheets such as Excel are normally done in Geneva for Imagewriter printing but may be quickly changed to New York from within Excel so that the LaserWriter will print the worksheet in the Times font.

Another minor problem that has been documented in Macintosh magazine articles is that WYSINAWYG (what you see is not always what you get). See the November, 1985 issue of A+ Magazine (page 157) for an article on this subject. I have found this to be true with straight lines that go all the way across the Macintosh screen but do not always print all the way across the page on the LaserWriter. This appears to be true when I use Helvetica or Times as the on screen font. This does not happen with a dashed line which is somewhat of a mystery? I think the number of times this happens is limited and is not a major problem. (Ed. Note: this problem happens often during Journal preparation.)

The network has no print spooling capability so LaserWriter print jobs are queued in the order received. This has the effect of locking up other Macintoshes that are trying to print until their particular job is executed. This has happened only rarely and I have not found this to be a liability. There are now print spoolers that can be added to the network to solve this if it becomes a problem.

We were able to print over 4,000 pages before replacing the first cartridge and many users get 5,000. It is apparently related to the amount of text printed versus graphics which use more toner.

Sunol Hard Disk

The Sunol hard disks received some bad publicity from Washington Apple Pi's attempt to use a 16-megabyte hard disk for its BBS system. Much of the dissatisfaction appeared related to misinformation by Sunol on the capabilities of the drive and its use with an Apple II based BBS system. I have no reason to discount the problems that WAP had with the Sunol product but my use of their hard disk was strictly with a Macintosh based system. So far, I have had only minor problems with the Sunol drive. As an aside, I understand that Sunol is having financial difficulties and has filed for reorganization so the future of the company may be in doubt.

Sunol Systems of Pleasanton, CA was one of the first companies to offer a hard disk server for the Macintosh and AppleTalk. They were also the first company that offered a hard disk with a capacity greater than 30 megabytes. It was this need for a larger capacity disk drive that caused me to chose the Sunol 70-megabyte hard disk for use with our AppleTalk network.

The Sunol family of hard disks for the Macintosh have undergone many changes from their first introduction including several upgrades of the system software. Until recently, Sunol had no "file server" capability and did not support the SCSI interface of the Macintosh Plus. Sunol as of April, 1986 offered hard disks referred to as Sun MUFS for "Multi User File Server." This new family of hard disks supports the SCSI interface and allows multiple users to access the same volume and same files simultaneously. The ability to put one copy of commercial software on a hard disk and have multiple users access this one copy is still software dependent. Manufactures must release multi-user copies of their software before this can be accomplished. The Omnis 3 and Double Helix databases are the only two Macintosh programs with multiuser versions that I am aware of. The Sunol SUN*MUFS are available in 21, 45, 70, 110 and 160 megabyte models. List prices range from $2,595 for the 21 megabyte version to $9,295 for 160 megabytes. Addition of the 26 megabyte SUN*SAFE tape backup adds another $1,350 to the price. For those users with existing Sunol hard disks an upgrade kit is available for $949. Support for the HFS is still in development and will only require a software update.

I ordered the Sunol 70-megabyte hard disk server with SUN*SAFE (26 megabyte 0.25" streaming tape drive) for backup. The Sunol drive was connected to AppleTalk with an AppleTalk connector which was in turn plugged into the connector of the LaserWriter. Before, I go any further, I want to say that the documentation supplied with the Sunol hard disk is absolutely the worst documentation that I have ever seen for any computer or peripheral. It looks like it was written by a junior high school student during recess. For a company that has been selling hard disks since the introduction of the Macintosh almost 3 years ago, their documentation could be much improved. A spokesperson for the company told me they had hired someone to improve the documentation. They should not have to work too hard to achieve that goal! Basically, the documentation is very sketchy, was not updated for recent changes, included misspelled words, and did not cover many aspects of the hard disk.

contd.

Since the hard disk would provide hard disk storage for a number of investigators in my research division, I decided to partition the disk into 7 virtual drives which were further subdivided into volumes. Investigators sharing the same office shared the same virtual drive and were each given 3 volumes ranging from 2 to 3 megabytes each. Partitioning of the disk requires some forethought since redefining virtual drives causes problems with other virtual drives. The largest volume of 3 megabytes was given to MacWrite and a second system folder. MacPaint and Excel were the major programs placed on the other volumes. Only programs purchased by individual users were placed on their volumes of the hard disk.

Each user was then given several hours of instruction and their own Sunol start-up disk with which to "boot" the system each morning. The disk is inserted into the drive and "Sunol Mount" is chosen from under the "apple" of the desk accessory menu. A dialog box then appears on the screen which allows the user to flip through each virtual drive until they reach their own. The user then has the choice of opening one or more volumes to the desktop. Floppy disk icons also appear on the desk top if disks are placed in the external or internal disk drives of the Macintosh. There is no way to tell a hard disk volume from a floppy disk icon unless the user names them in a distinguishing manner.

Unless password protection is added to a volume or virtual drive, all users on the network may access all files. We decided to not use password protection because of potential problems if the user forgets the password. Instead, each user was told to save sensitive files only on floppy disks. The advice that I gave each user was to backup all important files onto floppy disks since hard disk are known to occasionally "crash". I am not sure how useful the tape backup is, if users follow this advice. Even though each tape can back up 26 megabytes, only one volume or virtual drive can be backed up per tape. The backup process must be done when the network is not in use and it takes about 45 minutes to back up one virtual drive. Backup represents a mirror image and individual files can not be backed up separately. The tape must be formatted, then verified for bad sectors and then used for back up. Programs can be put back on the Sunol with ease, so backup of files is the only reason to use the tape backup system. Since users are continually adding new files to their volumes you would have to backup each virtual drive on a regular basis. (Ed. Note: It was for this reason that the Sunol was discarded for use by the BBS committee. Files became corrupted and were backed up as corrupted files, and subsequently reintroduced, unfortunately, as corrupted files.) If users backup important files onto floppies, there is little use for the tape system as I have configured the system.

As it stands now, we do not leave the Sunol or the LaserWriter turned on overnight or on weekends. I use a programmable timer which will turn on both peripherals each morning and off each night as the best means of automating the process. Otherwise you are dependent on the last user remembering to do so or leaving both peripherals on 24-hrs a day. So far the timer has not caused any problems.

Although multiple users on the Sunol will slow the operation of the disk, it is rare when more than a few users access or save to the hard disk at the same time. The worst case occurred during the instruction period when all eight users were told to perform the same action at the same time. This resulted in 1 or 2 minute delays before large files appeared on the screen of all users. This was atypical and average access times have been reasonable.

Conclusions

Overall I have been very pleased by the operational capabilities of the AppleTalk network and each of the shared peripherals. We have experienced no major problems and I am hoping that this continues. I find the AppleTalk network ideal for small working groups within a department or division organization. It would not be adequate for an institute-wide application. The speed of the network, which is not fast by network standards, is hardly noticeable and more than adequate with our applications. The LaserWriter will more than pay for itself with nine users sharing it. You may actually be able to decrease the number of Imagewriters purchased if you buy a LaserWriter. In reality, none of our users use the Imagewriters any more!

Although the version of the Sunol hard disk we have is not a true file server, this is not a liability since we do not have the need to share the same files. This capability is now available from Sunol and other manufacturers if needed and as such is no longer a missing link for the AppleTalk network. The cost to hook each Macintosh to the network was $37.50 (wholesale) for the AppleTalk connector and $300 to $500 for cabling for the entire network. Many of the IBM networks cost $700 to $1,000 just to hook one computer to an existing network. Each Macintosh, Imagewriter and external disk drive averaged $2,000 to $3,000 per user depending on time of purchase. The LaserWriter cost $5,200 and the Sunol hard disk $5,500. Therefore, the total cost of the entire network including 9 Macintoshes was about $34,000. A similar network today would cost about $25,000 because of price decreases. When compared to other networks available on the market this cost is unbelievably low. You can easily pay $34,000 for just network hardware without any laser printer or computers. If your company or department has need for a local area network, check out AppleTalk and the Macintosh.

Comparative Review contd. from pg 51

be wise to test drive any program, including these three, before accepting it for your situation.

Smartcom is the clear choice for an office setting where high speed terminals are the norm. Hayes has produced a highly professional product that's worthy of their reputation.

Red Ryder, and the sense of community that comes with it, are useful and appropriate for Bulletin Board enthusiasts. Not only is it the least expensive program, Red Ryder gives the hobbiest plenty to explore.

MicroPhone, as it stands, would be my choice for making short, routine transactions with mainframes. For getting stock quotes or electronic mail, MicroPhone's scripting is the most flexible. MicroPhone is also to be prefered for certain kinds of file transfers. However, before I would use it as my general purpose communication program, I would wait for at least the next version to be released.

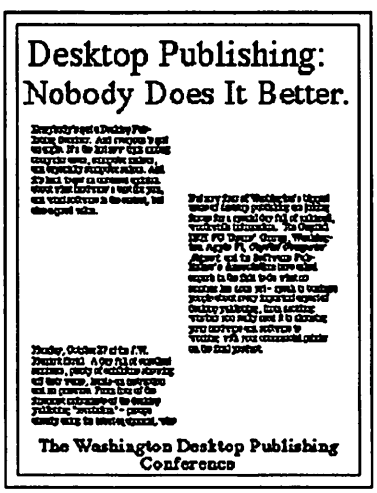
**MicroPhone:** Software Ventures Corporation, 2907 Claremont Ave., Suite 220, Berkeley, CA 94705. Phone: 800-336-6477. $75, plus $5 S&H for phone orders.

**Red Ryder:** FreeSoft Company, 10828 Lacklink, St. Louis, MO 63114. Phone: (314) 423-2190. $40.

**Smartcom II:** Hayes Microcomputer Products, Inc., 705 Westech Drive, Norcross, GA 30092. Phone: (404) 449- 8791. $149 suggested retail, $89 at MacConnection.

# Desktop Publishing: Nobody Does It Better.

Everybody's got a Desktop Publishing Seminar. And everyone's got an angle. It's the hot new topic among computer users, computer makers, and especially computer sellers. And it's hard to get an unbiased opinion about what hardware's best for you and what software is the easiest and, most important, are good values.




But now four Washington groups are joining forces for a special day full of unbiased, worthwhile information. **Capital PC User Group, Washington Apple Pi,** ***Capital***

**Monday, October 20, 1986**
**9 a.m. – 5 p.m.**

**Exhibits only: $5 ($7 at door)**
**Exhibits and seminars: $30 ($40 at door)**

***Computer Digest*** and the **Software Publishers Association** have asked experts in the field to do what no seminar has done yet – speak to the spectrum of potential users, from business people to home users, about every aspect of desktop publishing.

Monday, October 20 at the JW Marriott Hotel in downtown Washington--Come for a day full of excellent seminars, plenty of exhibitors showing off their wares, hands-on instruction and no pressure.

Write for information:
P.O. Box 19763
Washington, DC 20036

Exhibitors – (703) 525-7900

## The Washington Desktop Publishing Conference

**Monday, October 20, JW Marriott Hotel in downtown Washington**

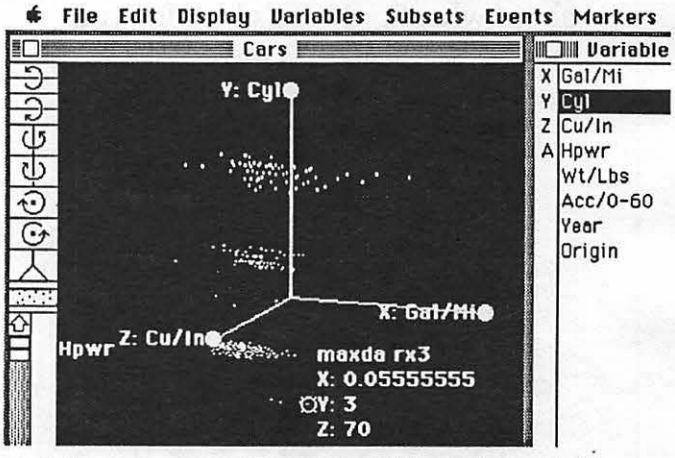
# Softviews
## David Morganstein

This month we look at three packages which can help you with statistical analyses. However, they are as different as night and day. The first, MacSpin, fits the mold of a traditional statistical package. It is written in Fortran and was developed on a mainframe, then ported into the Macintosh. While it is surprisingly Mac-like, it is a command language system requiring you to type in variable names and options with each command. The second, Systat, was developed for the Macintosh and is totally Mac-like both in operation and in what it does. It does not perform traditional parametric analyses and it does not print out estimated coefficients and their statistical significance. Rather it lets you "look at" your data as only the Mac can allow! The third, STAT80 (written in compiled Fortran), is not a newcomer in the statistical support arena. While it is weak in several important aspects of the Mac interface, its developers have expressed the intention of continuing its evolution into a more Mac-like package.

MacSpin. ($D^2$ Software Inc.) Are you a data analyst who works with multivariate data? Have you ever looked at a scatterplot to try to search for relationships between two variables?If so, a most unique tool is available to you in the form of MacSpin. This review can only skim the surface in describing what MacSpin has to offer. MacSpin can take a file of data containing hundreds, even thousands of records, allow you to select X, Y and Z axes from among the variables and produce a 3-dimensional scatter plot which can be rotated in real-time as you study the dispersion cloud for patterns, clusters and directions of variability. You have to see it to believe it!

There is nothing like it on any machine I am familiar with, including main-frame services. The closest approxima- tions are products on other micros which give you a pseudo 3-D scatter as a projection onto a plane. To obtain a different perspective, new position coordinates and viewing directions must be given and a period between several second to several minutes must pass before the new view is displayed. With MacSpin, you point to the direction of rotation and hold the button down, the cloud rotates at a rate of several degrees of arc per second of time. A 360° rotation is completed in less than 20 seconds even with 2,000 points in the scatter!

The main display, shown below, offers choices in the appearance of the scatter plot, such as a black on white view or vice versa, position of the origin and other options. On the left side of the window you see the choice of rotation (clockwise or counter-clockwise) in any of the three display axes. In the lower left corner, you see an elevator box which tells MacSpin if you wish to filter the display on a fourth variable. The filtering, referred to as animation, can either be based on a "less than" (referred to as "masking") or a "within a range" criteria (referred to as "slicing"). The Variables menu allows for creation of new variables from old, either by transformation or random number generation. Subsets of records can be selected using boolean rules about the variables. The display can then be restricted to these subsets or special markers assigned to the points to allow for easy recognition. To the right, you see one of three other windows which form the main display. The variable window lists all of the variable names in the file. By selecting a name in the variable window and dragging it into the 3-D area, an axis can be redefined. A new plot using the newly selected variable as a replacement will be drawn automatically. The animation variable, below it is Hpwr (horsepower) and is denoted as A, can be changed in a similar fashion by clicking and dragging a different variable name to the elevator box at the bottom left of the screen.



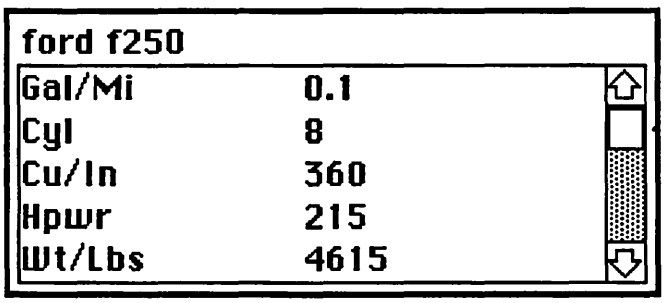

Below you see a piece of the Edit window. Similar to a scrollable spreadsheet display, this window allows you to enter new or make changes to existing data. Data can be imported easily from other applications via the clipboard or by reading a text file. The first line of the file must contain the variable names, each additional line one record. All items must be separated by spaces. An optional record label, denoted the Event and shown in a special window, can be added as the last field of each data record. Records can be selected and highlighted in the display individually or in groups by clicking on an event or shift clicking on more than one event. In a following display, three areas constituting records in a Housing file have been selected. You can see their names are selected in the event window.

Cars

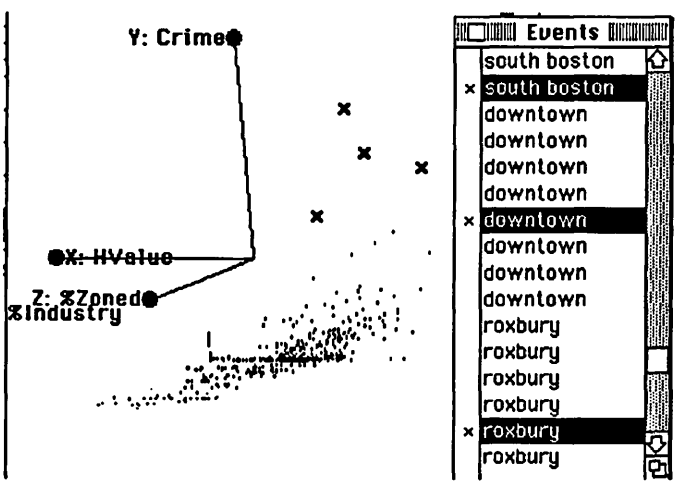
| | Gal/Mi | Cyl | Cu/In |
|---|---|---|---|
| chevrolet ch... | 0.05555555 | 8 | 307 |
| buick skylar... | 0.0666667 | 8 | 350 |
| plymouth sa... | 0.05555555 | 8 | 318 |
| amc rebel sst | 0.0625 | 8 | 304 |
| ford torino | 0.0588235 | 8 | 302 |
| ford galaxie... | 0.0666667 | 8 | 429 |
| chevrolet i... | 0.0714286 | 8 | 454 |
| plymouth fu... | 0.0714286 | 8 | 440 |
| pontiac cata... | 0.0714286 | 8 | 455 |

contd.

Not only can you display and rotate the points of the dataset, you can select records and the corresponding points will be displayed in a highlighted form. By holding the option key when you click on a point, its event label as well as the X, Y and Z values are displayed. The results are visible in the first screen shot seen earlier in which a Mazda RX3 was selected. By holding down both command and option key when you click on a point, a scrolling window, shown below, opens, allowing you to view all of the variable values for that point. The point selected represented a vehicle, in this case a Ford F250 truck. You can see the values of the first five variables and can easily scroll to the remaining ones. This feature may allow you to spot the reasons for an outlier or unusual point positioned away from others.

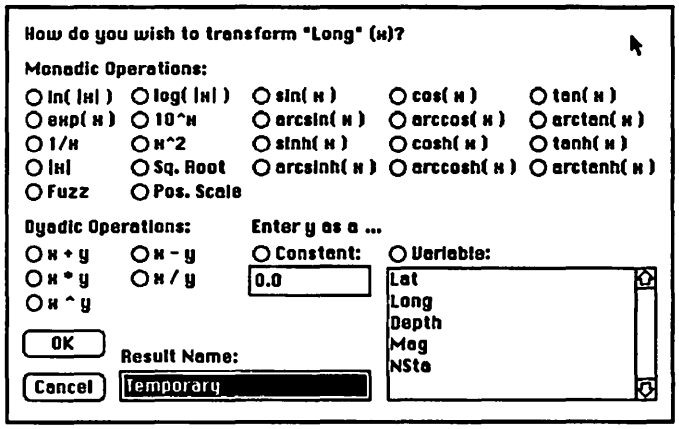



On the flip side, you can create a 2-D box by clicking and dragging to surround a set of points of interest and their corresponding event labels will become highlighted. In the following plot, the High Crime areas have been selected and given a special marker of an "x" for easy recognition. A quick scan of the Events window has identified three of the areas as South Boston, Downtown and Roxbury.




Many statistical analyses are conducted on transformed versions of the original data. From the following window, you see that MacSpin is very complete in providing a wide variety of functions for this purpose. A single variable can be transformed or two variables combined. By the way, the "Fuzz" operation adds a bit of noise to the variable.

**Documentation.** Because MacSpin is so unique, its manual represents a challenge. It must not only show the user how to operate the program, it also must explain why a program like this can be so helpful. I find that it succeeds on both counts. The 180 pages not only guide you through the use of MacSpin but demonstrate enough of exploratory data analysis that almost anyone familiar with elementary




statistical plots will be inspired to "look around" their data set. Several example datasets are included with the disk and are explored in the manual.

The manual begins with an overview of the kinds of patterns MacSpin can be used to locate. It then describes most of MacSpin's functions before getting into the nitty-gritty of how to use it. I found the Table of Contents and the Index to be a bit brief, so a thorough reading is in order. However, the manual is free of a lot of statistical jargon and certainly does not require an understanding of subjects like multivariate analysis to appreciate.

**Summary.** If it hasn't come through, I like this package. I found few, if any, faults with it. I occasionally found the axes labels disappearing as I switched between subsets. This might be a "bug" to be corrected in the next version (1.1). The $D^2$ Software, Inc. folks have already announced an upgrade and have included a description of the new features in their first manual, thus avoiding errata sheets. Features of the new version include: creating linear combinations from existing variables and finding subsets of the variables by entering a search string.

There are many data analysts schooled in the use of esoteric techniques which resolve themselves with computer printouts of seemingly mysterious coefficients. MacSpin will not replace these approaches but it surely will augment them. A few minutes of perusing a set of records will convince anyone that there is more in there than meets the eye, at least before MacSpin. Here is a perfect example of what the power and graphics of the Macintosh can do for which there are really no good alternatives. As I said at the beginning, I can not describe the power inherent in the simple operation of rotating a 3-D display for gaining an understanding of what the data points are telling you.

$D^2$ Software, Inc., 3001 N. Lamar Blvd, #110, Austin, TX 78766-9546. Phone (512) 482-8933. Price $99.95.

SYSTAT (Lee Wilkinson). I consider this program to be one of the most powerful statistical packages available to Apple II (under CP/M) or Macintosh users. Systat is not a newcomer to the statistical package market. The current release, version 3, contains a much expanded manual, a full-screen editor and several new procedures. As you will see, it contains many characteristics of software found on mainframe systems. The Macintosh version has been re-released in an enhanced form which supports most of the Mac interface.

Systat, written in compiled Fortran, consists of separate

contd.

modules supplied on five 400K disks, each of which uses a surprisingly simple set of commands, given the powerful procedures it offers. The new version contains a menu which allows you to switch easily from one module to another without leaving and returning to the desktop. If all of the modules are to be used, a hard disk is recommended to avoid swapping disks when switching between modules.

**Overview.** Statistical packages either limit data sets to those which fit in memory, or read the data set for each analysis. The former approach provides speed of analysis while restricting the size of problem which can be handled. Systat takes the second path. Files of unlimited number of records, with up to 200 variables, can be analyzed, but not quickly. For example, a single cross-tabulation from a file of 1700 cases and 40 variables took a little over three minutes (admittedly, some may consider this "quickly" while others will not). To offset what may be viewed as slower speed, Systat offers a SUBMIT option which allows you to give program control to a text file of commands. By using a desk accessory like MockWrite, you can avoid waiting for each result before entering the next step.

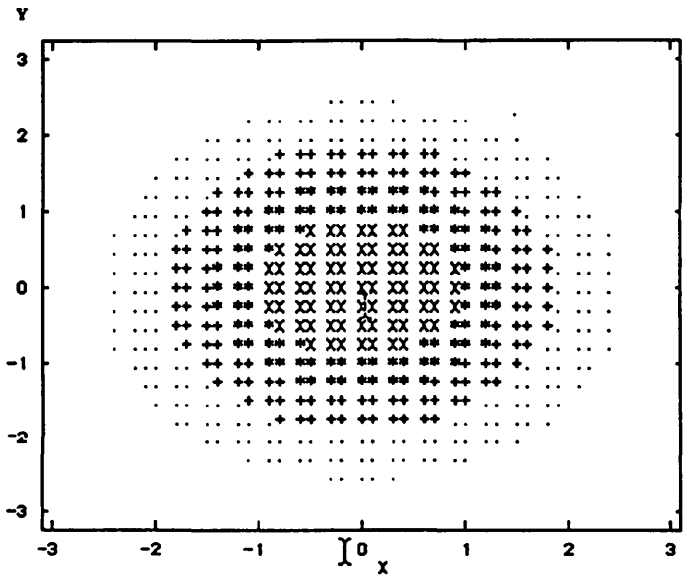
My major reservation about command language systems is the need to memorize the syntax and to correctly spell all of the commands! Systat helps both the new and the familiar user in two ways. First, it provides on-line help files as part of its menu offerings. The correct wording of any command can be viewed in an instant. Second, unlike the original Mac release, the current version gives full-screen editing of the Systat window. Misspelled commands can be easily edited and re-issued. Previously given commands can be copied, pasted and changed in the process to allow easier use of the program.

On the data handling side, complex transformations of data are possible using an internal BASIC-like language. The following Systat code generated the data used to produce the plots shown below.

```
SAVE BIVAR
HOLD
REPEAT 1260
 1 IF CASE = 1 THEN LET X=-4.65
 2 IF CASE = 1 THEN LET Y = -2.5
 3 LET X = X + .15
 4 IF X > 4.5 THEN LET Y = Y +.25
 5 IF X > 4.5 THEN LET X = -4.5
 6 LET Z = EXP(-(X^ 2 + Y^ 2)/4)
 7 IF Z<.2 THEN DELETE
 8 ELSE IF Z<.4 THEN LET C$='.'
 9 ELSE IF Z<.6 THEN LET C$='+'
 10 ELSE IF Z<.8 THEN LET C$='*'
 11 ELSE LET C$ = 'X'
RUN
```

The DATA module can import ASCII text files containing both numeric and character data where each record is a case terminated by a carriage return. The output can be redirected from the screen to the printer or to a text file for subsequent merging with a report.

**Graphics.** Its graphics displays consist of two-way plots, histograms, stem & leaf plots, as well as, box, probability and quantile plots. All of these, as you can see, come in a "text" format. Although not appearing in the Mac's exceptional high resolution, an informative graph can be provided in this manner, especially since Systat includes a unique version of the Monaco 9 font containing graphic symbols to enhance the appearance of the display. The contour plot of the data generated by the above program, for example, reveals the relation between three variables.



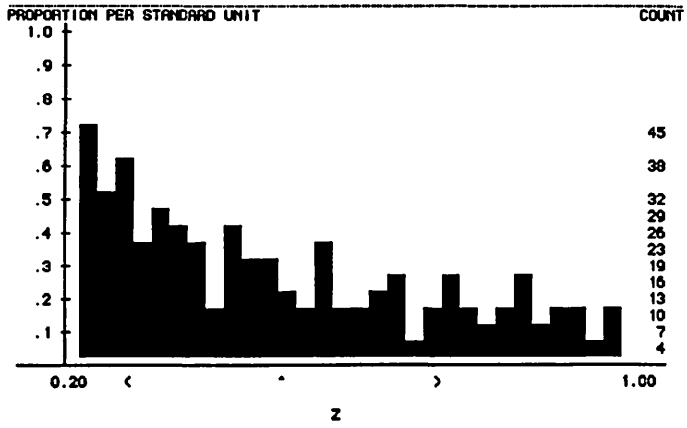

```
STEM AND LEAF PLOT OF Z                                  R

        STEM AND LEAF PLOT OF VARIABLE:      Z   , N =  537

MINIMUM IS:        0.205
LOWER HINGE IS:    0.300
MEDIAN IS:         0.444
UPPER HINGE IS:    0.673
MAXIMUM IS:        1.000

          2   0000000000000000000001111111122222222222333333333333333*
          2   5555555555555556666666666666667777777777788888888888888*
          3 H 0000000000011111111222222222233333333344444444444
          3   5555555566666666666667777888888888888899999999
          4 H 0000111122222222333333333344444444444
          4   555566666666667777777799999999999999
          5   0011112222333344444444
          5   555555555556666666666888899999999
          6   000011112222333333444
          6 H 55555555666677777777777888899
          7   00001111111144444444
          7   555555666666667777779999
          8   0000111111122224444
          8   55555555666666669999999
          9   11111133333333
          9   5566667777778899
         10   0

HISTOGRAM OF Z
```




**Statistical Procedures.** The package provides all of the commonly used univariate statistics and analyses including multi-way tables, multiple regression and ANOVA models.

Systat is among the few packages on any personal computer which test the multivariate general linear hypothesis. The MGLH module can perform multivariate analysis of

contd.

variance, profile analysis of repeated measures, principal components analysis, and canonical correlation. It also contains modules for factor analysis with rotation and scoring, and for multidimensional scaling. The TABLES module prepares multi-way contingency tables, with analysis of log-linear models.

The first of the new procedures is CLUSTER which provides several cluster analytic techniques falling broadly into two categories: hierarchical tree or linkage methods and k-means splitting methods. Several graphical displays provide the analyst with visual feedback on the effectiveness of the clustering procedures.

The NPAR module contains most of the commonly used non-parametric procedures including a sign test, the Wilcoxon signed ranks test, the Kruskal-Wallis one-way and Friedman two-way ANOVAs based on ranks and the Kolmogovov- Smirnov one and two sample distribution comparison methods.

A time series module provides for the computation of auto and cross-correlation coefficients, fourier analysis and ARIMA model fitting and prediction. To perform necessary transformation, the data can be smoothed with moving averages, medians or general linear filters with user supplied weights.

**Documentation.** The documentation contains 373 well-written pages including both a table of contents and an index. The manual presents examples of runs using all the commands. This is a nice touch as it will help to avoid the confusion that often results when trying to learn a command language. The package contains a reference card and a brochure describing "tricky" problems which may not be analyzed properly by some statistical programs. As mentioned earlier, Systat provides on-line help describing every module and every command.

**Summary.** Although Systat may be slower than programs which are limited to memory resident data sets, the author told me that Systat running on a micro-diskette equipped Macintosh was faster in performing large-scale regressions than an IBM-XT equipped with a hard disk. Upon exiting each module all run commands from the current session are printed automatically to provide permanent documentation. Its features will be valued by users in professional research and business environments.

Systat, Inc., 603 Main St., Evanston, IL 60202. Phone (312) 864-5670. Price $495.

**STAT80, version 2.9K** (Statware). This powerful package offering many often used analyses consists of a main program, written in compiled Fortran, which calls numerous subroutines as needed. There is so much code that it must be supplied on five 400K disks! If all of the subroutines are to be used, I would recommend a hard disk to eliminate a great deal of disk swapping.

Overview. The basic package provides most of the commonly used univariate statistics and tests including multi-way tables, multiple stepwise regression and several ANOVA models. The "professional" version adds: factor analysis, canonical correlation analysis, cluster analysis and a powerful matrix package. Below, you see a two-way table produced on 2000 records. The table contains the usual row, column and total percentages. To perform the chi-square test of independence on this table, a "SAVE" option must be given with the tabulation command to create a "table" variable. After this, a second command, CHISQ, yields the test statistic and a measure of its significance.

| V 2 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|
| 0 | 0 | 96 | 72 | 0 | 168 | 336 |
| | .0 R | 28.6 R | 21.4 R | .0 R | 50.0 R | 16.8 R |
| | .0 C | 80.0 C | 21.5 C | .0 C | 70.3 C | |
| | .0 T | 4.8 T | 3.6 T | .0 T | 8.4 T | |
| 1 | 142 | 24 | 72 | 450 | 47 | 735 |
| | 19.3 R | 3.3 R | 9.8 R | 61.2 R | 6.4 R | 36.7 R |
| | 100.0 C | 20.0 C | 21.5 C | 38.7 C | 19.7 C | |
| | 7.1 T | 1.2 T | 3.6 T | 22.5 T | 2.3 T | |
| 2 | 0 | 0 | 167 | 477 | 24 | 668 |
| | .0 R | .0 R | 25.0 R | 71.4 R | 3.6 R | 33.4 R |
| | .0 C | .0 C | 49.9 C | 41.0 C | 10.0 C | |
| | .0 T | .0 T | 8.3 T | 23.9 T | 1.2 T | |
| 3 | 0 | 0 | 24 | 237 | 0 | 261 |
| | .0 R | .0 R | 9.2 R | 90.8 R | .0 R | 13.1 R |
| | .0 C | .0 C | 7.2 C | 20.4 C | .0 C | |
| | .0 T | .0 T | 1.2 T | 11.9 T | .0 T | |
| | 142. | 120. | 335. | 1164. | 239. | 2000. |
| | 7.1 C | 6.0 C | 16.8 C | 58.2 C | 11.9 C | 100.0 T |

Two-way Table

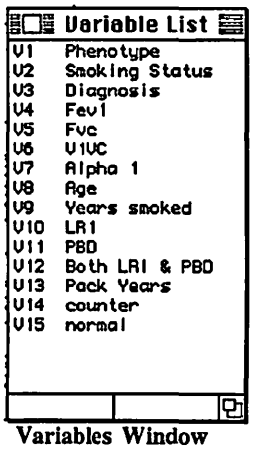
Statistical packages either limit data sets to those which fit in memory, or read the data set for each analysis requested. The second approach allows for handling a virtually unlimited size of problem. STAT80 holds its data in memory and offers speed of analysis in trade for limitations on problem size. A cross-tabulation of two variables from a file of 4,000 cases and 24 variables was completed in less than 20 seconds. A histogram on one variable in this file was completed in 15 seconds. A regression involving four predictors took about a minute. About 20 seconds were required to read the 4000 records into memory.

The distribution disks contain three versions of STAT80, each dimensioned for a different maximum number of data points. You can run any of the three depending upon your equipment and the size of your problem. The version which handles the largest amount of data can deal with files of 100,000 data points (number of variables times the number of records) in a Mac+.

STAT80, being a command language, will require considerable learning on your part. To use a command language system you must memorize the syntax and correctly spell all of the commands! To use a command language like STAT80, you must re-type the command sequence each time an analysis is given. In addition, you must remember the names or numbers of all the variables since they must be included in the command line. STAT80 does help both the new and the familiar user overcome these obstacles in several ways. First, it provides on-line help in each menu by displaying the correct wording of any command. Second, STAT80 offers an EXEC option which gives program control to a text file of commands. By using a word processor and switcher, you can avoid having to re-type commands in order to repeat an analysis. Also, a scrolling "variables" window can be opened to assist you in remembering the correct way to refer to a particular variable either by number or assigned alpha-numeric name. Although variables are initially identified numerically as V1, V2, etc., text labels such as "age" can be given to a variable and used in commands to improve recognition.

To assist in modifying data, STAT80 provides a built-in editor which allows for viewing and changing selected variables or cases. On the negative side, the editor is not in a

contd.



Variables Window

full-screen format. Rather, it consists of commands such as "p" to print, "c" to change, etc. What is more, the edit command must be given the name of a single variable which is to be edited. To edit a second variable, the edit must be completed and the command reissued with the second variable name.

On the data handling side, complex transformations of data are possible. Variables from different files can be merged or new cases on the same variables added. STAT80 can import ASCII text files containing numeric data where each record is a case terminated by a carriage return. If spaces are not present between fields, a Fortran-like format statement can be used to specify the starting position and length of fields. The output can be redirected from the screen to the printer or to a text file for subsequent merging with a report.

**Matrix Routines.** Since the STAT80 matrix routines are unique, they deserve special description. There are over three dozen different commands. These functions include transposition, inversion, Kronecker product, and extracting eigenvalues, in addition to the usual functions of addition, subtraction, etc. STAT80 provides functions to compute a determinant, perform a sweep operation or determine the trace of a matrix. A special array type variable is used to perform these operations. When using the built-in editor, individual elements of the array can be changed easily. The "matprint" command prints out the array with a single brief request. A weighted least squares analysis involving transposing and inverting can be obtained using a statement like:

```
matrix v19 = inv(trn('X')*inv('S')*'X')*
                trn('X')*inv('S')*'y'
```

where 'X' is the label for the design matrix, 'S' is the label for the weight array and 'y' is the y-vector of the dependent variable.

**Graphics.** Unfortunately, its graphical capability is quite limited, consisting only of histograms and two or three-way plots. The three-way plots, are not three-dimensional. Rather they are produced as projections on a two dimensional surface and use symbols to represent the value of the third variable. These plots are like those found on mainframes as "text" displays.

**Support.** The documentation consists of a 2 1/2 inch notebook describing STAT80's numerous commands. The notebook includes both a table of contents and an index; however, I often found myself searching through a section trying to find out how to peform a particular function. Unlike most Mac programs, you will have to spend time reading the manual to learn the STAT80 command language. A 187-page tutorial presents examples of the most common commands. A 50-page Macintosh supplement addresses issues unique to this version.

As mentioned earlier, STAT80 provides on-line help describing every command. Note below that an 800 number is available for technical assistance. The STAT80 folks send a quarterly newsletter to all registered owners informing them of tips and updates.

**Mac Interface.** While the keyword of all commands can be issued from pull-down menus, you must type in the variables to be used and any options you require. Currently STAT80 does not support desk accessories. There is no way to cut and paste between other programs; although, output can be routed to a file for later merging with a document. Data files written in ASCII text can be read and analyzed albeit somewhat slowly or converted into STAT80's special binary format for faster access. I was able to get the smallest memory version to run under Switcher. The graphics are reminiscent of main-frame packages with teletype-like displays.

STAT80 will run under the new HFS. However, it requires the 128K ROMs. Thus, you must have either a Mac+ or an enhanced 512K to use it.

**Summary.** STAT80 can be relied upon to provide fast, accurate results. Its command language will take some learning but is consistent in application. Its matrix functions are unique among Macintosh statistical packages. Its features will be valued by users in professional research and business environments. A more Mac-like interface will enhance its acceptance among Mac owners spoiled by exceptional graphics and pull-down menu ease of use.

Statware, P.O. Box 510881, Salt Lake City, Utah, 84151. Phone (800) STA-T80S. Mac+ or 512K enhanced, hard disk recommended. Basic version $249, professional version $399.

# MACINTOSH "VAPORWARE" ALERT!

by Ralph Begleiter

This is a warning to potential customers of a mail order firm called "Icon Review" (Monterey, California).

Icon Review widely advertised a Macintosh software "bundle" consisting of the "FullPaint" program (an enhanced version of MacPaint) plus "MultiWrite" (an enhanced version of MacWrite and ThinkTank) in its Summer 1986 catalog (mailed in May, 1986). The "bundle" price was $119. An order placed by mail on June 9, 1986 was partially-filled several weeks later (July 3) with the shipment of FullPaint only. Icon Review included no explanation of why the remaining (MultiWrite) portion of the order had not been filled. (There was no indication of a "back order" or anything of that kind.)

After a written inquiry (July 5), Icon review responded (July 15) with a form letter asserting that the mail-order firm had "received word from the manufacturer [MindWork Enterprises] that MultiWrite will not be released until after September 27, 1986." The letter offered two options to customers: a "refund" of $64 (Icon Review's claimed retail price of MultiWrite) "or you can save $19 by leaving your order with us."

Since Icon Review's widely-published price of MultiWrite is $79.00, the offer of a $64.00 "refund" clearly does not result in a "saving" of $19.00. The $4.00 discrepancy is readily apparent but is not explained in the form letter. (Incidentally, Icon Review's claimed "retail price" of MultiWrite is $149.00, despite the widely-advertised list price of $79.00!)

**Warning to potential customers:** Beware of Icon Review taking money for non-existent software and offering false "savings" for depositing cash in its bank for more than three months.

Icon Review, Karen G. Woods, Sales Manager, P.O. Box 2566, Monterey, California 93942 (800)228-8910.

MultiWrite, MindWork Enterprises, Inc., P.O. Box 222280, Carmel, California 93922 (408) 625-2720.

# ICON REVIEW REPLIES

The following letter was sent on July 26 to Ralph Begleiter from **Dennis C. Moncrief**, Publisher, Icon Review, in response to Ralph's letter as noted in the article above.

"... I understand that you are less than satisfied with the way that your order was handled and I offer you my personal apology for any inconvenience our firm may have caused you. I also wish to address several of the issues you have raised as well as challenge your conclusions.

1. The word processor, MultiWrite, is not 'non-existent' software as you assert. I am using a beta-release version of it to write this letter. No less a company than Lotus has on occasion been known to postpone the ship date of a major product. Jazz was delayed exactly two months past its original ship date. These things do happen. Your loss of confidence is somewhat hasty, I feel. Several months delay is not the same as never.

2. We have attempted to deal with the problems that developed due to the lateness of MultiWrite in a fair and generous way. It would be more standard in the retail industry for us to claim that if a customer wants to cancel one item in a two product bundle sold at a special discount he should be charged the normal advertised price for the remaining product ordered. For instance, if a customer were to buy the MultiWrite/FullPaint bundle for $119 as advertised, then cancel on MultiWrite, what he has really done is buy a FullPaint. The price for FullPaint is advertised as $69 and should therefore apply, leaving the customer with a refund of $119-69=$50.

Out of a sincere desire to make things right for all our customers who felt inconvenienced or for whatever reason did not wish to wait, we decided we would allow customers who canceled on MultiWrite to still buy FullPaint for only $55 instead of $69. The customer would thus get the benefit of the extra steep bundled discount price on FullPaint without having to also buy MultiWrite as advertised. The refund to the customer would therefore be $119-55=$64. The offer to refund $64 rather than $50 was our way of apologizing to our customers for any inconvenience due to the delay.

3. I see now that the form letter we sent out was not as clearly written as it should have been and did contain an error. Where we invite the customer to continue waiting and save $19, we meant to say save $29. This is the original savings the customer gained by buying the MultiWrite/FullPaint bundle at the specially advertised price of $199 instead of the regular prices of $69 for FullPaint and $79 for MultiWrite....

| | |
|---|---|
| Full Paint $69; MultiWrite $79; Total | $148 |
| FullPaint/MultiWrite Bundle | - $119 |
| Savings | $ 29 |

While we have made a mistake or two, I wish to affirm that it is our sincere intent to satisfy each and every customer who entrusts us with an order. Our actions have always been and always will be based on this committment to serving our customers fairly."

(**Begleiter** comments to the above: "Readers should be aware that the response from Icon Review does not change the facts in the original alert, and that saying they should charge even more than advertised for a product, when it is not available, is not an attractive method of doing business. We sincerely hope that Icon Review will live up to the pledge that it makes to satisfy each customer who entrusts them with an order.")

# MORE™: A Review
## by David C. Jamison

Just imagine turning on your Mac and booting up ONE APPLICATION that would:

- keep your daily calendar (let you plan ahead)
- outline your thoughts about memos/work/letters/ dreams
- have multiple "windows" open at all times
- do word processing
- dial direct from your electronic "Rolodex"
- date and time stamp work at one keystroke
- create presentation graphics of your work in one keystroke
- invoke multiple "templates" of frequently used formats
- "clone", "mark" and "gather" items from one window to another
- re-arrange windows on desk, titles, fonts, styles with one keystroke
- do calculations within text files

Sounds impossible, you say? Well, friends, meet MORE™, an aptly named product from the folks who brought you THINK TANK™—Living Videotext, Inc., and powerfully demonstrated by Jim Burger at our July WAP meeting.

The product of some 5 years of research and development in the field of electronic "thought processing" in both the PC and Mac environments, MORE is definitely a reflection of a company that has "listened to its customers" (Peters/Waterman "In Search of Excellence") and one who has tried to include most of the things we are looking for in a serious "work station".

"We've come a long way, baby" from the early days of electronic spreadsheets, and "outliners". One of the first non-Apple applications purchased for my 1st Mac was THINK TANK128, and my dependency on this company's products grew through the months and years as I up-graded to THINK TANK512 and READY™ for my office PC (when I was forced to use one at work).

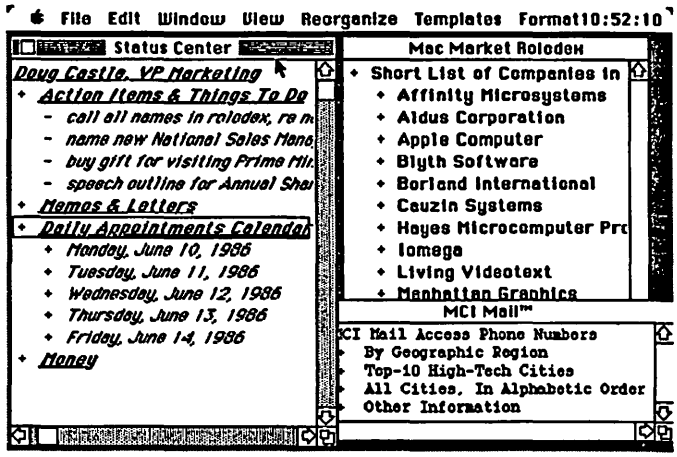
Now comes a product that has taken customer input several steps forward into an application that does most of the things that a serious "productivity tool" should do for a busy manager. It is also one that clearly shows the MAC superiority over the rest of the hardware world.

MORE has appeal to the novice and the power user alike. The first-time user will find its attention to the Mac environment and conventions helpful. Getting used to MORE will take a very short time. The tutorial "walks the user" through the easiest-to-use features and the examples and built-in templates make setting up your own desktop a breeze. The power user will be impressed by some of the built-in features that used to require Switcher and several other applications, like Chart™ (Microsoft) or PageMaker™ (Aldus Corp.) with "cut and paste" and lots of time required to execute those "presentation graphics" that the boss wanted yesterday!

For those of us who have come to rely on THINK TANK512 in our daily work, all of the conventions are retained in MORE (including the ability to read all our THINK TANK512 files and to do spectacular graphic things with them!)

But outlining is only the beginning with MORE. For the first time you can have a real word processor built in—one that will satisfy many of us who need to produce ready drafts. The basic formatting and searching features are built in and with a keystroke you can go from an outline to a full window of text, keeping your outline in a background (or horizontal or vertical) window as a guide. In addition, you can easily "export" this draft into Word™ or MacWrite™ for final glitz and sizzle or, if you have a secretary who (heaven forbid!) has a PC with Ready (also a Living Videotext PC product), you can cable or modem from your Mac to feed MORE direct to his/her machine for word processing under any of the PC software programs.

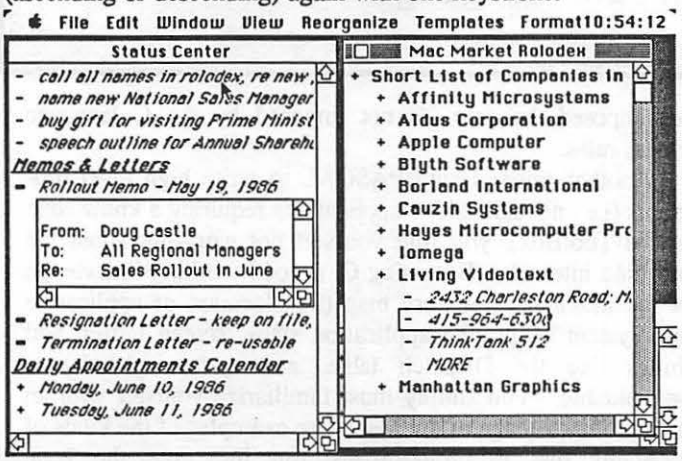
The friendliness of this application begins when you first boot it up and it asks you to personalize it with your name and title (the latter is optional). One of the first helpful features that the user notices (with appreciation) is that MORE supports multiple windows. This means you can have up to 6 windows open at one time. I instantly adopted Doug Castle's "Status Center" format as one of my standard windows. Doug is Vice-President of Marketing of the fictitious "American Technology, Inc.", a neat way of giving us some real life formats formats in our MORE tutorial. In the Status Center is a **Calendar** (current week) giving you the ability to overlay a real calendar with a keystroke to plan several months/years ahead if you like; a **"Things to Do"** list; a **"Memos & Letters"** section (to enable you to outline and/or draft correspondence or notes to be either hard copied, "exported" to another application or ported to a PC either thru modem or cable); and a **"Money"** section to keep track of expenses (you can dynamically link expenditures together with automatic calculation built in—e.g. taxi fares).



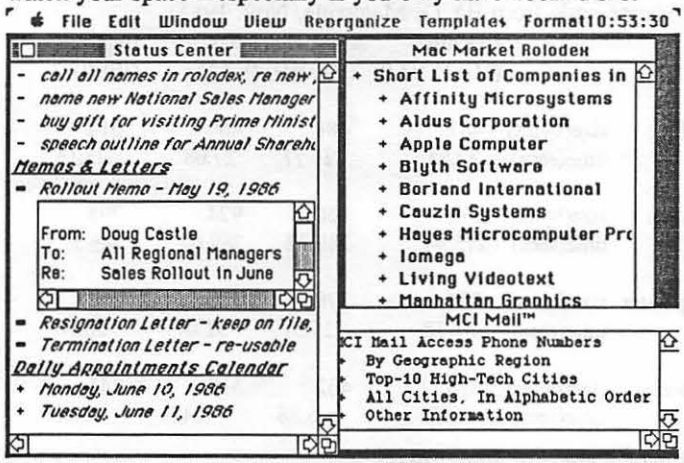

My next standard "window" is an electronic **Rolodex**. In it I have all the names, addresses and telephone numbers I frequently contact. MORE offers a direct modem dialing feature that enables me to make a call just by putting the cursor on the phone number and hitting one keystroke. This feature is even faster than the desk accessory dialers and infinitely

contd.

more convenient. Having this Rolodex window available also enables me to add new names/numbers easily and to sort (ascending or descending) again with one keystroke.

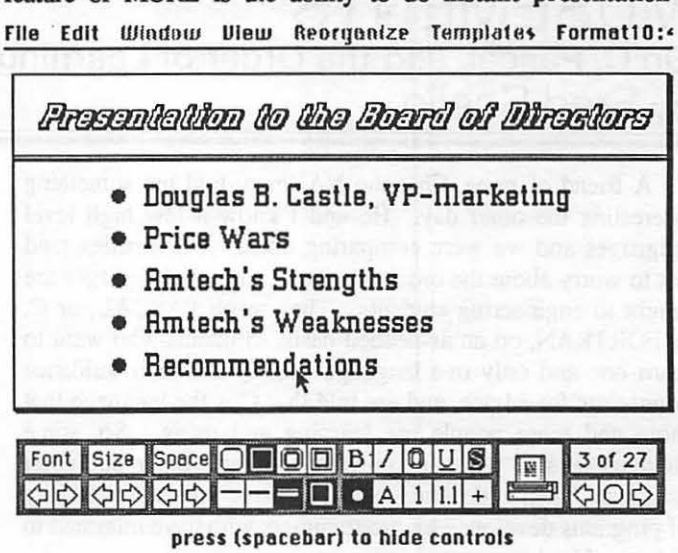



MORE has anticipated the need to conveniently access frequently used formats with its "**Templates**" section of the Menu Bar. Again, thanks to good old Doug Castle, a number of templates have already been installed; things like his **signature** (name,title,address), **Sales Leads, Rolodex** entry, **travel expense, time** and **billing info, order entry,** and **organization chart** for American Tech. You can make these your own by going in and adapting, deleting or adding new templates. The Mac Plus will support 32, while those of us with an ordinary "Fat Mac" will have be be content with 16. For those of you with floppy drives, the templates will boot automatically with the application, but watch your space—especially if you only have 400K disks!




Some of the most helpful features are to be found under the "**Reorganize**" section of the Menu Bar. Here you will find the "**clone**", "**mark**", and "**gather**" features that dynamically link sections of the window together enabling you to, for example, list an item in your calendar and link it to a memo/letter so that thoughts electronically jotted down in one place are automatically placed and/or "dynamically" changed in another. The "mark and gather" features are especially helpful when linked to the calculation feature to link expenditure items into a week or monthend report. "**Promote/Demote**" is a useful feature that enables seasoned outliners (i.e. "Power Users") to quickly move text from a dependent to an independent status and vise versa.

However, I've saved the best for last: the truly awesome feature of MORE is the ability to do **instant presentation**




**graphics.** And I do mean instant! No more arranging text in Word and then going to Chart and then to Draft™ or Ready, Set,Go™. No sir! Just make an outline in the usual way, then pull down the "View" menu and hit "**Tree Chart**" or "**Bullet Chart**". Either one will pull up a graphics tablet and your copy broken down by its major segments. You can put it in fancy boxes, change fonts/style, all in the touch of one keystroke. And, as we learned in Excel™, the chart is linked dynamically to the outline so that changes made in one will instantly be reflected in the other. We had just completed a new organizational change for our Young Astronaut™ Council and I was able to make both an organizational diagram and "bullet" charts for overhead transparencies in a matter of minutes. That chore before would have taken "hours of time and cost thousands of lives", a fact of life you know if you've been asked to do it!

All in all, MORE is one outstanding product from a company who has specialized in the office productivity field and who has distinguished itself as offering both first class products and support. The price is not unreasonable for the features incorporated in this product—with a generous rebate to THINK TANK128 or 512 owners and a nice "bonus" to new users.

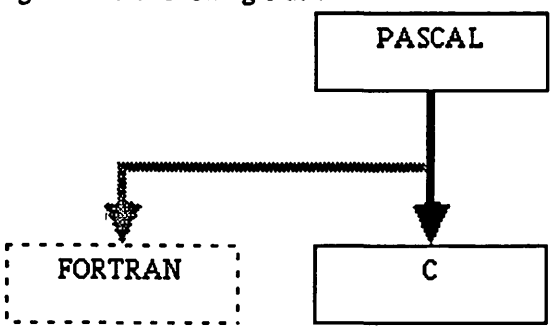
Living VideoText has also listened to the curses of those of us with hard disks who struggled to put their THINK TANK product up with limited success and are marketing MORE as an unprotected product. I hope would-be pirates respect the fact that software companies are in business to sell products not to give them "freeware"!

In short, I'd rate MORE a solid "must buy" application. When it is combined with a good spreadsheet like Excel, a good project planner like Micro Planner™, and, especially if you are linked to a Laserwriter, a desktop publishing product like PageMaker, you have about all the applications you need. If this doesn't promote "MORE MACS" (pun intended) in the Federal Marketplace—and elsewhere—nothing will!

# MUSEMENTS
## On C, Pascal, and the Order of Learning Computer Languages
### by Fred Seelig

A friend of mine, Chet the VAXman, told me something interesting the other day. He and I know a few high level languages and we were comparing notes. Universities tend not to worry about the order in which computer languages are taught to engineering students. They teach PASCAL, or C, or FORTRAN, on an as-needed basis. Students who want to learn one and only one language usually ask their guidance counselors for advice, and are told that C is the language that more and more people are learning and using. So, some students take C without knowledge of any other computer language. Their code tends to lack the structure and readability of programs developed by programmers who have migrated to C from older languages.

Chet said that the best way for learning computer languages is in the following order:




Learn PASCAL first, he said, to ingrain the structure and discipline imposed by the strongly typed language. Learn how to write self documenting code, and segregate variables according to use and type.

Only then should a novice software developer be allowed to use C with its extremely powerful instruction set. (Or FORTRAN, the older standard engineering language, somewhat weaker typed than PASCAL, and a language which allows sloppier algorithm structures, most notably the GOTO statement.) A friend of Chet's called C a high level assembly language, since it is so close to machine code instructions. It's true. C instruction sets operate on the very registers deep inside the microprocessor of the computer.

C instructions aren't like PASCAL instructions. PASCAL programmers are used to descriptive function or procedure names like DrawLine, FrameOval, GetMouse, InButton, etc. In contrast, C instructions sound like this: stcarg, bldmem, atoi, setnbuf, tolower, etc... The function names are more cryptic. But they are much more powerful, i.e., much less restricted in what they can do. An example is the beloved application Megaroids, written in MagaMax C, which happily wanders into the 22 kbyte screen buffer and does image dinking to achieve its fast response time between a user input and screen commands. That's why it doesn't work on the Mac+, by the way, because the program assumes a specific location for screen buffer in the memory map. And the Mac+ has the screen buffer in a higher memory location. The moral of the story is that, in C, program software discipline must be self-imposed, because it's not imposed by the C language syntax rules.

Another thing: Using PASCAL to write high level programs (i.e., not standalone applications requiring a knowledge of the ToolBox), you find yourself not worrying about the machine internals. But using C, a good working knowledge of the Macintosh memory map (i.e., location of application and system heaps, the application stack, screen buffer, and things like the Dispatch table, and system globals) is unavoidable. You simply must familiarize yourself with an in depth knowledge of the Mac. For examples of the kinds of problems that C programmers run into, see the Byte magazine's monthly section of their bulletin board, entitled "The Best of Bix."

**LightspeedC. Oh baby.**

Why am I saying all of this? I just received LightspeedC in the mail from the folks at Icon Review. The specs are dazzling. Compile speed is between 250-500 lines/sec. You read that right. Per *second*, not per minute. A typical 15,000 line program takes slightly more than 2 minutes to compile on a 10 MB Hyperdrive. Link time is less than 5 seconds, even for a large application. Look at these Byte magazine specs comparing existing C development times:

**Code Performance Benchmarks**
(Source code from BYTE Magazine, Nov. 1985)

| | | Consulair (MacC V4.0) | Aztek Megamax (V1.06G) | (V2.1) | LightspeedC (V0.40) |
|---|---|---|---|---|---|
| fib | size(bytes) | 482 | 488 | 466 | 318 |
| | time(secs) | 32.85 | 24.77 | 27.08 | 25.13 |
| float | size(bytes) | 872 | 930 | 924 | 798 |
| | time(secs) | 275.44 | 289.72 | 289.02 | 289.37 |
| pointer | size(bytes) | 304 | 298 | 326 | 210 |
| | time(secs) | 31.78 | 25.57 | 31.07 | 20.10 |
| sieve | size(bytes) | 438 | 432 | 510 | 344 |
| | time(secs) | 7.75 | 5.88 | 6.45 | 5.65 |

**Large Program Benchmark**
(XLisp 1.4, approximately 16.5K source lines)

| | Consulair (MacC V4.0) | Aztek Megamax (V1.06G) | (V2.1) | LightspeedC (V0.40) |
|---|---|---|---|---|
| Generated code size (bytes) | 36770 | 34566 | 37698 | 33870 |
| Program build time (sec) | | | | |
| a. compile the world | 887 | 654 | 354 | 194 |
| b. link-to-run | 99 | 49 | 95 | 5 |
| (incl. launch) | --- | --- | --- | --- |
| Total program build | 986 | 703 | 449 | 199 |
| Turnaround time(sec) (time to change one source fle and relink-to-run) | 159 | 108 | 127 | 9 |

contd.

All benchmarks performed on a 512K Macintosh with a 10Mb HyperDrive. Run out and buy a version, if you don't already have version of C. It's easier on the pocketbook than those $400 dollar versions. This is about $100. Write C applications at Warp speed. All ahead full, Mr. Sulu.

**Read Dvorak's Latest Column!**

John C. Dvorak, the monthly computer columnist and well-known industry gadfly, has written a hilarious column in the August, 1986 issue of MacUser. It is worth the newsstand price of the magazine. Entitled, "New Ideas for Tired Markets," the premise is that computer companies ought to get into cross-product marketing, like the Mattel/ Saturday morning cartoon connection: Go-Bots and Transformers, 1/2 hour commercials thinly disguised as entertainment. Here are two paragraphs that will be taped to most Apple offices in Cupertino:

...let's hope that IBM doesn't get hold of these promotional concepts. Who wants to see an IBM Transformer? Luckily, IBM is so stuffy (in a corporate sense) that I doubt it would dare tarnish its image as a *Serious* business-oriented company with a cartoon OR a cereal. By the way, this is why the company will NEVER be a success in the low end of the market. IBM just can't get down and funky with the masses. It's a shame, too. I would love to see a cereal box with the IBM logo emblazoned along the top. "IBM - breakfast of yuppies. No sugar, no additives, nothing but wholesome wheat and corn. Plus fiber for all you irregular and uptight executives."

I suppose the IBM cereal would simply be in the shape of a square block. Kind of symbolic of, uh, square blocks. Perhaps the company could make its IBM logo into the shape of a cereal morsel. It would be a popular brand with the competitors like, say, a marketing guy from DEC. "I eat IBM for breakfast!" That would give them some solace, perhaps. The IBM cereal might also be in the shape of a little featureless man. Each one would be identical and have no private parts, just like the real thing.

Is that cruel? Yes, but deliciously cruel. I envision lots of angry red-faced executive types in their quiet wall-to-wall carpeted offices in Armonk, shaking with rage after reading Dvorak's column. Ha ha. He has plenty of other great ideas: "And where is the Apple-sponsored Indy racer? The bigger question is, where is the commemorative Macintosh- shaped bottle of Jim Beam?" Hang around Crown Books during your next lunchtime and read it. Try not to laugh, just try.

**MacTerminal 2.0**

If you love your VAX at work, and can't stand to be at home without calling it up once in a while,then you ought to use MacTerminal version 2.0. I am running it on a MacPlus, with the MacPlus keyboard. The keyboard has the numerical keypad that is used like on the VT100 keypad. VT100 emulation is, in a word, superb. Everything I have tried works on here. The arrow keys function just as they do on the VT100. I love, for instance, the up arrow to call up the last command. (VMS version 4.0 and later, I believe, supports this timesaving feature.) All escape sequences, which do terminal graphics, seem to be supported except for the blinking feature.

**MacPASCAL 2.0**

Macintosh PASCAL, by Think Technologies, is getting better and better. Version 2.0 has added a few nice features that corrects minor irritants present in version 1.0. First, it's not copy protected. Thank you, thank you, thank you! I have MacPASCAL on the hard disk, and it's so nice not to have to insert a key disk every time MacPASCAL is opened.

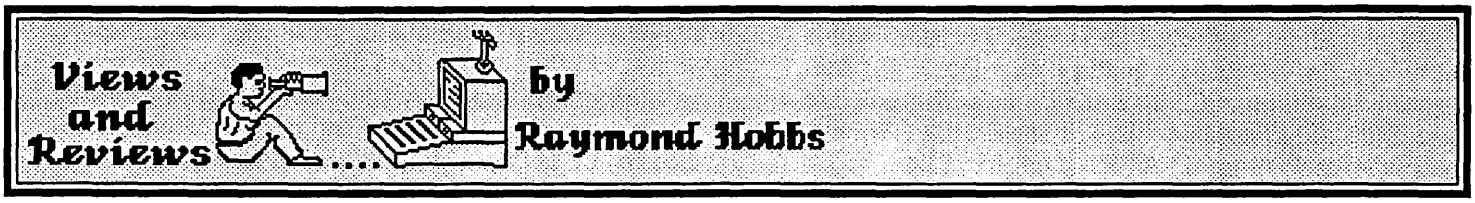
All programs can be saved as text only, as MacPASCAL source code ("as Object"), or as a standalone program ("as Application"). Output can be routed to a file or to a printer with a click of a button under the Windows menu. Also under Windows is a Font Control... command. It allows the selection of any font in your System, and any size font, for both the program listing window and the Text window. True hackers can now write programs in Cairo font, for legibility that approaches good, tight C code in readability. (Ed. Note: Maybe false hackers in Zapf Dingbats?)

I used to occasionally crash MacPASCAL by triple-clicking on a line to select the whole line. No more. This annoying problem seems to have been fixed in version 2.0. It is HFS compatible. This changes some file declaration statements. You now must declare the subdirectory a certain file resides in, giving the program the path (folder names separated by colons) to find the file. It's mentioned in the updates document that comes with version 2.

Macintosh PASCAL is becoming THE first programming environment for first-year engineering students in universities around the country, especially for members of the Apple University Consortium. It is especially nice to incorporate nice little graphics things into a MacPASCAL program. A program's speed is limited by the fact that it is an interpreted PASCAL, rather than a compiled version. But the actual program development goes amazingly fast with the context sensitive editor babysitting every line you input, and warning you if you have violated syntactic rules. The OBSERVE feature, displaying the variable values at breakpoints. makes debugging fast and easy to learn.

The execution time with compiled PASCAL is as not yet present within Macintosh PASCAL. But TML PASCAL supposedly accepts MacPASCAL programs pretty much as is, and TML PASCAL will compile and link a program, resulting in an executable code file that's ready to run. Execution time is much faster than with MacPASCAL. I also recently bought TML PASCAL, but so far efforts to compile MacPASCAL programs with graphics routines have been unsuccessful. It's not a straightforward procedure to develop code in MacPASCAL, then shuttle it over to TML PASCAL via Switcher and compile it there, as I had hoped. Rats.

Version 2.0 comes on two disks. Owners of version 1 MacPASCAL can get the update for free at a friendly Apple dealer. The Think Technologies people, by the way, are the same folks that gave us LightspeedC. We look forward to more from this promising company.




This month's offering is a pair of Database Management products from Forethought, Inc., both of which operate on the Macintosh. Why does one company produce two database packages and put them on the market at the same time? To answer that one, we must look a little more closely at the generic term "Database Management".

A Database Management System (DBMS) is a program designed to help us organize and use a mass of data which would be cumbersome to manage manually. In some cases, the size of the data may be so large as to be impossible to manage manually. When we think of collections of data, we tend to think of filecabinets of forms, or of catalogs of items, or things such as that. However, if we take more than a cursory glance at the types of data we work with, both professionally and personally, we quickly find that there are many classes of data, some more readily relegated to the file cabinet than others. Forethought, Inc. has created a small family of database systems for use on differing types of data collections. For the formal, rigidly defined data types (such as a library catalog or a collection of data sheets on members of an organization), Forethought has presented a formal DBMS, FileMaker. For more unstructured collections (such as research notes, personal calendars or notes on tax applications of expenditures) Forethought has brought out Factfinder.

I have reviewed the formal DBMS below, while Stephen Grimm has reviewed the unstructured one. Both are Database Management Systems, and both have their place in our arsenal of productivity software on the Macintosh.

1. FileMaker. $195 from FORETHOUGHT, INC., 1973 Landings Drive, Mountain View, California 94043. [Review by **Raymond Hobbs**]

Having just published a review of FileVision (TELOS Software), when I received FileMaker my first thought was to compare the two on a similar application. Unfortunately, the two products take a completely different approach to the management of data collections. While FileVision treats data graphically and is equipped to give us a visual image of data as it relates to other data, it lacks the raw power of FileMaker—to the extent that any application that I could think of to test the flexibility and power of FileMaker was beyond the ability of FileVision to handle. This is not to say that FileVision is poverty-stricken, but merely that its focus goes in another direction.

FileMaker was described to me as being a full-featured DBMS with multiple-field SEARCH/SORT and CALCULATE abilities—everything, in fact, except a fourth-generation programming language attached. O.K., I said, let's see if it can do an "almost-programming" application, and I assigned it the task of managing a golf tournament. I used the Peoria system for my tournament, assuming that the golfers who entered would not have an official PGA handicap on file coming in. The next paragraph explains how the Peoria system works. Those readers uninterested in golf can skip the next paragraph and just pick up on the power that follows.

The Peoria system calculates the handicap as the golfer plays. Six "handicap" holes are used, and the golfer does not know which holes will be used as "handicappers" until after the tournament. Since there are 18 holes all told, the handicap developed on the 6 handicap holes is multiplied by 3 and subtracted from the golfer's gross score to arrive at a net score for the tournament. The handicap is derived by subtracting the golfer's score on a handicap hole from the par for that hole. Normally, 3 holes are selected out of the first 9 holes and 3 are selected out of the last 9 by the golf course "pro". Prizes are generally awarded both for low gross score and low net score.

FileMaker's job was to record the golfers' scores, establish the handicap, calculate the gross and net scores, and produce lists of golfers sorted by gross and net scores. This is an application that I have previously programmed into dBASE III, and afforded me the opportunity of testing out another of FileMaker's features: the ability to import data from other programs. FileMaker also has the ability to import a MacPaint image, to dress up reports and such, so I made a little golf picture to put at the top of my list of winners.

The first job was to design the database. FileMaker makes that as simple as dBASE III. You just choose DEFINE and start defining. I made 60 fields, as follows:

NAME (1 field, type text [here is where I input the golfer's name])

SCORE#(18 fields, type number [here is where the scores for each hole go])

PAR#(18 fields, type number [here is where the pars for each hole go])

HANDI#(18 fields, type number [if the hole is a "handicapper" a 3 goes here, otherwise an 0])

OUT(1 field, type calculation [score for the front 9 - $\Sigma$ SCORE1...SCORE9])

IN (1 field, type calculation [score for the back 9 - $\Sigma$ SCORE10...SCORE18])

GROSS (1 field, type calculation [OUT + IN])

HCP (1 field, type calculation [the crux of the application. HCP = $\Sigma$((SCORE1-PAR1)*HANDI1...(SCORE18-PAR18) *HANDI18). In other words, the golfer's score for each hole is subtracted from the par for each hole. The result is multiplied by HANDI, which is 3 if the hole is a "handicapper", and an 0 otherwise. In that way, the "non-handicappers" will drop out of the summation, while the "handicappers will be expanded by a factor of 3.])

NET (1 field, type calculation [GROSS - HCP])

With all of the fields defined, all that remained was to import the data, design the reports and run (of course, in an actual tournament, all the data would be input at tournament time rather than being imported). In this case, however, I used last year's golf tournament for my office, and brought the data in from dBASE III. The process I used was to set the dBASE file out as an SDF file, send it via modem to the Mac and import it into FileMaker. No muss, no fuss). Had I been

contd.

typing in the data instead of importing it, I would have been able to duplicate data such as the PAR scores and "handicap" numbers across the entire database, without having to type it in each time. As a matter of fact, I would have been obliged to enter only the names and scores of each golfer to capture the desired database, since the calculation fields require no specific input. The reports were designed in a few minutes by selecting LAYOUT. There is no need to include all of the fields in the database on a report, so I could use just the golfer's name, scores, handicap, gross and net. Field lengths on a report are controlled by dragging and sizing boxes for each field to the desired location on the report. A grid and T-square are optionally available to assist in getting everything in the right place, and are selectable using the GADGETS menu. My two reports were nearly identical, so I used the first (Winners - Gross Score) as a template for the second (Winners - Net Score), changing only the sort field. The database is easily sorted, by the way, by merely selecting the sort field (or fields) and telling FileMaker to SORT. You can sort high-to-low or vice versa, using a simple single-field sort or multiple field compound/complex sort such as THIS + THAT .OR. THIS + THE OTHER. In short, you can sort every which way from Sunday.

As if the power and ease of use weren't enough, FileMaker's manual is exceptional. Written in the by-now-familiar Apple Computer "Quick Tour/Learning/Using/Reference" style, the manual is well-written and quickly digested. It has a Table of Contents for the manual itself, then for each individual chapter as well as a complete Index. You can't get lost in this manual. It is also hardbound, an indication that Forethought, Inc. expects you to use the package for some time. It also suggests a long-term commitment by the company to its product. To test Forethought's commitment to its customers, I called the toll-free support line with a trivial question (about file handling between various packages) and received prompt, courteous answers.

In summary, this is a power-packed and easily mastered DBMS which, if it had a programming language attached to it, could blow dBASE III out of the water. As it stands, it has ample power to handle any database management task I am likely to throw at it with ease. If you already have a DBMS, you may want to outgrow it before getting into FileMaker, but if you haven't gotten your database package for the Mac yet, you should give FileMaker some serious attention.

FileMaker is compatible with all Macintosh computers, including the Plus, and can recognize both the old flat file system and the new HFS for file management. It is not copy-protected, so any number of backups may be made. A quality product throughout, and a lot of punch for the buck.

**2. Factfinder**, $150 from FORETHOUGHT, INC., 1973 Landings Drive, Mountain View, California 94043. [Review by **Stephen Grimm**]

Factfinder is described by its publisher as an "electronic 'desk drawer' where you can enter your information free-form..." (it's a good thing they never saw my desk drawer, or I would show them something that is realy "free-form"). However, it may be more accurate to describe Factfinder as an unstructured database system which is especially useful for filing and recalling related textual information, such as notes, phone messages, schedules and such. Factfinder is unstructured in the sense that one is not restricted to placing data into records with named fields of specified lengths. In many structured database systems you must define the record fields in advance of data entry, which means that you need a pretty good idea of how the information is ultimately to be sorted or arrayed before you begin.

In contrast to structured databases, Factfinder allows you to enter your information into a record, or "factsheet" without any real advance planning, although it will be easier to work with later if you have some idea of your future needs. The factsheets are placed in a datafile or "stack" and can be entered in any order, using any format you desire. In reality, you may have a different format for each factsheet if that suits your specific needs. You can then organize the factsheets as needed by sorting them using "keys". The keys are the words or phrases you select and specify for each factsheet or group of factsheets. Key words can be assigned when the information is entered on a factsheet or can be added, deleted or modified later. If you are entering information onto a group of factsheets you can add the keys automatically, which can be a real time saver. The only limitation on the makeup of the key word is the 28 character maximum length, but the number of key words is virtually unlimited. Multiple criteria can be used in any sort or search operation, a useful tool if you have a large number of factsheets in a stack. Additionally, any complete or partial stack of factsheets can be readily merged into others. I find this feature useful since it is therefore very easy to reorganize your data as it grows and your needs change.

In real terms this means that if you have a need to store a variety of textual information for future use, Factfinder can provide a quick and easy method for saving, sorting and retrieving it. Factfinder also interfaces with MacWrite, an especially useful feature when you need to collect information to be used later in report writing. In fact, I employed Factfinder in doing this review, and then transferred the necessary information onto MacWrite.

Factfinder offers on-screen help and hints, and is not copy protected so backing up your disk is a snap. It is a useful tool for filing and retrieving textual information. [Like FileMaker, Factfinder comes with a complete, hardbound manual and a toll-free support number. - RH]

# WAPACROSTIC
## by Professor Apple

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

| Definitions | | Words |
|---|---|---|
| A. | Agents | 98 77 68 81 15 69 61 |
| B. | Hurried | 53 99 130 83 40 93 |
| C. | Cruel | 52 127 126 105 138 25 |
| D. | Gladdened | 107 65 76 66 90 44 60 |
| E. | Messengers | 32 87 85 134 63 28 |
| F. | Comes to the end | 26 132 43 27 21 122 110 111 |
| G. | Awkward | 96 59 73 7 106 |
| H. | Racial | 11 30 29 9 120 71 |
| I. | Pertinent facts (sl) | 36 124 67 70 46 129 135 |
| J. | Moved rapidly | 37 13 3 1 5 57 |
| K. | Delight | 35 47 92 117 78 42 50 |

| Definitions | | Words |
|---|---|---|
| L. | Upper right on map | 104 116 123 38 54 48 62 133 89 |
| M. | Automatons | 72 23 41 137 18 121 |
| N. | Overall city | 108 45 39 75 113 10 31 |
| O. | Colored | 125 128 33 101 102 82 17 103 |
| P. | Guards | 22 84 94 74 34 86 114 |
| Q. | Breathing disorder | 79 14 100 95 109 56 |
| R. | Baked | 24 8 16 6 112 20 118 |
| S. | Obstruct | 88 131 115 58 4 64 |
| T. | Openings | 51 49 91 119 136 80 55 97 |
| U. | Long | 12 2 139 19 |

## ANSWERS TO LAST MONTH'S WAP ACROSTIC

"Behind every product is a great product manager. This much maligned and misunderstood breed is a twentieth century phenomenon... This schmuck wouldn't have even had a job fifteen years ago."

Author: (Dan) Cochran
Work: (Of) Products and Processes
Source: Outside Apple - April Fools Edition

**Words**

| | | | |
|---|---|---|---|
| A. | Change | J. | Daken |
| B. | Olympic | K. | Debt |
| C. | Chamfer | L. | Uruguay |
| D. | Hob | M. | Coin |
| E. | Rejoin | N. | Thief |
| F. | Adding | O. | Stand |
| G. | Nettled | P. | Asthma |
| | | S. | Put |
| | | T. | Renew |
| | | U. | Omaha |
| | | V. | Churn |
| | | W. | Endows |
| | | X. | Shoving |
| | | Y. | Shimme |

View from the Hill contd. from pg 46

**Disk Drive Prices Cut**

A few weeks ago Apple reduced the prices of external disk drives. The new Suggested Retail Prices for Macintosh external drives are $1199 for the HD20, $399 for the 800K External Drive. For Apple II fans the new price for UniDisk 3.5 is $399 with Apple II System Utilities, $429 with Catalyst, or $468 with controller. Some dealers, of course, charge less than these prices.

**Apple Business Forum**

Just before I turned in this column, I attended the Apple Business Forum that Apple sponsored at the Westin Hotel on July 31 and August 1. The Forum included seminars, hands-on sessions, big screen demos, and a whole room full of software and hardware vendors with Macintosh products useful to businesses.

All of these activities were organized around the themes of Desktop Publishing, Desktop Communications, Desktop Engineering, Business Management, and Desktop Productivity. The signs in the viewing room were stressing these themes so strongly that it was sometimes difficult to find the actual product names. Apple is very clearly selling solutions to business and office problems instead of leaving potential buyers on their own to figure out why they need a computer.

Most of the exhibitors and Apple people at the Forum had been on the road for three weeks, conducting Business Forums in two cities each week. Washington was the last city for the group, and many exhibitors commented that the Forums were well attended and enthusiastically received in most of the cities.

**Off to MacWorld Expo**

When I write next month's column, I will have just returned from MacWorld Expo in Boston. There are so many new products at these shows that it's impossible for every observer to see them all. So I'll give you my own opinion about what's new and interesting, and perhaps a few comments about what it's like to work a show like MacWorld Expo as an exhibitor.

# MAC DISKETERIA NEWS
## by Martin Milrod

We have six new disks for you this month, two of which are revisions and four are brand new. The revision disks include later versions of applications [Dungeons of Doom 4.0 in disk #31.1 and FModem 0.95 (with great documentation) and Termworks1.29 in disk #51.1] The four new disks are described more fully below, but let me urge you to look at the Altered Finder (5.3 version) in disk #60 which I use on many of my own disks now.

By the time you read this, we will have returned from the MacExpo in Boston, and hope to have many new goodies for your next month's selection. Also, please note that the Mac Disk Catalog is available for purchase beginning with the August general membership meeting. The price for the Catalog is $2, the actual printing cost.

It is hoped that an archived set of disks by functional area (fonts, DA's. utilities, etc.) will be developed shortly and, at that time, a revision to the Mac Disk Catalog will be issued. Until then, you should find the Catalog of considerable interest and value since it also contains Type and Creator information for each file and lists all programs across all disks both alphabetically and by "standard category." Read the Catalog for more information.

Revised Disks:

**SigMac Disk 31.1:**
**Dungeon of Doom/Eliza Talks**

**Dungeon of Doom** - One of the best adventure games available at any price. It has characters with different levels of experience like Dungeons and Dragons and a large multi-level map that you scroll through like a fast action arcade game.

**D of D Manual V4.0** will get you started with Dungeon of Doom.

In the Talking Eliza folder:

**Eliza 1.3** - Eliza 1.3 is the best Eliza program we have ever seen. Not only does it talk, but it's programmable.

**Eliza.script** - This is the file that Eliza reads at startup to get its rules for creating responses.

**Eliza.classic** - A classic example of an Eliza dialog.

**Eliza.test** will run the program through a test of all its responses.

**MacinTalk** - Move this file with Eliza. It contains the resources that allow the Macintosh to "talk."

**Eliza documentation** - Read this file for important information on programming Eliza's responses.

**Mac Disk 51.1: Telecom II**

This disk contains some of the most important and valuable communications shareware available for the Mac. Included are Freeterm 1.8, FModem 0.95, Termworks 1.29 and the latest version of Kermit. Most of these support macros, XModem file transfers, a dialing directory and also contain documentation.

New Disks This Month

**Mac Disk 57: New Member Disk 1986**

This disk is given to all new members joining Washington Apple Pi. It contains some of the useful things that we thought all WAP member should have: a **Generic Scheduler**, a copy program called **Super Copy 1.1**, a catalog lister called **Cat•Mac™**, the **MacID** utility and—just for fun, the always great **Megaroids**. This is really an additional disk to the New Member Disk 1985.

**Mac Disk 58: Desk Accessories IV**

**Font/DA Mover** - Latest version (3.2) of the Font/DA mover.

**FONT-FKEY-DA Sampler** allows you to try DA's, Fonts, and FKEYs before you install them in your system.

In the Fun DA's folder:

**Animator** - Animate your MacPaint documents while in MacPaint. Cryptic and the instructions are not very good.

**Maxwell 2.2a** - Try to get all the "fast balls" on one side of a wall, and all the"slow balls" on the other. Tough game which takes time and patience.

In the Util DA's folder:

**Locator** - Displays a magnified area of where the mouse is and tells you the mouse's coordinates.

**The Box** - Displays the time and free memory, and also has a built in timer.

**MouseKey** - For people who can't use the keyboard. You can "type" onto an on-screen keyboard by using the mouse only.

**SetFile 3.3** allows you to set the finder attributes such as creator, type, etc. of any file.

**Camera** takes a "delayed" screenshot so that you can get pull down menus into the picture.

**Utils** allows you to copy, rename, or delete a file.

**µPaint** - A little painting DA. Has some interesting features, such as different kinds of bit copies (i.e., OR, XOR, NOR), but won't allow you to save or copy from a document.

**ClipEdit** allows you to edit text in the clipboard various ways: all caps, all lower case, smart caps, remove Line Feeds, or replace parts of the text.

In the System DA's folder:

**LifeSaver** allows you to save your document if there is a bomb in MacWrite.

**FixPic** makes pictures copied out of MacPaint print dark, and not the grey they usually do when merged with text in "best" quality printing.

**Memory** displays the system heap space, the application heap space, and the amount of free disk space.

**FolderMaker 1.0** lets you make an HFS folder in any application that supports DAs, so you don't have to go back to the finder to make one.

In the Telecomm DA's folder:

**Charger** - Figure out your long distance and time charging service bill, by recording your time spent while figuring out how much you spent in a session.

**QDial 1.5** - A background redialer which will redial a BBS while you are doing something else, and will even dial several BBS' in succession.

contd. on pg 25

## WASHINGTON APPLE PI DISKETERIA MAIL ORDER FORM
### Software for Creative Living

This form is only for ordering disks that you want mailed to you.
5 1/4" DISKETTES: - Members $ 5.00 each; Non-members $ 8.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
3 1/2" DISKETTES: - Members $ 6.00 each; Non-members $ 9.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
A $1.00 per disk discount on the above prices is offered for orders of 5 or more disks. Postage remains as above.

**DOS 3.3 Volumes**

( ) 41 IAC 25 Mach.Lang.Util.
( ) 42 One Key DOS ***
( ) 43 IAC 29 Utilities H
( ) 44 Utilities I
( ) 45 Diversi-Copy ***
( ) 46 French Vocab. Tutorial
( ) 47 Tic-Tac-Toe in French
( ) 48 Boot for l'Hote
( ) 49 l'Hote Story
( ) 50 l'Hote Quiz
( ) 51 French Poetry Tutorial
( ) 52 Apollinaire Biography
( ) 53 Albert Camus Interview
( ) 54 Tic-Tac-Toe in Spanish
( ) 55 Rafel-boot
( ) 56 Rafel
( ) 57 Rafel Quiz
( ) 58 Matute
( ) 59 Lo Fatal

( ) 70 Business/Math/Statstic.
( ) 71 Music
( ) 72 Keyboard Games
( ) 73 Text Adventure Games
( ) 74 Paddle Games
( ) 75 Color Graphics for Fun
( ) 76 Education
( ) 77 Utilities
( ) 90 Spreadsheet C Gen. Bus.
( ) 91 Spreadsheet D Investmt.
( ) 92 Spreadsheet E Bus. Rec.
( ) 93 VisiPlot & VisiTrend
( ) 94 CALCULINK ***
( ) 100 Utilities A
( ) 101 Utilities B
( ) 102 Games A
( ) 104 Business A
( ) 106 Science Engineering
( ) 107 Games B
( ) 108 IAC 10(Graphics)
( ) 109 IAC 11(Applesoft Tutr)
( ) 110 Personal/Education
( ) 111 Games C
( ) 112 Utilities C
( ) 113 Business B
( ) 115 IAC 12/13 Misc.
( ) 116 IAC 14 MicromodemII
( ) 117 Picture Packer
( ) 118 Utilities D
( ) 119 IAC 15 Misc.
( ) 120 IAC 16 Misc.
( ) 121 WAPABBS 1.1 Doc.**
( ) 122 IAC 17 Misc.
( ) 123 French Vocabulary
( ) 124 Utilities E
( ) 125 IAC 18 Misc.
( ) 126 Sights and Sounds
( ) 127 Math/Science
( ) 128 Games D
( ) 129 GLAQ
( ) 130 Diversi-DOS ***
( ) 131 Personal/Educ. 2
( ) 132 IAC 19-Utilities F
( ) 133 IAC 20-Pascal&DOS 3.3
( ) 134 New Members Disk

**DOS 3.3 contd.**

( ) 135 WAPABBS1.1 Disk 1**
( ) 136 WAPABBS1.1 Disk 2**
( ) 137 IAC 21 Spreadsheet A
( ) 138 IAC 23 Utilities G
( ) 139 IAC 24 Education 3
( ) 140 Education 4
( ) 141 Special Data Bases
( ) 142 IAC 28 Pinball Games
( ) 143 Sports
( ) 144 IAC 27 Applesoft Prog.
( ) 145 Apple Logo Tool Kit
( ) 146 Logo Documentation
( ) 147 App. Logo Samp.Prog.
( ) 150 EDSIG1 (Elem. Math)
( ) 151 1983 Tax Template
( ) 152 IAC 31 Miscellaneous
( ) 153 Investments A
( ) 154 Investments B
( ) 155 IAC 33 Miscellaneous
( ) 156 IAC 35 Applsft-AW//e
( ) 157 IAC 36 Arcade Games
( ) 158 Apple Logo Programs
( ) 159 Recipe Files
( ) 160 Utilities & Games
( ) 161 Wizard Worker
( ) 162 Games E
( ) 163 Graphs and Displays
( ) 164 Games F
( ) 165 Happy Holidays
( ) 166 Charts and Graphs
( ) 167 IAC 40 - Pilot Lang.
( ) 168 IAC 41&47-AW Util.
( ) 169 Hayes Term. Prog. ***
( ) 170 Love's Follies (Util.)
( ) 171 Cat-Graphix
( ) 172 Print Shop Graphics
( ) 173 Riley's Pers. Instru.
( ) 174 Imageworks
( ) 500 Master Catalog Listing

**Eamon Series Volumes**

( ) 180 Dungeon Designer
( ) 181 Beginners Cave
( ) *182 Lair of Minotaur
( ) *183 Cave of the Mind
( ) *184 Zyphur Riverventure
( ) *185 Castle of Doom
( ) *186 Death Star
( ) *187 Devil's Tomb
( ) *188 Caves of Treas.Isl.
( ) *189 Furioso
( ) *190 The Magic Kingdom
( ) *191 The Tomb of Molinar
( ) *192 Lost Isl. of Apple
( ) *193 Abductor's Quarters
( ) *194 Quest for Trezore
( ) *195 Underground City
( ) *196 Merlin's Castle
( ) *197 Horgrath Castle
( ) *198 Deathtrap
( ) *199 The Black Death
( ) *200 The Temple of Ngurct
( ) *201 Black Mountain
( ) *202 Nuclear Nightmare
( ) *203 Feast of Carroll
( ) *204 The Master's Dungeon
( ) *205 The Crystal Mountain
( ) *206 The Lost Adventure

**Eamon contd.**

( ) *207 The Manxome Foe
( ) *208 The Gauntlet
( ) *209 Caverns of Langst
( ) *210 Future Quest
( ) *211 House of Secrets
( ) *212 Sewers of Chicago
( ) *213 Slave Pits of Kzorland
( ) *214 Alternate Begin. Cave
( ) *215 Lifequest
( ) *216 Swordquest
( ) *217 Priest of Xim!
( ) *218 Heros Castle
( ) *220 Utility II
( ) *221 Utility III
( ) *223 Temple of the Undead
( ) *224 Quest for Holy Grail
( ) *225 Caves of Mondamen
( ) *226 Orb of Polaris
( ) *227 Death's Gateway
( ) *228 Escape from Orc's Lair

**ProDOS Volumes**

( ) 802 Utilities (A)
( ) 803 Filecabinet
( ) 804 Shareware ***
( ) 805 '85 Tax Templates-AW
( ) 806 ZAP
( ) 807 Imageworks

**Forth Volumes**

( ) 700 Assembler/Disassemb.
( ) 701 Full Screen Editor
( ) 702 GoForth Tutorial
( ) 703 Fig-Forth
( ) 704 Floating Point Arith.

**Pascal Volumes** (See also 133)

( ) 300 PIG0:ATTACH 1.1/BIOS
( ) 301 PIG1:
( ) 302 PIG2:
( ) 303 PIG3: (PIG0:, PIG2:,
( ) 304 PIG4: PIG4:, and
( ) 305 PIG5: PIG11: are
( ) 306 PIG6: re-issues)
( ) 307 PIG7:
( ) 308 PIG8:
( ) 309 PIG9:
( ) 310 PIG10:
( ) 311 PIG11:
( ) 312 PIG12:
( ) 313 PIG13:Guerilla Guide
( ) 314 PIG14:

**CP/M Volumes**

( ) 401 Master Catalog
( ) 402 Utilities 1
( ) 403 Communications
( ) 404 Utilities 2
( ) 405 Utilities 3
( ) 406 ZCPR2 Install
( ) 407 ZCPR2 Documentation
( ) 408 ZCPR2 Utilities
( ) 409 Modem 730
( ) 410 Essential Utilities
( ) 411 Text Editor
( ) 412 Spreadsheet
( ) 413 MDM740(SSC&Com)
( ) 414 MDM740(7710&A-Cat)
( ) 415 Orig. 350 Pt. Adventure

**Apple ///**

( ) 1001 Games Volume 1 & 2
( ) 1001 Basic Utility Volume 1
( ) 1002 Basic Utility Volume 2

**Macintosh @$6 (see above)**

( ) 1 MS-BASIC Pgms
( ) 2 Atkinson's Goodies
( ) 3 Fonts
( ) 4 MS-BASIC Pgms
( ) 5 Desk Accessories
( ) 6 Mac Paintings
( ) 7 Desk Calendar&MS-Basic
( ) 8 MacFORTH Programs
( ) 9 Not One Byte
( ) 10 Mostly BASIC
( ) 11 MacFonts } Recommended
( ) 12 MacFonts } as a pair.
( ) 13 RAM Disk&Altrd. Finder
( ) 14 Filevision Templates
( ) 15 Progammer's Playground
( ) 16 New Members Disk 1985
( ) 17.2a Red Ryder 9.2 ***
( ) 17.2b " " "
( ) 18 MusicWorks Collectn. I
( ) 19 Mock Accessories ***
( ) 20 MacPaintings II
( ) 21 Utilities I (ResEd)
( ) 22 Desk Tools
( ) 23 Fonts III
( ) 24 Telecom I
( ) 25 Util. II (Switcher 4.4)
( ) 26 Am. Sign Lang. Font
( ) 27 Cyclan Develop. Sys.
( ) 28 World Mapping Prog.
( ) 29 Fun and Games
( ) 30 Education I
( ) 31.1 Dungeon of Doom/ Eliza Talks
( ) 32 Fun and Games II
( ) 33 Desk Accessories II
( ) 34 Excel Tax Temp. '85
( ) 35 Fun and Games III
( ) 36 Utilities III
( ) 37 Fkeys
( ) 38 Graphic Tools
( ) 39 XLisp and Mini-ADA
( ) 40 Mac Videos
( ) 41 Cap'n Magneto
( ) Modula-2 68K - Set of 3 disks - $15 (no discount)
( ) 42 Studio Session (512K)
( ) 43 CE Software Sampler
( ) 44 Boston II Fonts
( ) 45 Games IV
( ) 46 Games V
( ) 47 Fonts
( ) 48 Fonts
( ) 49 Utilities IV
( ) 50 Paintings III
( ) 51.1 Telecom II(no sys)***
( ) 52 Utilities V
( ) 53 Utilities VI
( ) 54 Games VI
( ) 55 Games VII
( ) 56 Games VIII
( ) 57 New Member Disk '86
( ) 58 Desk Accessories IV
( ) 59 CE Sampler II
( ) 60 DesignScope Demo

*Vol. 181 required with these disks. ** Vols. 121, 135, 136 must be purchased together. DATE: _____
*** Use of this disk requires sending money directly to the author.
Note: Allow 2 to 3 weeks for mailing. Total Order = ____ Disks; Postage $_____; Total Amount Enclosed $_____.

NAME: _____ Make check payable and send to: (U.S. funds payable on a U.S. bank.)

ADDRESS: _____ Washington Apple Pi, Ltd. Telephone _____
Attn. Disketeria

CITY, STATE, ZIP _____ 8227 Woodmont Avenue, Suite 201 WAP Membership No. _____
Bethesda, MD 20814

# WAP TUTORIAL REGISTRATION

Apple //: The following three WAP tutorials are being offered to Apple // owners on the first three Tuesday evenings of the month from 7:30 to 9:00 PM, at the office, 8227 Woodmont Ave., Bethesda, MD. (The tutorials start promptly at 7:30; if you bring your computer please arrive 15 minutes early to set up.) You may sign up for any or all of the series. They are designed for the "beginner" and will be repeated monthly. A revised outline of the tutorials was given in the October 1985 issue of the WAP Journal. However, the 3rd tutorial has been revised as follows: It will introduce AppleWorks, Apple's integrated word processor, database and spreadhseet, for use with Apple //c, //e and ][+ when patched by Norwich Plus Works or similar software. An AW Data Disk will be available for use (or copying) during the tutorial. It contains several small (less than 10K) examples of databases and spreadsheets, in addition to procedures for using, adding to, and altering existing files. The particular files used will be chosen in response to requests from registrants.

( ) September 9* - **WELCOME TO THE WORLD OF APPLE** - October 7
( ) September 16* - **HOW TO USE YOUR APPLE SOFTWARE** - October 14
( ) September 23* - **POPULAR APPLICATIONS FOR YOUR APPLE** - October 21
* September tutorials are on the 2nd, 3rd and 4th Mondays because of the Labor Day Weekend.

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

__ Tutorials at $10.00 (with equipment) __ Tutorials at $15.00 (without equipment)

••••••••••••••••••••••••••

Macintosh: Tutorials for the beginners are given on the last two Monday evenings of the month at the office, from 7-10 PM. The fee for two tutorials is $30.00. You are strongly urged to bring your Macintosh. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

( ) Monday, September 22 and 29
( ) Monday, October 20 and 27

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 $ _____

## INDEX TO ADVERTISERS



## INDEX TO AUTHORS

# Power Plus!

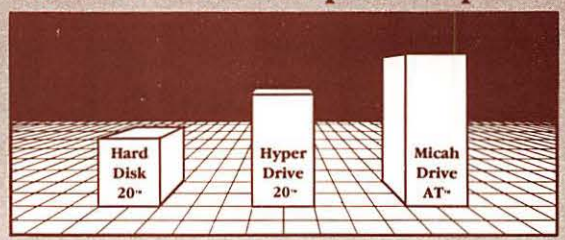

**Power plus means the fastest, coolest operating, most rugged and reliable internal hard disk you can get for your Macintosh™ or Macintosh Plus™. The MicahDrive AT™.**

Besides great speed and 22.4 mb of formatted capacity, The MicahDrive AT™ comes complete with print spooling, security, backup, and hard disk management software that provides 100% MFS or HFS compatibility. And since the MicahDrive AT™ can boot directly from the hard disk with 64K ROMs or 128K ROMs, you needn't worry about incompatibility when you upgrade your Macintosh™ to a Macintosh Plus™. The reinstallation is quick and easy.

With the Macintosh Plus™, the MicahDrive AT™ supports an additional 1 to 3 mb of add on memory with MicahMemory™ expandable RAM.

Because it's internal, the MicahDrive AT™ leaves more room on your desk while leaving your Mac portable. And it's all backed by a one year limited warranty.

**Relative Data Transfer Speed Comparison**




To find out more about the MicahDrive AT™, and the name of your nearest authorized Micah dealer dial up MicahLink™ -our 1200 baud, 24 hour a day BBS at (415) 771-1119 or call (415) 331-6422 during regular business hours.

MICAH

2330 Marinship Way, Suite 111, Sausalito, CA 94965 (415) 331-6422, Telex: TWX 510 600 1221

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

FORWARDING AND ADDRESS CORRECTION REQUESTED

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