$2.50

Washington Apple Pi

The Journal of Washington Apple Pi, Ltd.

Volume 10 January 1988 Number 1

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- I Love Apple Music - Simple Apple Music: **Part 7**
- Best of the Apple Items from the TCS
- Calculus for the New Century
- First WAP Journal Index
- Printer for the Rest...Ah, More of Us
- HyperCard Anomalies

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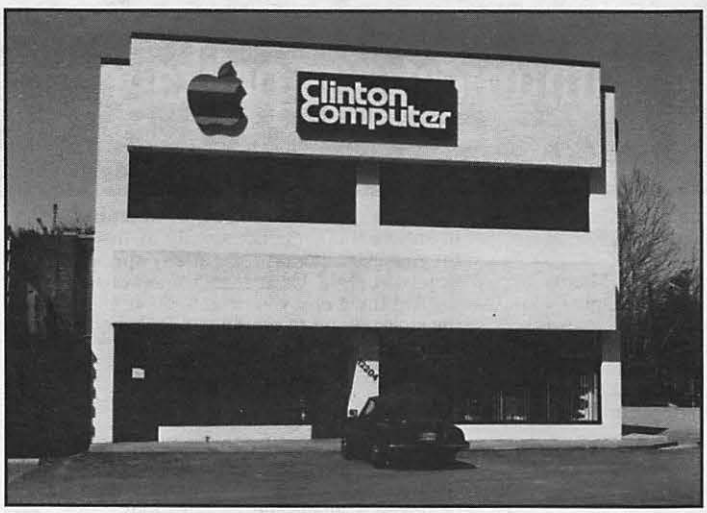

Clinton Computer's New Store at 12204 Rockville Pike

The company also operates a huge 3600-square-foot service and repair facility in Clinton, with satellite repair shops at the Laurel, Vienna, Rockville and Alexandria stores.

Clinton Computer was founded in 1978 by co-owners Art Lundquist and Chuck Perilli. It began as a two-man consulting firm on the fourth floor of an office building and has grown into a multi-million-dollar retail business.

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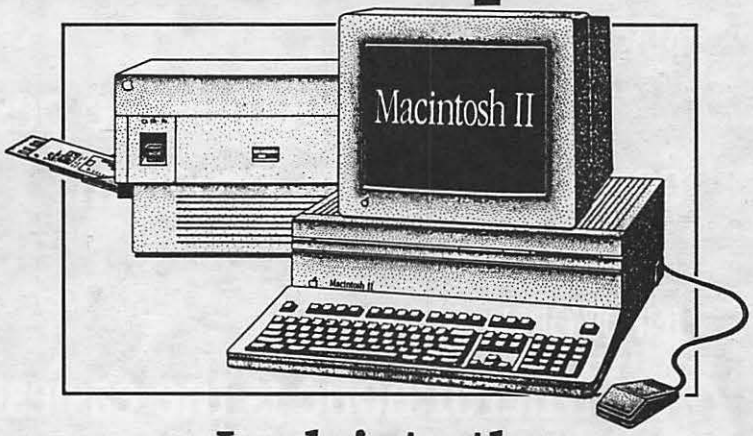
CLINTON COMPUTER offers Washington Apple Pi members a 25% DISCOUNT OFF THE LIST PRICE on all non-allocated Apple brand peripherals (no CPU's), software and AppleCare. For upgrades, the 25% discount applies to both the parts and normal labor rate. Discount is available to persons who have been Pi members for at least 3 months. Discount cannot be applied retroactively. Pi members need to present their cards up-front. No phone or mail orders, please. Discount cannot be used in combination with other promotions. Products on allocation from Apple are excluded from this offer. Clinton Computer reserves the right to change this policy at any time.



Look into the New Macintosh II

The new Macintosh™ II. There's a lot to look into. And it's easy. Just lift off the cover, and you're inside a whole new world. A world that makes it simple for you to adapt, expand, upgrade, and configure the Macintosh II to meet *your* needs. And with color, too!

What's more, the Macintosh II is the fastest and most powerful member of the Macintosh family -- processing information at four times the speed. And with six internal expansion slots, you have tremendous expansion capabilities. Which means there's practically no limit to what it can do for your business.

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Clinton Computer offers a comprehensive training program on both Apple™ and IBM™ microcomputers. Classes, currently scheduled through October, include New Owners' Workshops, Mac Graphics, AppleSoft BASIC, AppleWorks, Lotus 1-2-3, Microsoft Works and more!

For registration information, contact Paula Majerowicz at our Laurel location -- 953-1110.

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EDITORIAL

This month we have two new developments regarding the preparation of the Journal to report.

Please notice the front cover. This time, thanks to the considerable and expert volunteer work of Bill Baldridge, we now have an electronic version which is prepared entirely by the Mac and LW+. Since Mark Crosby developed the original cover in 1980 we've been updating the template by hand. Bill, working with a thunderscanned image of the template, cleaned up a 3x4 foot image within Canvas 1.0 and saved it as a Pict ready for placement by PageMaker 2.0a into manageable size. Thank you, Bill!

You may also note that the print in this issue is a bit blacker. This is due to the first-time use of a refilled LaserWriter cartridge. This work was done by Jeff Evans of P.C. Resources (see their ad elsewhere in this Journal). The quality of work is quite evident. Obviously this was not a hole drilling and refill operation, but a competent cartridge overhaul. The contrast between the old cartridge, which was just about out of toner, and

contd. on pg 86

PRESIDENT'S CORNER

by Robert C. Platt

Don't jump to a conclusion from this byline that I led a *coup d'etat* ousting Tom at the last meeting. Other commitments prevent him from reporting here this month.

New IIgs User? Congratuations to the Ted Meyers on the arrival of Theodore Arthur, an 8 lb 5 oz IIgs user. This shows that Ted will do anything to recruit new members for the IIgs SIG. Seriously, new IIgs users of any age can benefit from attending the SIG meetings held at 8 a.m. before the WAP business meetings. Also, the SIG has started a bimonthly tutorial for new IIgs users.

Group Purchase. Please remember that WAP continues to offer an exceptional group purchase program. For example, Danny Goodman's HyperCard book, modems and 800K external Mac disk drives are available at substantially below list prices on a continuing basis. Other items are available through special order. To find out what items are available, come to the monthly meeting or call 202-544-8327 from 7-9:30 pm. Monday-Friday. This phone is staffed by an group of dedicated volunteers, headed by Rich Wasserstrom. Many thanks to Rich and Russell Strange, phone coordinator, Bob Wilbur, Mark Pankin, Tom McKay, and Charles Sicard. By the way, congratulations to Rich on his transition this month from a trade association to partnership in the **Frank, Bernstein, Conaway & Goldman** law firm. I sympathize because I'm also going through the trade association to firm transition this month to **Ginsberg, Feldman and Bress.**

Meeting location. WAP continues to improve our meetings and is considering moving to a different location. No firm decision has been reached and the January meeting will be at USUHS. Watch the Journal for possible future changes.

The WAP Hotline. This issue's Hotline list has been expanded to include volunteers from the November meeting. If you have expertise with a particular software package, please consider volunteering by calling the office. Many thanks to the individuals on this list who have offered fellow Apple owners assistance when stumped.

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday of each month (except December—3rd Saturday) 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 8:45-10:00 AM. 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:

January 23 - High-Tech Toys, tentative
February 27 - Connectivity

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office.

GENERAL INFORMATION

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

Membership dues for Washington Apple Pi are $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

Please note that the office is closed on all U.S. Government holidays. Members are asked to place phone calls to the office during the day hours Monday - Friday whenever possible, since only one person staffs the office during evening hours and on Saturday.

MINUTES

WAP Executive Board Meeting of December 9

The fees for the last garage sale were reviewed. There was some discussion as to who would have tables. Participants were invited to bring extensions cords. Software can only be sold as original, with original documentation. The finish time will be 1:30 PM. There was no Treasurer's reports but Gena reported that she had a copy of the financial statement for the first four months of the fiscal year. We are about $4000 better than projected, but the Chairman warned us against excessive reliance on partial year reports. Bernie said there was no change in the meeting site suitation as yet. January, February and March are reserved at USUHS for our use (auditorium and cafeteria) with Dr. John Gardner as our sponsor. Regarding status of our work on 501(c)(3) status, Harvey Kaye has called IRS, but no forms are yet available. John Gertsch sugged that some libraries have originals of all forms for copying. Gena told us that Dan Dwyer had done considerable work on the subject and had written a report to Tom. There was a discussion of the various proposals that had been received for printing the Journal. A proposal for holding stand-alone tutorials was presented. Bob reported on the requests from some members to upgrade the club's Macintoshes. Bernie suggested that we upgrade our donated Lisas to Mac+ standard.

* January 1988 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Office Closed New Year's Day Best Wishes for 1988	2
3 Deadline for Journal articles is Thursday January 7 -->	4 PI-SIG 7:30 PM Office	5 Apple II +,e,c Beginning Tutorial #1 7:30-9PM Office	6 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	7 GameSIG 7:30 PM Office	8 AV-SIG Meeting 6:30 PM Nancy Seferian <-- on Jan. 7	9 WordPerfect for IIgs Tutor. 9-12am Office; Music SIG
10	11 Introduction to Macintosh Tutorial - Office 7:15 - 10 PM	12 Apple II +,e,c Beginning Tutorial #2 7:30-9PM Office	13 Executive Board 7:30 PM Office	14 Stock SIG 8:00 PM Office	15 Federal Holiday Office Closed	16
17	18 Intermediate Mac Skills Tutorial - Office 7:15 - 10 PM	19 Apple II Beginning Tutorial #3 (AW) 7:30-9PM Office	20	21 Pascal SIG 8:00 PM Office	22	23 WAP Meeting 9:00 AM USUHS
24 Jan. 25 --> IIgs Meeting 7 PM - Dolley Madison Library	25 Productivity on Your Mac Tutorial - Office 7:15 - 10 PM	26 Mutual Fund Sub Group (Stock SIG) 8 PM Office	27 Apple /// 7:30 PM Office	28 EDSIG 7:30 PM Office	29	30 Disk & File Recovery for Apple II Tutor. 9-12am Office
31						

* February 1988 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 PI-SIG 7:30 PM Office	2 Apple IIgs Beginning Tutorial #1 7:30-9PM Office	3 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	4 GameSIG 7:30 PM Office	5	6
7 Deadline for Journal articles is Monday, February 8 -->	8 Introduction to Macintosh Tutorial - Office 7:15 - 10 PM	9 Apple IIgs Beginnning Tutorial #1 7:30-9PM Office	10 Executive Board 7:30 PM Office	11 Stock SIG 8:00 PM Office	12	13 Music on Mac Tutorial 10-12AM Office; MusicSIG
14 Happy Valentine's Day! Mon. Feb 15 Office Closed -->	15 Intermediate Mac Skills Tutorial - Office 7:15 - 10 PM	16 Apple IIgs Beginning Tutorial #3 7:30-9PM Office	17	18 Pascal SIG 8:00 PM Office	19	20
21	22 Productivity on Your Mac Tutorial - Office 7:15 - 10 PM	23 Mutual Fund Sub Group (Stock SIG) 8 PM Office	24 Apple /// 7:30 PM Office	25 EDSIG 7:30 PM Office	26	27 WAP Meeting 9:00 AM USUHS
28	29					

SIGNEWS

Apple IIGS SIG will meet at 7:00 PM on Monday, Jan. 25 in the meeting room at the Dolley Madison Community Libriary in McLean VA. For information call Ted Meyer at (703) 893-6845 evenings between 7 and 8 PM.

Apple /// SIG meets on the 4th Wednesday at 7:30 PM in the WAP office. The next meeting is January 27.

AppleWorks SIG offers two meeting options: 8:00AM before the regular WAP meeting and 12 Noon after the meeting. Attend either or both.

AV-SIG is the new SIG for arts and video. See their news elsewhere in this issue for details of next meeting.

dPub SIG (Desktop Publishing) meets on the 1st Wednesday of the month at 7:30 PM in the PEPCO Auditorium at 1900 Penn. Ave., NW. The next meeting is on January 6.

EDSIG (the education special interest group) meets on the 4th Thursday of the month at 7:30 PM at the office. The next meeting is on January 28.

Fed(eral) SIG usually meets on the third Wednesday of the month. Call the Chairman for details.

GameSIG meets on the 1st Thursday of the month at the office, 7:30 PM. The next meeting will be on January 7.

Mac Programmers meet on the 1st Wednesday of the month at the office, 7:30PM. Next meeting is January 6.

MusicSIG meets on the 2nd Saturday of each month. Call Bill Bittle (301) 236-9898 for details.

PIG, the Pascal Interest Group, meets on the 3rd Thursday of each month at 8:00 PM at the office. The next meeting will be on January 21.

PI-SIG (Program Interface) meets on the 1st Monday of the month at 7:30 PM at the office. Next meeting is January 4.

Stock SIG meetings are on the second Thursday of each month at the office, 8 PM. The next meeting is January 14.

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

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 users 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.

Apple II

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APPLE SSC	Bernie Benson	(301) 951-5294
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	Ray Settle	(301) 647-9192
	Charles Baumgardner	(703) 538-2316
	Ken Black	(703) 369-3366
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	Ginny Spevak	(202) 362-3887
Profiler 3.0	Barry Fox	(717) 652-4328
Hard Disks		
CMC (not CMS)	Barry Fox	(717) 652-4328
Corvus & Omninet	Tom Vier (BBS)	(301) 986-8085
Corvus	Leon Raesly	(301) 439-1799
Sider	Jaxon Brown	(301) 350-3283
	Otis Greever	(615) 638-1525
Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)		
A	Louis Biggie	(301) 967-3977
A	Peter Combes	(301) 251-6369
A	Leon Raesly	(301) 439-1799
A,I,M	John Love	(703) 569-2294
M	Ray Hobbs (BBS)	(301) 490-7484
P	Michael Hartman	(301) 445-1583
Forth	Bruce Field	(301) 340-7038
Operating Systems		
Apple DOS	Adam Robie	(301) 460-6537
CP/M	Art Wilson	(301) 774-8043
ProDOS	Leon Raesly	(301) 439-1799
	John Love	(703) 569-2294
	Eric Rall	(301) 596-0004
ProDOS 8 and 16	Barry Fox	(717) 652-4328
Print Shop	Thomas O'Hagan	(301) 593-9683
Newsroom	Carol Thomas	(301) 424-1266
Spreadsheets	Leon Raesly	(301) 439-1799
	Walt Francis	(202) 966-5742
Sprdsht.2.0(MagicCalc)	Leon Raesly	(301) 439-1799
SuperCalc Ver. 2.0	Leon Raesly	(301) 430-1799
	Terry Prudden	(301) 933-3065
Utilities: ProSel	Barry Fox	(717) 652-4328
Word Processors	Walt Francis	(202) 966-5742
Apple Writer II	Dianne Lorenz	(301) 530-7881
	Leon Raesly	(301) 439-1799
Gutenberg	Harris Silverstone	(301) 435-3582
Letter & Simply Perfect	Leon Raesly	(301) 439-1799
Magic Window and II	Joyce C. Little	(301) 321-2989
Mouse Write	Barry Fox	(717) 652-4328
ScreenWriter II	Peter Combes	(301) 251-6369
	Gene Carter	(202) 363-2342
Word Handler	Jon Vaupel	(301) 593-3316
Word Perfect	James Edwards	(301) 585-3002
	Henry Donahoe	(202) 298-9107
Word Star	Art Wilson	(301) 774-8043
	Dana Riel	(301) 350-3283

Apple IIgs

General	Barry Fox	(717) 652-4328
General/Finder	David Todd *	(301) 228-0237
General/Monitor	Neil Walter	(301) 946-4526
General/Paintworks Plus	Paul Tarantino	(703) 455-7670
//e Upgrade	Morgan Jopling	(301) 261-3886
APW	Andy Gavin	(703) 734-3049
	Jim Frison	(703) 525-9395
Deluxe Paint II	Rich Sanders	(703) 450-4371
GS-BASIC	Barry Fox	(717) 652-4328
Multiscribe GS	Ray Settle	(301) 647-9192
Newsroom/Pinpoint	Chuck Ward (til 9 pm)	(703) 830-3720
Telecommunications	Dale Smith	(301) 762-5158
& Utilities: ProSel	Barry Fox	(717) 652-4328
VIP-Pro/Multiscribe	Jim Frison	(703) 525-9395
816 Paint/Writr's Ch. El.	Andy Gavin	(703) 734-3049

Macintosh

General	Donald Schmitt	(717) 334-3265
Art and Video	Jay Williams	(301) 9398910
Data Bases		
Double Helix	Chuck Sicard	(301) 963-2879
Helix	Jim Berry *	(703) 662-0640
	Harvey Levine	(301) 299-9380
MS-File	John Love	(703) 569-2294
Omnis 3 and 3+	Paul Tabler	(703) 278-8657
	Jeff Alpher *	(301) 630-2036
OverVue	J.T.(Tom) DeMay Jr.	(301) 461-1798
	Tom Parrish	(301) 654-8784
Desktop Publishing		
& Graphics	Jay Rohr	(301) 655-0875
PageMaker	Kate Burton *	(301) 621-6351
ReadySetGo	Jim Graham	(703) 370-5737
	Marty Milrod	(301) 464-5981
Graphics	Bill Baldridge	(301) 779-8271
Full Paint & SuperPaint	Bill Baldridge	(301) 779-8271
HyperCard	John Love	(703) 569-2294
	Holger Sommer	(301) 474-3467
	Rick Chapman	(301) 989-9708
Inside Mac	Jon Hardis	(301) 330-1422
MacDraft	Bob Wilbur	(703) 379-2960
MacDraw	Tom Berilla	(301) 434-3256
	Tom Parrish	(301) 654-8784
	John Spencer	(301) 730-1084
MacLion (DBMS)	Mark Miani	(202) 333-0098
MacMoney	Chuck Sicard	(301) 963-2879
MacProject	Jay Lucas	(703) 751-3332
MacTerminal	Jon Hardis	(301) 330-1422
Magic	Joyce C. Little	(301) 321-2989
Power Point	Herb Schwartz	(301) 983-0534
Programming, MS-BASIC	John Love	(703) 569-2294
Spreadsheets	David Morganstein	(301) 972-4263
& Graphics	Bob Pulgino	(202) 797-0879
Excel	David Morganstein	(301) 972-4263
	Mark Pankin	(703) 524-0937
	Jim Graham	(703) 370-5737
	Dick & Nancy Byrd	(703) 978-3440
Multiplan	John Boblitz	(301) 356-9384
	John Love	(703) 569-2294
	Walt Francis	(202) 966-5742
Sidekick	Ray Hobbs (BBS)	(301) 490-7484
Telecommunications	Eric Rall	(301) 596-0004
ThinkTank/More	Jim Graham	(703) 370-5737
	Tom Parrish	(301) 654-8784
Word	Marty Milrod	(301) 464-5981
WriteNow	Bill Baldrige	(301) 779-8271

General

Games - Apple II	Charles Don Hall	(301) 864-2715
Games - Mac		
IBM	Ray Hobbs (BBS)	(301) 490-7484
	Leon Raesly	(301) 439-1799
Lotus 1-2-3	Walt Francis	(202) 966-5742
& MS BASIC	Ray Hobbs (BBS)	(301) 490-7484
Math/OR Applns.	Mark Pankin	(703) 524-0937
Modems		
Anchr Mrk 12&BIZ Comp	Jeremy Parker	(301) 229-2578
Hayes Smartmodem	Bernie Benson	(301) 951-5294
Smartcom I	Harmon Pritchard	(301) 972-4667
Music Systems	Ray Hobbs (BBS)	(301) 490-7484
Printers - General	Walt Francis	(202) 966-5742
	Leon Raesly	(301) 439-1799
MX-80	Jeff Dillon	(301) 662-2070
Okidata	Michael Proffitt	(301) 874-2270
Stat. Packages	David Morganstein	(301) 972-4263
Stock Market	Robert Wood	(703) 893-9591
TCS	Eric Rall	(301) 596-0004
Time-Sharing	Dave Harvey	(703) 578-5621

* Calls until midnight are ok.

CLASSIFIEDS

WANTED: Apple //c for donation to Centers for the Handicapped, Inc. for use by multi-handicapped adults. Will serve as communication, learning, and vocational device. Also need a **grahics capable printer** for donation to above. **Donations are tax-deductible.** Contact Judy Hyde at (301) 445-3350.

FOR SALE: Mac 512K, $800/best reasonable offer; Apple 400K external drive, $65; Mac Carrying Case (Apple), $49. Call Steven Payne (Carmelite Monastery) at 832-6622.

FOR SALE: Personal Laser Printer made by General Computers, only two months old, along with necessary software. Under $1900. Please call (301) 589-1600 day or (301) 460-4447 evenings.

FOR SALE: Apple //e with Premium Softcard //e (80-col, 64K, Z80 for CP/M), Hayes MicroModem //e (internal), Sider 10 Meg, 2 floppy drives, Grappler+ parallel card, green monitor, joystick, System Saver, and lots of software. $1500 or best offer. Call (301) 884-4043 after 6 PM.

FOR SALE: Apple //e, 128K, mono, 80 col. card, CH Mach III joystick, Juki 6100 printer with carton of continuous paper. Software with extra blank disks. Miscellaneous items: 6-outlet surge protector, floor cable cover, diskette storage file, Apple magazine *InCider*, back issues with 2 1/2 years paid subscription. All manuals and original cartons available. Plus office supplies at 75% discount. Must sell $900. Call Bill Lafayette (202) 635-1114.

FOR SALE: (2) XL's; (1) 512K enhanced, 20 Meg internal hyperdrive; (1) Apple][+ w/Disk II Disk Drive; (1) color monitor III model A3M0039. Please contact Kris Wheeler (301) 589-6760 M-F 8:30-5:00.

FOR SALE: Adobe Illustrator, used only once, still has registration card, $275. Call Howard at work (202) 366-4057 or home (202) 882-4645.

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I LOVE APPLE MUSIC (The Disk) Parts 1 - 6. Have you been following this series in the Journal but have not had time to type in the listings? Now - ALL LISTINGS + TEXT FILES on a 5 1/4" disk. Hear and experiment with Apple Sounds immediately, PLUS several other great programs. Send $7.00 to Gary Hayman, 8255 Canning Terrace, Greenblet, MD 20770.

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Q & A
by Bruce F. Field & Robert C. Platt

Q. I read an article in Call-A.P.P.L.E. a few years ago about a 3-byte patch to DOS 3.3 that will speed up the loading of files. Do you know anything about it?

A. You may be referring to an article by Art Schumer where he suggests disabling the automatic verify that occurs after every SAVE or BSAVE and also shortening the time DOS waits for the drive motor to come up to speed. POKE 46732,76 to disable the automatic verify and POKE 46732,32 to re-enable it. POKE 47102,236 to shorten the motor turn on time and POKE 47102,216 to restore it to the standard time.

If you are interested in DOS 3.3 speed up techniques I recommend that you get a copy of *Call-A.P.P.L.E. In Depth Number 3, All About DOS*. I believe that this journal is still available in limited quantities. It contains Art Schumer's article as well as a number of other articles for speeding up DOS 3.3. Mark Brown discusses a Fast Load Formatter for Applesoft and binary programs. This program saves the original program to disk with an additional special file to permit quickly loading the original. A 131-sector Applesoft program normally takes 30 seconds to load but only 8 seconds using the Fast Loader for a 430% improvement. R. D. Purves presents a fast text file loader, Phil Bryan has a 50-byte assembly language patch to be inserted in DOS to change the "skew", the order in which the sectors are written to the disk, and J. E. Hopper and J. B. Mathews have written an assembly language program to modify DOS for fast booting.

An alternative solution is to use one of the faster Disk Operating Systems that are compatible with DOS 3.3. At one time several were available but they may be hard to find now. Two that I remember are Diversi-DOS written by Bill Basham, available from Diversified Software Research, 5848 Crampton Ct., Rockford, IL 61111, and Pronto-DOS available from Beagle Bros. (see any Apple magazine for their ads). Apple ProDOS uses some of the preceding speed up techniques and is considerably more speedy than DOS 3.3, so the best solution may to be convert your DOS 3.3 files to ProDOS. The CONVERT program on the ProDOS Utilities Disk will do the conversion, or the COPY function of the later versions of ProDOS will do the conversion automatically when copying between disks of different formats.

Q. How does Applesoft deal with floating point arithmetic? Actually, what I am looking for is a machine language subroutine that will multiply four place trig functions in order to generate Apple graphics using polar coordinates. I would like to insert this subroutine, as needed, into Applesoft programs. Four digit accuracy would suffice for three digit graphic coordinates, and would not be slowed down by extra digits built into Applesoft trig function routines.

A. Most of the following information comes from Applesoft Internal Entry Points by John Crossley, an excellent reference for anyone considering using assembly language from Applesoft which stores floating point numbers in memory in a packed format using five bytes per number. The exponent is a single byte signed number in excess $80 form, that is the signed value of the power of 2 exponent has $80 added to it. The mantissa is stored as four bytes and the binary point is assumed to be to the left of the most significant bit (msb). Since in binary floating point notation the msb is always 1, the number's sign is kept there when the number is stored in memory (the so-called packed format). For example,

exp mantissa
-10 decimal = 84 A0 00 00 00
10 decimal = 84 20 00 00 00

If the exponent is zero, then the number is zero although the mantissa isn't necessarily zero. For arithmetic operations in the floating point registers the numbers are converted to FAC format where the msb of the mantissa is always one and the sign bit is moved to the msb of an additional (sixth) byte. Only the msb of the sign byte is significant. Thus for FAC format -10 decimal becomes 84 A0 00 00 00 FF and 10 decimal becomes 84 A0 00 00 00 00.

Information on where Applesoft variables are stored in memory can be found in the Applesoft Basic Programming Reference Manual.

Q. Can I use the Apple LaserWriter printer on European electric power? I know I'll need a transformer to step-down the voltage from 220 V to 110 V but what about the difference in frequency?

A. The LaserWriter, Imagewriter II, Scribe, and Apple Color Plotter are designed to work only with 60 Hz power and may be damaged if used with a 50 Hz source. Apple has supplied the following information (via AppleLink) on some of its other products.

These Apple products are designed to operate at a line voltage range of 107 V to 137 V, at 50 or 60 Hertz.

Computers:
- Apple II, IIe, IIc
- Apple III, III+
- Apple IIGS
- Macintosh
- Macintosh XL, Lisa

Printers:
- Daisy Wheel
- Dot Matrix
- Imagewriter
- Silentype

Disk Drives:
- Profile

Monitors:
- II, IIc, III

video output is NTSC standard only
the control panel has a 50 Hz setting
the screen may flicker at 50 Hz

Use these with a grounded step-down isolation transformer. A 50 Hz source can noticeably affect spacing

contd.

between the characters for all these printers. These work with NTSC video only. There may be some screen flicker at 50 Hz.

These Apple products are designed to operate at a line voltage range of 107 V to 137 V, at 60 Hertz ONLY. Damage may occur with a 50 Hz source.

Printers:

LaserWriter
Imagewriter II
Scribe
Apple Color Plotter

These Apple products are self-configuring and are designed to operate in a line voltage range of 85 V to 270 VRMS, with the frequency ranges specified below.

HD20SC Hard Disk Drive
High-Resolution RGB Monitor
High-Resolution Monochrome Monitor
47 - 64 Hz
50 - 60 Hz
50 - 60 Hz

If the country uses a line voltage of 220 V, you'll need a 220 V to 110 V step-down transformer. Although converters (not transformers) are available in the U.S., some of these have killed Apples. Don't risk this. Pay the $60 for an isolation transformer. A 500 Watt unit should be plenty for an entire Apple system (CPU, monitor, and printer). The unit must have a third prong for a grounded outlet.

Apple also notes that Apple dealers overseas are capable of servicing the equipment designed for their country only. European Macintoshes for example have power supplies designed to handle Europe's 220 V, 50 Hz electricity. Although mice, external drives, digital boards and similar modules are the same as distributed in the U.S. the software and keyboards are different for each country. The Apple warranty is valid only in the country of purchase. A defective unit must be returned to the country of purchase if service is desired under warranty. Use your product extensively before you leave so that any problems that the warranty covers may be detected and corrected under warranty.

Q. What does the new system do that Apple is shipping with the GS? Is it worth getting?

A. Apple posted the following information about the new system on AppleLink.

System Disk 3.1 began shipping with every Apple IIgs CPU in late October, and is now available at your local participating authorized Apple dealer. This new version introduces the new Apple IIgs Finder™, plus updated System Utilities. The Finder takes full advantage of the Apple IIgs computer's 16-bit system performance and:

- locates and starts applications
- organizes information
- performs general system utilities

What's more, the Finder does it all in high-resolution color graphics.

Works with ProDOS

Using a simple mouse and icon interface, the Finder works with ProDOS® applications and requires 512K RAM. It replaces the Apple II Desktop interface. If you have only 256K of memory, you can use the Program Launcher and System Utilities to launch applications and manage files. The system will automatically boot either the Finder or Program Launcher, depending on the memory you have available.

Enhanced System Utilities

In addition to the new Apple IIgs Finder, System Disk 3.1 contains an enhanced version of System Utilities. Changes to the disk copying feature allow you to reduce the number of disk swaps required when copying on a single drive system.

New Manual

Available now for separate purchase is the new Apple IIgs System Disk User's Guide (order number A2D6001). This comprehensive manual (which does not include the software) provides you with extensive documentation of the Finder and other functions of System Disk 3.1. It also allows those who upgrade to System Disk 3.1 to take full advantage of the new software features. The manual is available at a suggested retail price of $19.

Q. With the new IIgs finder, how do I color icons on my desktop?

A. Select the icon by clicking on it. When an icon is selected, the color menu becomes active. Drag down the color menu and release the mouse button on the color you desire.

Q. Does the IIgs finder support alternative types of disk copying?

A. Yes. If you hold down the option (closed-apple) key while dragging the source disk icon to the icon of the destination disk, a dialog box will appear. You can either: 1) place the contents of the source disk in a new folder on the destination disk, 2) replace the contents of the destination disk with the contents of the source disk, or 3) add the contents of the source disk to the destination disk without creating a new folder to separate the copied files. In the finder's Special menu, the Preferences dialog gives you the choice of "Doing a smart block copy when copying disks of the same size." You will usually want to have a check mark in this box.

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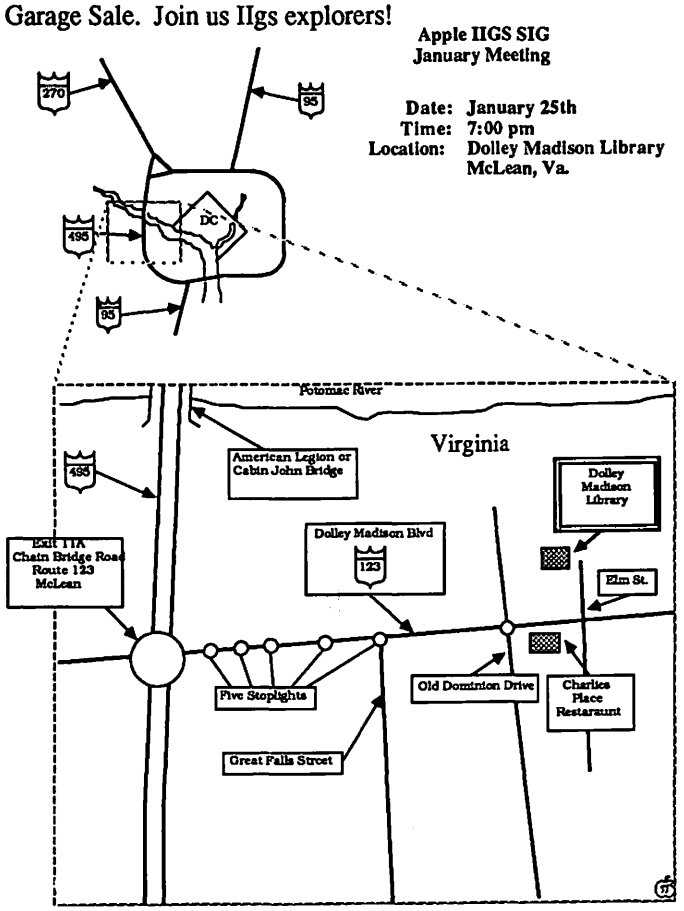
APPLE IIGS SIG NEWS
by Peg Matzen

IIgs SIG members convened at 8:00 a.m. to glean more information about their new systems. Chairman Ted Meyer was absent: a new son—Theodore Arthur—has joined Ted's household. This happy event has understandably changed Ted's focus of attention for the moment. Nevertheless, Ted expects to be with us for the January meeting, AND his very informative articles about the IIgs will continue to appear in the WAP Journal.

Jim Frison presented the program of the day on the Finder, which is part of the new System Disk 3.1. As best anyone knows, no documentation has been offered by Apple for operating the new system. Jim did a good job of presenting his findings on the Finder, and other SIG members who had experimented with the Finder added their input.

Alternatives to the 8:00 a.m. meeting hour were discussed. If you have constructive suggestions on the matter of meeting time and/or place, let Ted Meyer know (see phone information below).

NOTICE...NOTICE...NOTICE... Chairman's Note: The meeting time and location for the January meeting has been changed. We will meet at 7:00 p.m. on Monday, January 25th in the meeting room at the Dolley Madison Community Library in McLean, Virginia. For information or directions call Ted Meyer at (703) 893-6845 evenings between 7 and 8 p.m. A map is printed below. There will be NO December meeting before the Garage Sale. Join us IIgs explorers!



APPLEWORKS SIG NEWS
by Peg Matzen and Bill Burns

For their November meeting, AppleWorks SIG members joined in the Apple II program on Productivity, which ended smartly in a Q & A session beamed toward novice users.

Lee Raesly directed questions and added his input to a panel of four Apple II stalwarts: Ken DeVito, Peter Combes, Dave Harvey, and Lou Pastura. A brief recounting of their answers may be of interest to many of you:

Q. What magazines are available?
A. *WAP Journal; A+; AppleWorks Journal; Byte; Call Apple; InCider; Open Apple; Nibble.* [After WAP Journal, Open Apple was the unanimous favorite.]

Q. Which are your favorite programs?
A. AppleWorks; Copy II Plus; ASCII Express; Mousetalk; Supercalc; Procel; Cat Doctor; Bag of Tricks; WordStar; dBase II, ScreenWriter.

Q. Which software enhancements do you use or like?
A. Pinpoint; Pathfinder (used within AppleWorks); SuperMacroworks (comment: "AppleWorks will do about everything with macros"); UltraMacros (Timeout series—"expensive"); Printrix ("a very powerful tool") and its companion, Fontrix.

Q. What printers do you use?
A. Apple DMP; Imagewriter I & II; Amadex; C. Itoh; NEC; Epson FX 80 or 100. Ribbon costs, re-inking, etc., were discussed: If you don't want to risk the mess of re-inking your own, some local sources for ribbons at reasonable prices are: W. B. Dalton; Cove Ribbon, Beltsville, Md; Maxware, Alexandria, Va.(for re-inking).

Q. What would you like to do that you can't at the present?
A. Ken DeVito would like to download pictures from the TCS. Lee Raesly said Apple is working on this.

SIG sessions are always informative—even our experts continue to find new ways the AppleWorks! Happy Holidays!

MEETING LOCATION SITE

The January 23rd meeting of Washington Apple Pi will be at our usual location site at USUHS.

THUNDERSCAN FOR THE APPLE II: A Review

by David Todd

Now I have a Dover Clip Art habit as well as a caffeine habit. More on that in a bit.

ThunderScan for the Apple II is an optical scanner that pops in place of the ribbon cartridge on your Imagewriter. Anything that you can roll through your printer can be digitized. ThunderScan is compatible with Apple II's, from the unenhanced 64K / /e up to the GS. The only printers supported are the Imagewriters I & II and wide carriage Imagewriter.

Software is not copy protected and is supplied on 3.5 and 5.25 disks. A single drive system can be used, but will be severely limited. Hard disks and Ram disks are supported.

Setup can easily be done in a couple of minutes. The unit plugs directly into the Apple's gameport. The arrow keys are used to set the size and position of the image being scanned. Density can be set from 36 dots per inch to 350 dpi. The size of the scan image is dependent on the size of your storage medium. You are told during setup if you do not have enough room on the disk. The largest possible scan is about 7.75 inches by 8.5 inches.

The time it takes to scan is determined by the size, density, and quality desired. Expect to spend 15 minutes or more per scan. Information is written to disk as the page is being scanned. This can be saved as a scanfile. From the scanfile you may switch and choose the screen format being used for display. Your choices are Standard, Double Hi-res, Super Hi-res, and Ultra Hi-res. These options are limited by your Apple model and memory.

Display mode can be set from line art (black & white) to halftoning to 16 levels of grey (GS only). TS does not scan in color but colors may be assigned to the different grey values. A histogram shows the percentage of each grey value or color in a screen. The relative brightness and contrast in a screen can be changed with a couple of keystrokes.

You may also save individual screens in whatever format is being displayed. These screens can be loaded into MousePaint, Dazzle Draw, DeluxePaint, or any other paint program that uses these standard file formats.

The scanfile format is used only by TS. It can be printed out as Line Art (high contrast black & white) or as halftones, at 72 dpi or 144 dpi. Thunderware is working on a driver for the Laserwriter.

The 70-page illustrated manual is clearly written with a tutorial and index. The reference section includes tips and solutions to possible problems.

I do have a number of complaints, nit picking, mostly. ThunderScan doesn't follow standard ProDOS Quit protocol. It asks for a slot# and does a re-boot. This is less confusing than Apple's "ENTER PATHNAME..." but it doesn't allow exiting to program selectors such as ProSel, Byrds Better Bye, or Finder. This could also be frustrating to a new user who has saved his files to the Ram disk.

The menu section of the interface, particularly for the GS, is somewhat primitive by today's standards. It does the job without confusion, but it could be so much better. There are no help screens and some of the information is found only in the manual. Loading and saving files is cumbersome. If you need to catalog a disk before saving a screen, you will have to reload the scanfile before saving.

Since this is the time of year for wish lists, I would like to see, as options, a mouse interface and a separate interface for the GS. Painting tools could be integrated, as they are in the Mac version.

If you already have ThunderScan for the Mac and your scanner disconnects from the adapter box, you may upgrade to the Apple II version for $30. Similarly, in early 88, Thunderware plans to offer the Macintosh adapter box and software, should any Apple II user decide that a Mac would make a nice second computer. Price is not set but should be less than $100.

Apple][+ users with 64K and Imagewriters take note: While TS will not currently work on your machines, I'm told that Thunderware may rewrite the drivers if there is enough demand. Let them know.

//c and //c users may want to try before buying. They can get the same quality scanfile printout as the GS, but Hi-res and Double Hi-res have limitations. When I was scanning for Double Hi-res I had to scan at greater densities to get a halftone that I was happy with. This requires more disk space and the image filled more of the screen that I would have preferred. Keep in mind that I am somewhat spoiled by the GS modes.

For GS owners, even with the interface shortcomings I would wholeheartedly recommend ThunderScan for the Apple II. At $219 retail (mail order is $180, but you'll spend $39 on Dover Clip Art), it produces images comparable to some of the more expensive video digitizers without taking up a slot.

ThunderScan can be a practical and necessary tool when used for desktop publishing. Dover Press offers literally hundreds of Copyright free Clip Art books, many for $3.50. These little gems are filled with borders, decorative fonts, Victorian illustrations—all just waiting to be scanned and used with a paint or desktop publishing program.

Software tested: version 1.1, Thunderware Inc., 21 Orinda Way, Orinda CA 94563. (415) 254-6581. Dover Publications, Inc., 31 East 2nd Street, Mineola, N.Y. 11501.

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I LOVE APPLE MUSIC - SIMPLE APPLE MUSIC: Part 7

by Gary Hayman © Copyright 1987

First, let me thank all who participated in the Mystery Song Contest in part 5 of the series. Yes, it was "Road to Morocco". The song came out of one of the famous "Road" series films starring Bing Crosby, Bob Hope and Dorothy Lamour in 1942.

Now for this part of the series I would like to turn my attention to some of the commercial music programs that I am familiar with. I will present my comments, observations and recommendations regarding these programs. I will be discussing mostly "old" programs (mostly pre Apple //c) that may not be available from the stores or mail order houses but may be available at swap meets. I will not be discussing the most recent and fantastic IIgs type programs that have arrived on the scene, nor will I cover programs (with one exception) that require the installation of an expensive music generating circuit board costing $100+.

MUSIC MAKER

My favorite music program by far is "Music Maker" by Jim Baldridge which was published by SubLOGIC back in 1982. If you see this one at a swap meet—grab it! "Music Maker" is a slick and easy-to-use way of writing music programs. No additional hardware is required. Not only can you create music that you can hear with the "Music Maker" program, but your music is transportable to your own programs—an important consideration when you want others to hear your music without their owning extra hardware or having your original music development program. This means that you can insert music easily into your programs, not only to entertain, but to enliven the program. I have used "Music Maker" to write music for some of my published programs, such as "Scrambled Words" an entertaining quiz program that was published on disk by Softdisk, and "Hollywood Who" published by UPTime. The music was used as rewards when proper answers were selected.

"Music Maker" has a range of some fifty tones from F below Low C to F# above High C. It is much easier to write your music with "Music Maker" than the techniques that I have been giving you in the past articles. All you do is select the note's OCTAVE, the actual NOTE (including sharps and flats), the DURATION (from quarter grace note {1/256} to whole notes), the note's MARK {Regular/Legato/Staccato), and its TEMPO. Since TEMPO and MARK most often do not change, only NOTE, DURATION, and OCTAVE are of major concern. I have found that most notes that I program are in octaves 3 and 4, with an occasional 2. If you want to go beyond that, it's nice to know that you have the capability.

Each note that you are working on is numbered and highlighted for you by the program. By pressing RETURN, the note is accepted and you move on to the next note. If you desire, the note can be sounded so you can hear it. If the next note is the same as the previous note, then all you have to do is to press RETURN. If only one item governing the note needs to be changed, change the item and press RETURN. There is no need to re-enter the other items. There are no complicated codes to remember. The "G" note is typed as G. A duration of a half note is typed <CTRL> H. Sharps are "#", flats are "&" and naturals are "N". If you want a dotted duration, then type a period. Suppose you encounter a Triplet in the music—remember, three notes played in the duration of two notes—easy to handle, just type "T". Quintuplets are handled by typing "Q".

An excellent feature is that you can set the Key Signature at the beginning of the music entry. If the Key Signature is a D Major, that is the C and F notes are to be "sharped", then do it once in the beginning and all C's and F's will automatically receive the sharp as you enter them. It can be over-ridden at your desire or as the printed music demands.

The use of the Legato feature allows "slurs"—no apparent breaks between the notes (smooth sounds). The Staccato feature allows you to have short "plucky" notes—a la Banjo.

The "Music Maker" has a terrific editor program. I can't stress enough the importance of easy editing of your music. You are bound to make errors and you will want to be able to correct them easily. First of all, the editor program allows you to hear all or part of your music. You can easily hear it note by note, forward or backwards. Each note, and its configurations are presented for your observation by sound and sight. If you come across a bad note you can easily change it with a few key presses. You can list the notes and their configurations on the screen, skipping quickly through your music. With the editor, you can change tempo at any point in the music, either the entire selection or parts of it. This can be used to speed up parts of the music when "Accelerando" is called for, slow down parts of the music when "Ritardando" is required, or return to the original tempo when "A tempo" is indicated. You may, after listening to your music decide that it is a little too slow for your ear and would like to speed up the whole piece. A tempo adjust is indicated and it will take you only a few seconds to complete it. Making repeats is a breeze—remember much of your music is repeated and "Music Maker" makes it easy to repeat sections.

The music that you have created is saved in three formats: Text files that are used by the Editor to be heard and altered if desired, Assembled files, which contain your music which will be used in making Modules, and the Modules which contain 1 to 16 of your Assembled music files that you will use in your programs. You can use the Modules from Applesoft, Machine Language and Integer BASIC (who remembers that). From Applesoft, for example, all you have to do is BLOAD the Module, activate it with a CALL, and play the selections either in whole or part whenever your program desires to. It may be played fully or note by note. The music can be interrupted by an <ESC>.

The "Music Maker" allows some special effects with its Kaleidoscopic Maestro (KM). The KM allows you to see, while you hear, your music represented by colorful graphics on your lores screen. It is quite a trip. In addition there are a large selection of Modules already on the disk that you can hear and see when running the Demo section. By the way, this Demo program is one of the best I have seen. It was probably designed for the dealer to have it up and running on an unattended Apple as a way of capturing interest in the "Music Maker" to the passers-by in the store. It certainly does.

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The manual and the tutorial are also the best I have seen for music entry. You are led step by step, given plenty of examples and suggestions. There is a command summary card, a staff card with notes and octaves, and some sample printed music for you to follow.

My recommendation—get it!, if you can find it.

T.U.N.E.S. (TUNES)

"TUNES" is short for Tone Utility and Note Encoding System. Authored by Dr. S. Scott Zimmerman, it appeared in "Nibble" Volume 4, No. 7 in 1983. It was later published on disk (S01) and as of this writing, is still available. At first, when you read the article, it appears confusing. Upon second reading, however, it is still confusing. It is only when you follow the step by step procedure in the tutorial that it begins to make sense. Zimmerman is an excellent writer—I have read some of his other articles and books, and he does an excellent job if you stay with it.

"TUNES" is not like "Music Maker". It does not provide an editor for easy music correction nor use the module approach. What "TUNES" does is to provide you with an ampersand (&) technique for note playing. What you do is to place in your programs, I suggest in sub-routines, ampersand commands with some values that are passed on to the "TUNES" routine. Notes or sounds will then exit via your speaker setup. For example, the following placed in your program will produce a C scale:

```
2000 &X: &C: &D: &E: &F: &G: &A4: &B: &C
```

while what appears below would produce a C sharp note of an eighth duration in the 2nd octave with the tempo being slowed 60 beats per minute from the previous tempo as called for in the music by a "ritardando" notation:

```
2010 &C#E2T(X-60)
```

Why do I like "TUNES"? It provides you with some beautiful note control and some great sound. The program allows note entry in a four octave range with note duration as long as 6 minutes and 50 seconds (you will never need that capability). You can change pitch, octaves, sharps, flats, durations. You can program for staccato, normal, and fantastic legato. You can insert pauses (portato), or have excellent ties and fermatas. Ties, as you might remember, are like notes that are sounded in a smooth manner without a break between the notes. Fermatas (hold) can be accomplished easily. You might remember that we had to do some mathematical gymnastics to try to give the appearance of a fermata in my original programs in this series—not with "TUNES". Tempo changes can be inserted into the program. The music can be stopped and started at any place by use of appropriate programming. You can program quality sound effects for use in games and educational programs or just plain music listing.

Now for the bad news. Tone entry is not as straightforward as "Music Maker". There is no editor, so editing can be difficult. I have overcome the editing problem by using my G.P.L.E. (DOS 3.3) editor to help me with the task. Since everything is in Applesoft it is easy to go to the line in question with the editor and check it out and change it if necessary. You can then immediately hear what you have done with a keyboard GOTO command. The other unfortunate thing is that "TUNES" is copyrighted so you cannot put it on disk and legally sell or give it to another person. However, for your own use, it is a great music program. You might be able to license "TUNES" from Nibble (MicroSPARC) if you contact them.

MUSICOMP

"Musicomp" is an old program, vintage 1980. It was written by Paul Lutus (of Apple Writer fame) and was published by Apple Computer Inc. I mention it here because you may find it for a reasonable price at a swap meet sometime.

Music that you write with "Musicomp" is not transportable, that is, it can only be heard if you are using the "Musicomp" program. However, there are a couple of interesting things that the program does. It is, in itself, a music synthesizing program of a four octave range. Music, written with it, when played by it, dances across the screen as notes on a staff something like a scene I saw in Walt Disney's "Fantasia". Another interesting item is that you can program the tones with three voices and four timbres. The three voices, sometimes referred to as sound envelopes in other writings, include: 1) hard attack with soft decay—which sounds like a plucked instrument such as a piano, harpsichord or banjo, 2) soft attack with a soft decay—producing a sound like a woodwind, and 3) hard attack with a hard decay—producing an instant on instant off square wave sound of a music synthesizer. The timbre choices vary from an open and full-throated sound to a quiet, reedy, attenuated sound.

The music entry and editing features of the program, to my mind, are complicated with a capital "C". I wouldn't wish it on you. I guess that in the early 80's there was no real force to make things easy, or should I say, "user friendly". If you can get this program at a swap meet at a reasonable price, pick it up for the interest, not its ability to program music. You can listen to and watch its 24 resident musical pieces which are quite good.

ELECTRIC DUET

"Electric Duet" really sounded like the perfect program. It came out in 1981 and was written by Paul Lutus, who also wrote the aforementioned "Musicomp". Not only was Paul allowing music entry with several voices (different types of sound) but also with an apparent 2 notes being played at the same time. That's quite a feat. He provided a fairly good method of entering the notes, a not as good method of editing mistakes, a piano program that lets you play songs from the keyboard, a method of entering music by playing at the keyboard and later saving it, and a way of creating a player module that will play your music on the Apple.

The big problem, the answer to which I have searched for for a long time is, I can easily determine what the first note should be from the printed melody line of the music, but what should I choose for the second note (the note that is playing at the same time)? Would you believe that there are no good instructions in the manual giving you some help. On top of that, when I asked a variety of professional musicians and music teachers, they could not suggest any rule that a novice in music, like myself, could follow. So I have, for several years, been unable to correctly select that second note to be played. If someone has some ideas for a rule for the selection of the second note, please contact me.

The music editor of "Electric Duet" is a little different than that of "Music Maker". It of course is divided into two sides (one for each note of the duet). The two notes could be the same, different, or one or both can be silent. They must, however, have

contd.

the same duration. Note entry includes setting duration, octave, note, and accidental if needed. No flats are allowed so you will have to do some adjusting if flats appear in your music score. You can, if you know how, make a conversion chart yourself—one was not provided in the manual. If the note is to be repeated you can't just press RETURN as in other programs, you have to enter at least one character before you press return. I don't know if this is a safety feature. You can immediately delete the line that you just worked on, but you can't delete other lines without doing some special things called opening and closing the file.

Of course you can listen to what you have been programming as you go along, and can even change music speed and transpose the music (change its key) in one fell swoop. I don't feel that the editing is as straightforward as other programs; however, it is not impossible and you can get used to it.

"Electric Duet" allows you to produce some special effects by changing voices (up to six) and creating some unusual sounds such as "heterodyning" the music (a beating sound produced by two notes of frequencies close to each other). That makes it more "sound flexible" than "Music Maker".

The technique for getting your music to play in your programs is fairly straightforward. You BLOAD a program called "PLAYER" at address 768 ($300), you BLOAD your saved music (could be in various places but address 24576 is suggested), you POKE 30 and 31 with some information which tells the program where your music is residing, and you CALL 768 to hear your music. Now this technique is fine for one piece of music—it becomes complicated, not impossible, if you have more that one piece that you are using.

Now "PLAYER" is copyrighted so again legally, in order for you to give away or sell your music, the recipient must have "PLAYER" available. I suppose you could get a license from Insoft, the publisher, if they are still in existence.

This program, or I should say, variations of this program are quite popular and in use today. If you listen to any of the music on Softdisk's monthly two disk magazette, you will find the two voice music. If you look closely at the disk's catalog, you will find "PLAYER". Softdisk also has available a disk which has "Q & D Duet" which is either similar or the same as "Electric Duet".

I recommend getting this program for the special effects and two voice sounds. "Electric Duet" has a Jukebox feature that allows you to play a variety of songs that are already stored on the disk. They are quite impressive. If you are a musician and know how to select the second (complimentary) note you will probably like it. I find that listening to this two-voice music for long periods of time kind of annoying. You should judge for yourself.

MUSIC CONSTRUCTION SET

I never did take to "Music Construction Set"—which is a shame, for it has gained great acceptance and is the fore-runner of advanced graphic techniques for writing music that you see in today's music programs for the Mac and the IIgs. I guess my objection was that in order to appreciate the music you must have a separate piece of hardware—a Mockingboard costing over $100 dollars and anything you wrote could not be enjoyed by others unless they too had a Mockingboard. (Owning a Mac or a IIgs eliminates the problem, for the sound hardware is built in.) The music is only transportable to your programs to be used by them if you owned a Mockingboard. There are no directions for those without the Mockingboard. In addition you would have to use a program called MUSIC, which I am sure is copyrighted, limiting your giving or selling of your music unless a licensing agreement is obtained.

The program is supposed to print the score of the music on your printer—if you had an Apple Dot Matrix, C-Itoh ProWriter or NEC 8023, which I didn't. There were some workarounds for other printers—even an Epson, which I couldn't get to work.

Another thing that was difficult was that you would capture an icon (picture) of a note and drag it across the screen and deposit it on a musical staff, hoping that you could release it at the position that you desired it. Most often, it ended up in the wrong place and you had to make an adjustment. This was quite time consuming. I later discovered that you could forgo the capture/drag/deposit system and use keyboard entry. Certainly, not state of the art, but it was 5 times faster.

Being fair though, "Music Construction Set", by Electronic Arts, was the most advanced program when it was released. On the screen appeared two staffs where you deposited notes, dotted notes, rests, sharps, flats, ties, etc. Not only do you deposit one note, but if you desire, you can deposit up to SIX (Wow!) simultaneous notes (if you have the Mockingboard Sound II) installed. Without the board you can have only two simultaneous notes (like "Electric Duet"). With six simultaneous notes you can have notes and their associated chords for more fuller and richer music. You have the ability to control the speed of the music, and, if you have the music board, the volume and sound quality of each of the two staffs. You can select the music's time signature and you are alerted if you have entered too many notes in a measure for the selected time signature. Repeats are handled by a cut and paste routine. However, if you want to repeat a section, you are limited to nine measures (you can work around this). When you cut from 1 to 9 measures they immediately disappear. You must immediately paste them back in, move to the place where you want to do the repeat, and do another paste. I do wish that they had a system of numbering the measures. You never know where you are in the middle of a musical piece, and if you want to insert and paste you have to be very careful where you put it lest you make an error and then correction is quite difficult.

The ability to transpose your piece to another key is quite easy to do. As you play the music the staffs are supposed to scroll by (like "MusicComp") but on my Apple][+ they don't.

Once you get over the cuteness of the capture/drag/deposit technique of the Joystick or Koala tablet, it is best to use the keyboard shortcuts. It is much faster. I would describe the sound of the music, "sans" Mockingboard, kind of "tinny". It is certainly not as good as the earlier programs that I discussed. Even the author states, "In Apple Speaker mode, the singer is the built-in Apple speaker—no award winner when it comes to music."

You may be able to pick up an early edition of "Music Construction Set" at a swap meet as I believe that later editions have more whistles and bells and upgraded IIgs owners will be getting rid of their old editions—to help pay for their new toys.

There are several other music making programs from child to adult level that are available. Whenever I see one, I have a tendency to pick it up, especially if it is at a swap meet and it is cheap, just to play around with it. You might have fun doing the same thing.

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LETTER TO THE EDITOR
from Roger Wagner

Dear Editor,

I was delighted to see SoftSwitch mentioned several times in the October, 1987 issue of the Pi Journal, but there does seem to be a variety of misunderstandings about the "copy-protection" on the disk. I use quotes because, in fact, unlimited backup copies can be made by the user of every single file on the SoftSwitch disk (not to mention the free backup disk we send on receipt of the registration card).

In regard to specific points mentioned in the issue:

1) The SoftSwitch disk will install SoftSwitch on an unlimited number of user disks, and is not limited to a single CPU. Any disk with SoftSwitch installed on it will run on any IIgs that has *ever* had a legitimate copy of SoftSwitch on it. Users of SoftSwitch that need to have a motherboard replaced, new battery, new computer, etc., need *not* get a new disk from RWP; they need only run the Install program once again to re-activate SoftSwitch in the Desk Accessory Menu.

2) Open-Apple was *not* misled about SoftSwitch, although they did publish details on the system used in SoftSwitch. An ironic paraphrasing of their own statements about SoftSwitch is to say that they had the package for several months and didn't even know it was "copy-protected" until someone wrote explaining the system. To my way of thinking that's a compliment to our system, whose primary goal from the beginning was to protect our interests in such a way as to be completely transparent, and thus totally unbothersome to the owner. If you can't even tell it's "protected", where's the problem?

Since Roger Wagner Publishing software products are not copy protected at all, with the exception of SoftSwitch, let me explain the reason. SoftSwtich is different in some significant ways from every other program we produce. Unlike Merlin or MouseWrite, it is intended to be put on every disk the user wishes, as opposed to just a single disk. In addition, it is not easily seen on a disk since it is located several subdirectories deep and easily overlooked as even being present on a disk. This creates the strong possibility that several months from now a SoftSwitch user could unintentionally copy the System files to a new disk, perhaps to create a disk to give to others, or even distribute as a public domain disk, and inadvertently set into motion the unauthorized distribution of thousands of copies fo the program. This is not just speculation. Already both parts of the PinPoint software, and a program by the author of SoftSwitch, Ken Kashmarek, have appeared on I.A.C. disks, through this very same accidental process. Rather than worry about this, we wanted to design a system that would not inconvenience the owner of SoftSwitch in any way, and yet de-activate the software should it be put on a public domain disk. The solution was simple and effective. When SoftSwitch is run on a computer, it leaves a flag set saying that the original copy was in that computer, at least once. That way, any and all user copies function normally. However, should unauthorized copies be distributed and run on other computers, the disks boot completely normally; SoftSwitch just doesn't show up in the Desk Accessory Menu.

It's hardly copy-protection in the usual sense of the word because it is easily defeated, and more importantly, the files can be treated just like unprotected software in every way. You can put in on hard disk, 3.5" disks, make backups, etc. The only difference is that you'll never have to worry about accidentally giving away a copy. In this case, the c opy-protection actually serves the user as much as it does the publisher.

I hope this clears up the SoftSwitch questions. Thanks for a great magazine and club!

Sincerely,
Roger Wagner, President
Roger Wagner Publishing

IT'S TAX TIME AGAIN!
by Paul Koskos

Another year has rolled around, and we've prepared yet another set of IRS tax templates for AppleWorks. As in 1976, there are two versions. One is for power users with large memories for their Apple //e's aand //c's, and occupies about 90K of desk top memory and includes all the forms which we have templated. (It also occupies about 90K on side 1 of the WAP distribution disk.) In it, Schedules 1040, A, B, C, D, E, SE, 6251 (Alternative Minimum Tax), and the Tax Tables, as well as Input Tables 1 and 2 are inter-connected so that numbers need be entered only once and are automatically transferred to the other forms where needed. The second version has been been split into two files, each of which can be loaded into the 55K desk top which is originally available on the Apple //c & e without memory enhancements. File A contains schedules 1040, A, B, C, fully interconnected with each other. File B contains schedules D, E, SE, & 6251, also fully interconnected within the file. However, values must be transferred manually between files.

An AppleWorks word processing file titled README.OR.ELSE is on the disk, and contains detailed instructions. You may wish to print it out for reference.

CAVEAT 1: The writer is not a tax accountant and cannot give tax advice. These templates provide a computational aid, and the user is finally responsible for the choice of forms and the accuracy of the data.

CAVEAT 2: The murkiness of the IRS instructions for Schedule D made it difficult to insure that proper plus and minus signs were maintained for all the Gain and Loss combinations. YOU will be responsible for studying the instructions and making sure they come out right. Sorry.

CAVEAT 3: The templates will not print out on IRS acceptable forms. But they can be printed for easy review and manual transfer to IRS forms.

It is my understanding that the template disk will be available soon in the WAP Disketeria. Good taxes to all.

ToolSet Rap

by TaskMaster D.
and the
Event Mask Queue
Assembled, compiled,
and interpreted
by Jon C. Thomason

All computer "emcee"s
Got to agree
that the GS is better than any PC.
You people in the house
Know not to grouse
But Apple Tech Support
Is one big louse
And our efforts are vented
Our code is dented
'Cause the Print Manager
Ain't documented.
We try to breeze
Through tool I.D.'s
In beta-test versions
Of computer-eze
From preliminary packs
In paper tacks
With old information.
On outdated stacks
A.I. debugging
Can't hold no candles
To the problems created
When using those handles.
ProDOS 16
Is finally hittin'
On a power O.S.
If it were written
To include all of the things
That they have planned,
But until that day
We're by the hand
Of ProDOS 8
Which ain't that great
'Less we kill off the bugs
Who perpetrate.
We stay up nights
'Cause we're committed
Staring at the RGB
In the quilt Mom knitted
'Til our eyes fall out
And our mind gives way
To all the other projects
Which fill our day
But until that happens
We'll spend our green
On scampy-looking books.

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.....New, recently published software.....

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BEST OF THE APPLE ITEMS FROM THE TCS

by Euclid Coukouma

Apple][+ Keyboards

FROM JON THOMASON, ON 11/08

Sure, you can imitate many of the //e keys on a][+, but not all. Specifically,

Open-Apple (Command) = joystick button 0
Closed-Apple (Option) = joystick button 1
] = shift-M
tab = control-I
up arrow = control-K
down arrow = control-J
clear = control-X

Some of the keys you can't do without special software are: [, {, }, \, |, ~, ', and delete. Also, control-[, control-], and control-^. There are probably others, but they've slipped my mind.

TOM VIER ON 11/10

Whoops! You're right! All the lowercase need software to read the Shift Key Mod (if there). Lowercase ASCII-wise includes {,},~,etc. Shift-N is ^ and Esc is control-[, I believe. It's all kinda messy, but word processors proliferated even with the crippled keyboard. Took a good memory though...

Printing More Than 9 Copies In Appleworks

KEN DE VITO ON 11/03

Open Apple (October 1987, Page 3.71) contains a "PATCH" to let AppleWorks 2.0 print more than 9 copies of all (WP/DB/SS) outputs. QUESTION: What must one do prior to the first POKE 768,255? I've tried just about everything (to include unlocking SEG.M1) and keep getting either FILE TYPE MISMATCH or PATH NOT FOUND. This effort was the after-effect of a Hotline call and I'd appreciate any infomation anyone can provide. FYI: The OA issue also contains information for patching AppleWorks 1.2 and 1.3 to print out more than (and up to 255) copies directly.

LEE RAESLY ON 11/04

Ken, there is a BASIC program written by Jon Thomason (and somewhat by me) on the AW D/L Area called something like PATCHER. Also one called AW.PATCH.BNY that does this for you. Make sure that SEG.M1 is unlocked. Have fun!

1987 Tax Template

BILL HUGHES ON 11/12

The last couple of years the PI has sold a diskette with tax templates on it. Will there be one for this year. Is it possible to put it on the download system

ROCKY RAGANO ON 11/13

I am planning to prepare a 1987 AW Tax Template with the following forms: Form 1040, Schedules A,B,D,C & SE. I will make it available to WAP (via Ken DeVito) sometime during the first week in December.

Move a Picture

GARY HAYMAN ON 11/21

Could someone please give me a short ML routine which would move the contents of HiRes Page 2 to HiRes Page 1 without destroying Page 2. I would like it placed at $300 so that I could call it with a CALL 768 from an Applesoft program. The program would be the following from the Monitor: 2000< 4000.5FFFM. By the way, I prefer not to have any zero page locations altered. If they are, they must be put back to what they were at the end of the routine. I am sure that this is an easy and short task and would appreciate your help. LATER: I FOUND AN ANSWER All I have to do is prepare a text file as follows:

CALL -151
2000<4000.5FFFM

and EXEC it from my Applesoft program.

GARY HAYMAN ON 11/21

I really want to thank you a million times for aiding me with that code for moving a picture. I did find a little bug that I was able to easily correct. PageLoop label was on the wrong line. $0 was put into Y at the wrong time and indexing could not take place. I think that it was just a word processor problem. I made the correction and it works BEAUTIFULY. I can easily adjust it so that it will move a picture from page 3 to page 1. Here is my source code that I ended up with. I found that I couldn't use or didn't know how to use some of the labels—so this is what I got.

```
          ORG $300
          OBJ  $300
TEMPA     EQU $06
TEMPB     EQU $08
TEMPAH    EQU $07
TEMPBH    EQU $09
   LDA    #$40
   STA    TEMPAH
   LDA    #$20
   STA    TEMPBH
   LDA    #0
   STA    TEMPA
   STA    TEMPB
PAGELOOP     LDY    #0
AGAIN     LDA (TEMPA),Y
   STA    (TEMPB),Y
   INY
   BNE    AGAIN
   INC    TEMPA+1
   INC    TEMPB+1
   LDA    TEMPA+1
   CMP #$60
   BNE    PAGELOOP
   RTS
```

I am really not into ML but am learning slowly. I was really confused with the handling of numbers larger than 256. Your example will help me understand better. Thanks again.

Using Both Hi Res Screens

GARY HAYMAN ON 11/21

I want to load a picture on both the page 1 and page 2 hi-res screens. I then want to draw a white box on the page 1 screen and a black box on the page 2 screen. The program below will load the pictures on screens one and two and will draw the black box on screen two. It doesn't touch screen one. If I reverse in line 11 the HGRs. I can get the white box but not the black box. HOW CAN I GET BOTH THE WHITE BOX ON SCREEN 1 AND THE BLACK BOX ON SCREEN TWO?? I have been pulling my hair out and I can't afford it. Will you help?

```
10 D$ = CHR$ (4)
```

contd.

```
11 HGR : HGR2
20 PRINT D$;"BLOAD PI.MOUNTNS,A$2000"
30 PRINT D$;"BLOAD PI.MOUNTNS,A$4000"
35 REM GAPHICS/FULL SCREEN/PAGE 1/HI-RES
40 POKE 49232,0: POKE 49234,0: POKE 49236,0:
   POKE 49239,0
45 HCOLOR= 3: REM WHITE
50 FOR Z = 20 TO 40: HPLOT 20,Z TO 260,Z:
   NEXT Z
60 FOR X = 1 TO 2000: NEXT
70 POKE 49237,0: REM SWITCH TO PAGE 2
75 HCOLOR= 0: REM BLACK
80 FOR Z = 20 TO 40: HPLOT 20,Z TO 260,Z:
   NEXT Z
999 END
```

Please note that it is important to load both pictures before I draw any boxes. I also need to draw other boxes on each of the pages.

JON THOMASON ON 11/21
Since the older][s had no way to check the position of the soft switches, they didn't know which page to draw on. Your pokes only switch the DISPLAY to that page. The drawing still occurs on the screen last set up with HGR{2}. The way Applesoft knows which page to draw on is in location 230, if I remember correctly. You may wish to double-check. This location is the high byte (MSB) of the beginning of the graphics page. Put to practical use, this means you need a POKE 230,32 to draw on screen 1, and POKE 230,64 for screen 2. Beagle Bros. occasionally takes this a step further, and do draw on an "invisible" page 3, which they can manipulate, then copy over onto either 1 or 2 for animation or memory requirement uses.

BILL HUGHES ON 11/21
By using the following POKEs 49232,0; (graphics), 49234,0; (all graphics), 49239,0; (hi-res); 49236,0 (show page 1). 49237,0 (show page2).... By POKEing 49236,0 you will show page 1, and by POKEing 230,64 you can draw on page 2 (hiding what you are doing on page 2). Then POKE 49237,0 will show page 2, and POKE 230,32 will allow you to draw on page 1 while page 2 is on the screen. If you have a fast drawing routine you can show motion very smoothly.

WordPerfect 2.0

BOB COSGROVE ON 11/01
Has WordPerfect Corp. explained their philosophy about 2.0 and the future to you? In other words, are they trying to include ALL PC-version features, or are they going to give the GSers only so much? Serious GSers are going to have at least 1 meg. on board, so they can't use lack of memory as an excuse. Or, is it that they don't think GSers are in need of all the features? I write this because I've heard that 2.0 still lacks some of the PC features, including SORTING within a document. To me, this is important. I've already told them of my disappointment. Since you are in contact with them "almost daily," perhaps you can find out if there are plans to include the PC features still not included. Let 'em know that we won't settle for second best. We want it all!

LEE CABANA ON 11/02
While I have both a //e and a Leading Edge at work, I've never used WordPerfect in an MS machine. However, other beta testers have extensive experience with the program in that computer. From reading their comments, there are some features that are not yet on the GS version (how would you use a sort feature in a word processor? I've not heard about this before). Anyway, from the comments I've seen in reply to your question, which has been raised by the testers, the head of Apple Development implied (I think he actually came out and said, but don't want to misquote) that the GS version will, in future releases, have more features than the MS version, simply because the GS had greater capacities than the PC. Please fill me in on the sort feature and any others so I can transmit them to Orem.

ZIP Chip

LAWRENCE HAIDER ON 11/03
I have been reading in Computer Shopper and A+ about a new chip for the //e,c,+ called the ZIP chip shown at the Applefest. It is supposed to be a direct chip swap out for the 65C02 that boosts the speed of the old IIs to 4 Mhz. (400% speed enhancement). Another company said they have one in the works that will boost the old IIs speed to 6 Mhz. It was mentioned that the same technology will be applied to the 65C816. Can anybody give me an educated guess at when such a product may be available and what limitations apply to boosting the speed of the IIgs? I would think RAM speeds put some limitations on max. speeds for the gs, but it was mentioned that the new chip performs its magic by putting a RAM cache on the processor chip, thus RAM chip speeds outside of it may have little effect in limiting the chips processing speeds. Can you imagine a 22.8 Mhz IIgs (600% speedup)? Faster than the Mac II! 30% faster! Seems improbable but, I hope, I hope, I hope.

TOM VIER ON 11/08
Vaporware for now.... People are getting their charges billed, but no product. They just announced ANOTHER "six" week delay.

][+ Boot Problem

BRETT PARKS ON 11/09
Ok folks, let's put on our diagnostics cap and take a shot at this one. Our good ol' orig][+ is having some boot up problems. Power will come on, but disk will not spin and we usually get a set of vertical bars on the screen rather than the Apple][sign on. Problem is intermittent. Previously when this happened it was the Power Supply, and this has been replaced again but the problem remains. Anyone out there care to help me 'round up the usual suspects'? I would like it to be a fix I can do myself if possible, as this is an old system, but still does fairly heavy duty printing labels for us.

TOM VIER ON 11/09
Do you get the ol' beep from the speaker? There's also a trouble-shooting guide in the back of the old New Member Guide (plus A+ or InCider had one a number of years ago and Sams has a PhotoFact on it). Have you tried removing ALL cards? And pushing down the chips into their sockets?

CHRIS PEARMAN ON 11/10
I have had this exact same problem. It was also the power supply for me the first time, but the second time I tried pushing all of the chips back in their sockets and have had no problems since (about 2 years). I would recommend cleaning the contacts on all of your cards as long as you have it apart. That may also be the problem.

BRUCE FIELD ON 11/12
Your problem is almost for sure that the 6502 in the Apple is not correctly executing instructions. If it were it would erase the vertical bars from the screen. These bars come from the power up condition of the video RAM. The microprocessor may not be working because of a bad RAM chip, a bad ROM chip, a bad

contd.

microprocessor chip, or a short coming from one of the peripheral cards. Take ALL the peripheral cards out (including the disk drive card) and see if it will boot up. If not try swapping the top row of RAM chips with the bottom row. If there is a bad RAM chip in low memory it may prevent the Apple from booting correctly. Swapping it with high memory (which isn't used for booting without DOS) might give you a clue. I'm assuming of course that the power supply really isn't the problem. If you have a voltmeter it wouldn't hurt to check it. Finally it's not unreasonable to get a 6502 from a mail order place ($5 or so) and replace the original. If it's not that, you likely have a bad ROM which you must get replaced by an Apple dealer.

//c Hard Disk

ROBERT LAMACCHIA ON 11/18
Does anyone have experience or recommendations about a hard disk to hook up to a //c? A+ magazine talks about the ProAPP and the Quark hard disks. Which one is better. The applications would only be ProDOS so there is no need to look for one that will handle CPM or Pascal. One consideration is that the //c will "go off to school" in about a year, and be replaced by a IIgs at home; at that time, the hard disk would be moved to the IIgs if possible. Any and all comments are welcome.

WALLACE RIDLEY ON 11/19
I own a PROAPP 20 and use it on a //c. I've got no complaints about the drive and I recommend it. The company that used to sell it really treated me right. They no longer own the company and I haven't dealt with the new folks yet. Kim Brennan came by one Saturday afternoon and hooked up his IIGS to the drive and performed a number of tests. On the whole, the drive worked with both the IIGS and the //c. It does have some limitations and Kim said he intended to write an article for the Journal concerning the test he ran. When I bought the drive, it was over at Clinton Computers being evaluated. I happened to ask about it when the owner was there and he asked if I wanted it. He showed me how it worked with a Mac and a //e so I bought it. I paid $825. It is compatible with ProDOS, DOS 3.3, and Apple Pascal 1.3. The DOS 3.3 is a version of their own called RigiDOS. I can't tell you anything about because I've never used it. If you want further info give me a call.

AppleWorks

JOE CHALMERS ON 11/07
Does anyone know how to get AppleWorks 2.0 to recognize the clock in an Apple IIgs?

MICHAEL PEARCE ON 11/07
To get AppleWorks to recognize the clock, change the ProDOS on the disk to 1.2 or higher. Copy II+ is where I got mine.

Interference

ED DONNELLAN ON 11/07
I just found the source of a problem that has been driving me crazy for two weeks, and maybe the solution will help someone else. TML Pascal and The Music Studio, but no other programs, began to boot, then freeze after bringing up their initial menus. The mouse would roll but not click. Once in a blue moon TML Pascal would work. The problem started right after I had updated the system files on my Sider from the new 3.1 disk, but this may be a red herring. I tried removing and changing cards, shifting files around, even getting the VGC and ROM upgrades—nothing. Then by chance I turned off the][+ which I usually run on my desk right next to the GS. Dozens of pent-up mouse clicks poured into TML Pascal, opening menus like they were going out of style. It isn't the monitor, and the two machines are on different power outlets. I have a bunch of cards in the][+, including a UDC and a PCPI Z80 card. I don't know anything about electronics, but the coiled keyboard cable from the GS looks suspiciously like something you induce current in in a high school lab. Just wanted to share my happiness.

CMS SCSI ROM Upgrade

DAVE HARVEY ON 11/23
CMS has released the "new improved" SCSI card ROMs. This corrects a problem that happens when using ProDOS 16 and certain combinations of other cards. Basically during interrupts something was getting trampled on occasionally. The new ROM is free to any CMS owner by calling Bob at (714) 549-9111 (x216). Registered owners will be receiving information about this in the mail. You need to request this upgrade, since it only affects IIgs users and no other machines. BTW, if you are a user of a Pro-line BBS, you can be on the distribution list for two newsfeeds for CMS owners. One will be for Mac users, and the other for Apple II users. The newsfeed will be originating from rusty@pro-snapp.cts.com (Rusty Hodge)

JAMES FRISON ON 11/23
I strongly recommend that gs users get this upgrade. The interrupt problem is one of the "bugs" which causes the Finder to trash disks. In this instance, the bug was in the CMS card, not the Finder.

Monitor Woes

KIM BRENNAN ON 11/16
Well, today I was moving a few things around the computer while listening to Mozart on the CD Player. My speakers are perched on either side of my computer since I occasionally listen to the computer through the stereo. Well, now that you've been set up, when I turned on the computer I was somewhat disturbed to notice that the right hand side of the screen of my Analog Apple Color monitor was a very sick color indeed. Sort of the way old color TVs become. This was quite sudden since I had used the computer just yesterday and the screen had been fine. At first I thought that perhaps I had knocked the electron gun out of alignment, when I had another thought. I turned one of my speakers and watched in (horrified) amazement (I wasn't really amazed) as the colors of the screen started waltzing through the spectrum. Drats. Does Clinton Computers DeGauss monitor screens? Anybody know what that runs?

DAVE RANDALL ON 11/16
I had the same problem. Just move the speakers away from your monitor. Then turn off the monitor, wait a minute and then turn them back on. Presto, your monitor should be o.k. At least it worked on mine!

KIM BRENNAN ON 11/17
You are correct. I tried turning off the monitor but I just didn't wait long enough apparently for the problem to correct itself. This takes a load off my mind.

PAUL KELBAUGH ON 11/18
But didn't the "sick colors" in the monitor go away when you moved the speaker away from the monitor? I had a similar situation occur only with a Bose 901 (monster-sickness). I panicked and figured it was all over for the monitor. But I moved the speaker (and the guilty magnets) away and the warpo colors went back to normal.

contd.

KIM BRENNAN ON 11/20

No, the sick colors didn't go away when I moved the monitor away from the speaker. It took the turning off and leaving off for several minutes for the problem to cure itself. The whole problem arose from turning on the monitor when it was too close to the speaker to begin with. The magnetic field of the speaker affected the electron gun of the monitor. Apparently once power is applied the electron gun gets into a synch pattern of sorts such that when I moved the monitor away from the speakers magnetic field the synch pattern was distorted. If I positioned the speaker in a certain position the monitor looked fine (but I looked silly trying to type with a speaker in my lap). Still everything is fine now so I'll just put this down as another interesting lesson in electo-magnetic field effects.

LETTER TO THE EDITOR from Barry Fox

I am writing this as an explanation of how it is best to reach me in general for Hotline questions and as a means of reaching other "distant WAP members".

Since moving from the Washington area in late 1985, I have found myself in a circumstance that I am sure other "distant WAP members" have found themselves. After being an active part of one of the most prestigious Apple User Groups in the country, I find myself isolated from the mainstream of the Apple community. To assist others that may be WAP members in my neck of the woods, I have volunteered to be available as a Hotline member. If you call me long distance, please expect me to return your call collect, as the cost of long distance for lengthy calls of assistance are prohibitive. If you have a modem, you can call my BBS, Pro-Connection, at 717-652-4364, 24 hours a day, 7 days a week (300/1200/2400) and I can reply to your request a little sooner. Also if you happen to be a member of the Northern Virginia Apple User Group (Novapple) and have a modem, you can send mail to me through the ProLine network by sending a letter to "pro-connection!bfox" and it will be sent to me and I can reply to your request.

If the rest of us who are geographically remote from Washington were to similarly make ourselves available, we would probably help not only ourselves, but the Pi in general. Thanks for listening...

(Ed. Note: Great idea, Barry!)

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Smart Computer

The Generic PC: An Enduring Classic

by Bud Stolker

These are the glory days for users of IBM-compatible personal computers! Ten million PC systems are now in use. Tens of thousands of free or inexpensive programs are available to release the incredible computing power of today's systems. Features are proliferating even as hardware costs plummet.

With hundreds of PC clones crowding the marketplace, the choice of IBM-compatible computers and programs has never been richer. There's the classic XT and AT series, the luggables and laptops, the 386-based systems, the new PS/2 line.

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ON THE TRAIL OF THE APPLE ///

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

Happy 1988!

We're off to a new year, /// SIGer's, and I think it's going to be an exciting one for us. It's been nearly four years since our ///s stopped rolling off Apple's assembly lines. Yet the /// continues to do an excellent job for the purpose for which it was intended: a good, basic business machine that can help us write our correspondence, balance our books, and even provide a little fun now and then. The fact that prices for a used /// have basically hit "rock bottom" now means 1) that, if you already own a ///, you can afford to buy a second machine for back-up purposes and 2) that, if you don't own a ///, you can buy a good starter computer with a large software library and the support to get you started.

Given the fact that you can get //e emulation for about $200, can upgrade to 512K, can use an 800K Unidisk and many hard disks, (not to mention use programs like /// EZ Pieces that have AppleWorks compatiblity) still makes our wonderful machine a useful tool THAT MANY OVERLOOK. I think that in too many cases, people give up on the machine before making a real effort to find someone in the /// Community to help. We need to do a better job of getting the word out and of helping!

New Products 1

Perhaps one of the most eagerly-awaited products ever to come out for the Apple /// is reportedly going to make its appearance this month. It's called the SOS Driver Optimizer, a program designed to replace the System Configuration Program. So far, early reports of Beta-testers indicate it will be a must-have product. Originally scheduled for release by Pair Software, the program will now be marketed by On Three.

It was written by Lt. Charles Sykora, who you will remember wrote the Trackball driver mentioned in last month's column. He recently wrote me and described exactly what the SOS Driver Optimizer will do:

1) It allows Driver files up to 60K, rather than the 51K limit of SCP.

2) You may directly control the order of your Drivers, if desired, with a 'Move a Driver' command.

3) The program will 'Optimize' or sort your Driver Configuration for each of the different Boot Disks you use (it is smart enough to know that re-sorting isn't required if several Boot Disks use the same Interpreter). This minimizes, and, in most cases, completely eliminates the 'hole' in memory that most programs cannot employ usefully.

4) An 'Auto-Optimize' option is available that will allow you to insert each of your Boot Disks one after another. The program will read in the SOS. DRIVER file on each disk, Optimize it, and write it back out.

5) The program automatically updates each Boot Disk to the 512K version of SOS 1.3 (i.e. SOS+). Thus, your disks will work equally well with either a 256K or 512K machine.

6) The program allows the installation of the .DESKTOP-MANAGER (TradeMark of On Three) and its removal, updating the Boot Disk for the special Boot Tracks required for use with Consorti's utilities.

7) You can generate compact archival versions of Drivers, Fonts, and Keyboards that take up much less disk space.

8) When you remove a Driver from your Desktop, the memory is freed up for use by other Drivers, eliminating one of the primary frustrations with SCP.

9) A context-based Help system that occupies 3 full disk sides is constantly available. No program (not even for the Mac II or Big Bad Blues) has such a comprehensive and easy-to-use on-line Help system.

10) DCB editing may be done in either Binary, Decimal, Hexadecimal, or Character Modes.

11) A Program Environment feature saves the settings you use with the program (FileName prefixes, suffixes, and defaults, for example). A comprehensive Printer setup feature allows you to control printer output with unprecedented precision. Most printers can be selected quite simply from a Menu.

12) For those Drivers that require it, you may edit the Device Subtype.

13) You may 'Anchor' those positionally-sensitive Drivers such as PowerKeys (trademark of Pair Software), so that they will not be moved by the 'Optimize' function.

14) The Optimizer displays much more data than SCP, according to your own defined User Level. System information such as memory size, version of SOS, size of Driver Desktop in both the disk and booted formats, and type of Boot Disk is displayed in a Window. Information on Drivers, such as memory Address, size, and many other items is readily available. All of these Displays may be printed.

15) You may read many Drivers onto your Desktop and select those Drivers that you don't wish to include in a particular output file by marking one or more Drivers as 'Destroyed'. Then, when you need them for another Driver arrangement, you may restore them using a simple Menu option.

16) The program is written in Pascal and Assembly language and comes on 5 disk sides. It will install easily on Selector and Catalyst. It is not copy-protected. It is infinitely easier to use than SCP and, at the same time, is the most powerful program ever written for the ///. Future programs for the /// that I develop will use the same Windows-oriented user interface concept as the Optimizer.

There's no word on price yet, but I hope to have more details by the January SIG meeting. Stay tuned!

New Products Take 2

Lt. Sykora and his brother, by the way, are also working on a new graphics card for the /// and GS (yes...the /// AND the GS). Here's how he describes that project:

The design features have been finalized, and, as you read this, we are testing the computer interface circuitry. So far, we have not tried to contact anyone for commercial applications for the board. Rather, we are developing it for the use of the orphaned Apple ///'ers out there. To realize the ultimate capability of the design, while offering a less expensive entry-level option, the C3RGB project (as we are currently calling it) uses two boards,

contd.

the second of which piggy-backs to the first. The first board contains the computer interface circuits, monitor drivers, and 512K of RAM. The second board, which boosts the resolution capability by a factor of two, includes another 512K of RAM, plus an optional 65C02/65C816 character generator and programmable graphics controller. Although it is still early to make precise predictions, we believe that the basic board would cost $300-$400 (plus $50 for the analog RGB interface, if desired), and the second board $250-$350 (plus whatever the on-board optional computer costs).

Resolution

The C3RGB uses a family of special purpose chips from Hitachi, the central part of which is the graphics coprocessor itself. The single primary board is capable of 640X480 resolution with 4 bit (i.e. 16 color) pixels with VGA/ PGA quality monitors, such as the Mac II's (trademark Apple) or SR12-P of Princeton Graphics. The board will also be capable of using the IIGS analog RGB monitor at standard resolution with 8 bit (i.e. 256 color) pixels. A color palette RAM on the board allows the colors to be selected from a 4096 color maximum or (optional for about $20-$30 extra) 16 million different colors.

Without the analog RGB interface option, only 4 bit pixels can be used, with the resolution depending on the monitor (TTL RGBY monitors only). With the second board, analog RGB monitors can realize the full 640X480 resolution with 8 bit pixels. By using a multiple-synchronizing analog monitor such as the NEC MultiSync or Princeton Graphics UltraSync, the resolution can be extended up to approximately 700X500 with no hardware changes.

Memory

Since the C3RGB board offers 512K (1Meg with the second board), almost two entire screens (three if only 4 bits/pixel are used) with the 512K memory. The extra space could be used to extend the logical screen past the limits of the physical screen, allowing extremely rapid scrolling by using graphics processor commands. Also, the extra memory could be used for non-graphics data, and we are considering providing a .RAM Driver as part of the new .GRAFIX Driver Module that will support this board. For programs which cannot take direct advantage of the board's graphics capability (which is all known /// programs), the memory could be a devoted RamDisk, if nothing else.

Capabilities

The graphics coprocessor, which runs at 6MHz, has built-in commands to handle 98% of typical graphics requirements, including CAD/CAM. The main limitation will be the transfer of data from the computer to the graphics board. Data-minimal tasks (i.e. graphics-intensive) should rival the Mac II in speed, especially scrolling operations and windowing. Text may be placed on the Graphics screen with bit-mapped characters. With the 65C02/65C816-based character generator computer option, ASCII characters can be written to and read from a graphics screen, with flashing, inverse, half-tone, boldface, underline, and overline. Four programmable fonts will be standard, with additional fonts possible, depending on additional memory.

Software

The board will, of course, come with a new .GRAFIX Driver. Hopefully, someone will write a graphics program to use the new board. By using the advanced features of the graphics coprocessor to Zoom, flood fill, etcetera, sophisticated CAD/CAM could be done with comparative ease.

Hard to say when this graphics card may be ready for actualy production, but we'll keep you up-to-date on this as well...

New Products ///

SIG member Ed Gooding told me recently about a contact he's made with a vendor called The Lisa Shop in Minnesota. According to Ed: (They) will soon be selling 20 and even 40 meg Profiles!!! The 20 meg'ers will be $800 and the 40 meg'ers will be $1400. He's also fitting a 3.5" drive INSIDE the /// case to use as the internal drive!! This will cost around $375, including new case, drive, and newanalog card.

I'll have more on this as it becomes available...

Business BASIC and GS BASIC

I spoke with GS SIG Chairman Ted Meyer recently to let him know about the similarities of the two Basic languages. I also mentioned to him that there is a Public Domain program called Apple-Con that will convert (up to a point) Applesoft programs into Business Basic. Since the program was written in Pascal, it should be fairly easy to convert and use on the GS. It also needs to be updated a bit, since it will only recognize programs on DOS 3.3 formatted disks. It's not that difficult to move programs from DOS to ProDOS or SOS-formatted disks, but an option within Apple-Con would make the program easier and quicker to use. (this will be covered by as GS column in a future issue of the Journal.)

I am also interested in a similar project to take the current version of Apple-Con for the /// and upgrade it to read ProDOS/ SOS as well as DOS 3.3 Applesoft files. Any SIG member willing to take this on, please give me a call. I am also looking for contributions of programs converted from Applesoft to Business Basic. Specifically, I would want both the Applesoft and the Business Basic programs, so that the two can be compared. Any tips for converting from Applesoft to Business Basic would also be appreciated. These would go into a new /// PD disk offering, with the upgraded Apple-Con on one side and the programs on the other.

Concurrent with this, I am also working on a project to convert the Preschool Gameroom PD offering into Business Basic. Anyone interested in helping should give me a call. I am also starting to gather Business Basic Foto Files and Fonts for PD disks. Any contributions welcome.

A Thank You

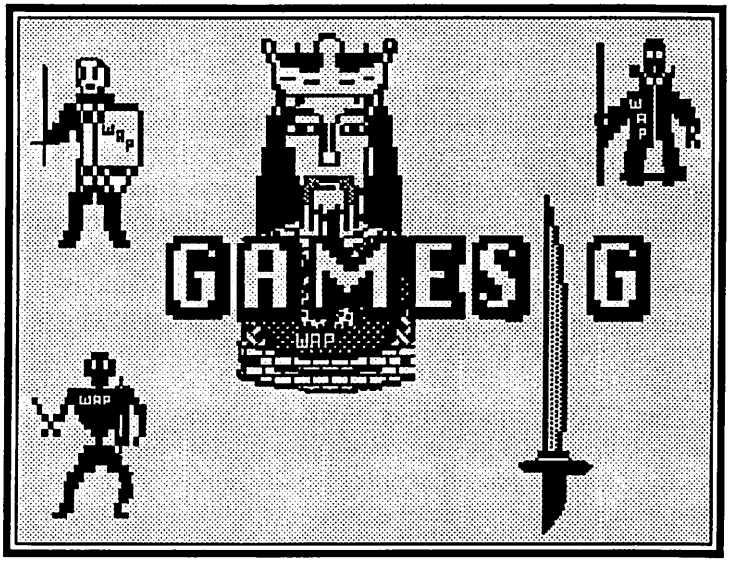
I want to once again say thank-you to the WAP Board, and specifically to Bernie and Gena Urban for their support of our SIG this past year. Despite the "orphan" nature of our computer, I have been thrilled at the amount of support and encouragement we have received. I have not always made things easy for the Urbans, but they continue to care and it is very much appreciated.

And Finally

If you recently purchased a /// PD disk and discovered Side Two was blank (all our disks except #1002 and 1003 are double-sided) be sure to bring it back to the WAP office for an exchange.

If you have a friend who has a ///, tell them about WAP and our /// SIG. We currently have the largest /// group on the East Coast, and the more members the merrier!

GameSIG NEWS
by Steven Payne



Perhaps the fear of snow (which never materialized!) kept attendance unusually light at our regular monthly meeting on December 3rd. Still, we were able to attract several brave newcomers. As the first order of business, Charles Don Hall found a new volunteer for the WAP Hotline: the notorious Perri Mongan (heir to Ron Wartow's "Overflow Valve" BBS), who will henceforth be fielding questions regarding Macintosh games. She can be reached at 572-5459 (voice) or 572-2360 (modem).

In gaming news, Charles mentioned Infocom's new real-time spy adventure, **Border Zone**, in which you play three different roles; and the first fantasy/role-playing adventure exclusively for the GS, **Tower of Myraglen**, which is supposed to have wonderful sound effects. He also noted that the real **Questron II** (distinct from **Legacy of the Ancients**) should be out shortly.

Since the overhead projector had not yet been returned by its previous borrowers, we skipped the usual demos and instead went around the room asking what "games people play." Among the titles most often mentioned were: **Beyond Zork, Legacy of the Ancients, Might and Magic, Stationfall, Phantasie II, Wizardry**, and **Alternate Reality: The Dungeon.**

The meeting broke up after the following programs were distributed for review:

Falcon (Spectrum HoloByte, Macintosh, on two 800K disks): F-16 fighter simulator;

NBA (Avalon Hill, Apple II series): master disk for basketball simulation.

The next regular GameSIG meeting will be held on Thursday, January 7th, 1988 at 7:30 PM in the WAP Office. Meanwhile, you will find reviews of **Legacy of the Ancients, Infiltrator II, Xevious**, and three new Infocom games (**Plundered Hearts, Nord and Bert Couldn't Make Head or Tail of It**, and **Beyond Zork**) on the following pages.

LEGACY OF THE ANCIENTS: A Review
by David Granite

One of my favorite games on the Apple II series is **Questron** (SSI). **Questron** was written using the gaming system of Richard Garriott (Lord British) and obviously resembles the Ultima games very closely. One of the best features of **Questron** was that it required very little mapping, despite the fact that it included several dungeons. The dungeons were simple and the ending of the game was extremely congratulatory, with much marching and bowing to the conquering hero (i.e., you). As a result, I was really looking forward to a sequel to **Questron.** Unfortunately, rumor has it that there was some sort of problem with the rights to the gaming system and it took another 2 years for "Questron II" to appear. Now it's here, and the name is **Legacy of the Ancients** (Electronic Arts). [*But see this month's GameSIG News column.* —SP]

It's an enjoyable game. You begin as the usual weenie, with few hit points, no armor or weapons, and even less battle skill. The game starts in The Galactic Museum, which was placed on the planet by an unknown group of aliens. The museum is full of exhibits, all of which you need to view. To see them, you need specific coins and one of the quests in the game is to obtain these coins. As is typical of most of the best fantasy-role playing games, there are numerous sub-quests on your way to winning the game. These lesser quests give you more strength or intelligence or coins for seeing the other exhibits. The ultimate goal is to defend your world from an evil magic scroll that is attempting to control and destroy all the inhabitants.

After leaving the museum, you must obtain weapons, armor and food in the nearest town. Money is crucial, but fortunately there are fairly easy games of chance in the towns which enable you to build up your stake quickly. Another feature of this game is that your skill at weapons is dependent on how well you do in a little arcade game that is available in certain of the towns. In addition, you can raise your intelligence by playing a poker-like dice game with the computer in the museum. Clues are available throughout the game for a nominal fee from fortune tellers. Best of all, the mapping is virtually unnecessary, except for the museum itself, which should be charted. Even the dungeons are not extremely difficult, despite being 8 to 10 levels. A crucial hint is to always examine the area where you are in the dungeon and to go toward the direction guarded by traps.

All in all, this is an excellent fantasy-role playing game for the Apple II computers. It has the requisite monsters and it has its moments of anxiety when you are running low on hit points and desperate to get to a town and the monsters keep popping up, just as if it knew you were in dire straits....

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INFILTRATOR II: A Review
by Ian Soboroff

Infiltrator II (Mindscape, Apple II series with 64K, joystick required) is an action game which is something like a cross between a flight simulator and *Castle Wolfenstein*. The object is to stop the Mad Leader's various plots to take over the world. There are three different missions you must complete to win the game.

Each mission consists of two parts. The first is the same: you must fly your 'Gizmo DHX-1 Attack Chopper' to the Mad Leader's headquarters. The problems with **Infiltrator II** begin here. A flight simulator this is not! Most of the time the copter will not steer, and usually just goes where it wants to. So while you sputter and curse at the controls, an enemy aircraft comes up behind you. You weren't watching, because you were busy attacking the manual to figure out what you did wrong. But explosions rocking your computer shake you back to the joystick. All right, break out the machine guns. Lesson Number Two: it is impossible to hit anything with your guns. Missiles, you say? They tend not to want to fire when you want them to, which is usually when the enemy is in sight. So while the enemy is peppering you with missiles, you try the flares and ECM's. Sorry, they appear to be siding with the enemy. But hey, what's this? It seems that you can begin with the second part, the ground mission, when you start.

Hmmm—the ground mission—I have to give some credit here. This is definitely better than the chopper. What you do now is walk through buildings and such (a la *Wolfenstein*) trying to find the Mad Leader's secret weapon. You must look through desks, boxes and so on to find objects to aid you on your search. When you find something, you have no choice on whether you want to get it or not. This is a pain, because more often than not what turns up is a bottle of Vodka or something, which you have to drink; then you stagger around for a bit, unable to perform any constructive actions. Usually, while you are staggering around, one of the enemy comes in and puts you out of your misery. When you're sober, you can find the enemy in about every other room, and you can dispose of them temporarily with your supply of sleeping gas (why not a gun?).

I don't know—the graphics aren't bad, and the manual is rather funny (if terribly unhelpful), but between the vodka and the chopper, I discovered that I really didn't like this game at all. Rating: 1 out of 10. Recommendation: save your dollars and don't look twice.

XEVIOUS: A Review
by Forrest Black

"The Xevians are returning to claim earth as their own. Only you and your sensational Solvalu super ship can hope to penetrate their defenses and save the planet. Battle your way through air and ground targets, avoid menacing flying mirrors, and destroy the immense Mother Ship."

Xevious (Mindscape, Apple II series with 64K, joystick required) is set up exactly like the arcade version, which was popular around 1985. As a matter of fact, the only difference is that this version starts with a menu, which lets you choose one or two players, sound on or off, and color or monchrome monitor. **Xevious** claims to have stunning arcade graphics and sound, full-screen scrolling battlefields, and high-speed action and excitement. Well, the graphics are good and it does have sound, but I was not exactly stunned by these features. The full-screen battlefields are done well. This feature keeps the player moving at a good pace, not too fast and not too slow. As for the high-speed action and excitement, the Xevian attack craft move quickly and the Xevian anti-aircraft guns keep you dodging shells fairly regularly. I felt that the Solvalu super ship was a bit slow responding to controls, but manageable. Performance-wise, aside from the few shortcomings stated, I enjoy the play of this game.

The Solvalu has two guns that shoot straight forward and a bombing device. The front guns allow the player to shoot down Xevian aircraft. The bombing device allows the player to obliterate any of the ground targets. The ground targets include pyramid-shaped buildings, a variety of domed anti-aircraft guns, Xevian troop trucks, mobile anti-aircraft vehicles, and, of course, the immense Mother Ship (not to mention strange underground buildings that may only be detected by the blinking of the crosshairs of your bomb sights). Also, in the air, the player needs to be on guard for large and small Black-Balls. The small Black-Balls materialize anywhere on the screen and set a path for the player's Solvalu; soon they transform into ordinary anti-aircraft shells. The large Black-Balls rapidly fly onto the playing field, and if not shot, will explode into an expanding circle of deadly fire. These Black-Balls are much more menacing than the flying mirrors, which act as moving indestructible walls with which the player must avoid contact.

The package is colorfully decorated with a scene of the Solvalu super ship blasting attacking ships while flying over ground installations. I like the package, but the documentation is a little light. It states your mission as "Shoot anything that moves, your goal is to destroy the Mother Ship," explains the controls, and that's it. I may be picky, but I prefer better documentation, in which the company gets creative when explaining their product and providing background information. Documentation should be fun to read, not dry and unimaginative.

Overall, I do enjoy this game quite a bit. I found myself coming back to play again and again, as I did with the arcade version. The difference between this and the arcade version is that this one doesn't suck my allowance from my pockets. I spent many an afternoon attempting to obliterate the Mother Ship; now I can sit in the privacy of my own home and ignore the Pascal algorithm that's due tomorrow for just one more game. **Xevious** has good arcade-style playability and is challenging, even for the experienced player. Well done, Mindscape! I recommend your product to anyone who truly enjoys good arcade games.

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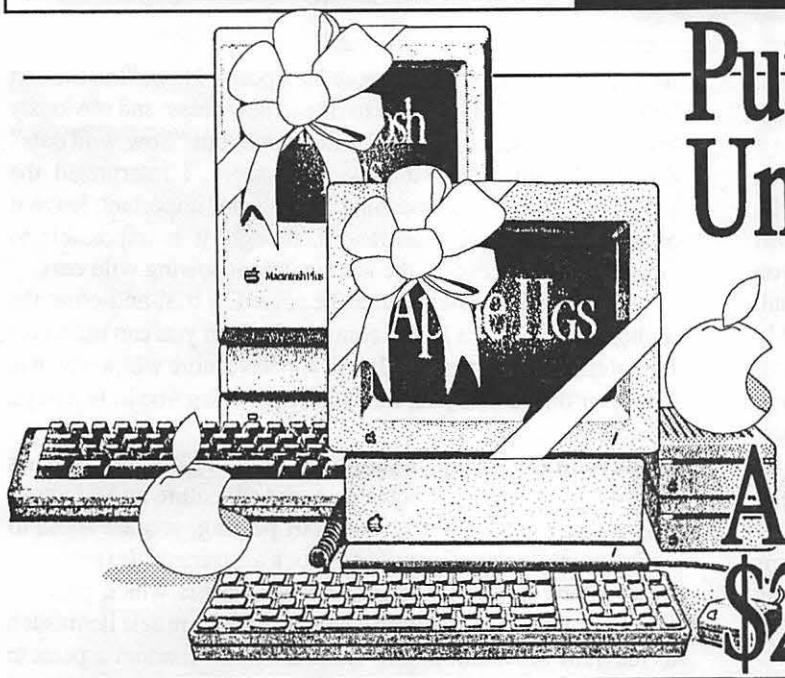

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THREE INFOCOM GAME REVIEWS:

Plundered Hearts, Nord and Bert, and Beyond Zork

by Charles Don Hall

The three latest Infocom games are out: **Plundered Hearts, Nord and Bert Could't Make Head or Tail of It**, and the long-awaited **Beyond Zork**. Only **Plundered Hearts** will run on a 64K computer; the other two require a 128K Apple or 512K Mac.

Each of these games breaks new ground. **Plundered Hearts**, for example, is Infocom's first historical romance, set in the 17th century. You play the part of Lady Dimsford. It seems that you have received a letter from Jean LaFond, the governor of a small Carribean island, telling you that your father has fallen deathly ill. As the game opens you are on one of LaFond's ships, traveling from London to see your father before it's too late. Suddenly, the ship is attacked by pirates. The ship's owner, Captain Jamison, acts in a less-than-gentlemanly manner by handing you over to the pirates in hopes that he'll have time to escape while they're busy with you.

Just as things look blackest, you are saved by the handsome pirate captain, who has been hired by your father to keep you out of the clutches of LaFond, who is not a very nice person. This all happens within the first dozen moves.

As the game progresses, you must solve various problems as they crop up: for example, saving the pirate ship from destruction, rescuing your father, rescuing the handsome pirate captain, and saving yourself when you eventually fall into the clutches of LaFond. By the way, if you can't solve the last problem, then the game is over, not with the traditional "** YOU HAVE DIED **" message, but rather with "** YOU HAVE SUFFERED A FATE WORSE THAN DEATH **". If all goes well, you get to marry the handsome pirate captain.

This is for the most part a fairly easy game, although there are a couple of tricky puzzles. **Plundered Hearts** is well suited for beginners, and would probably be enjoyed by historical romance fans, even if they haven't had any gaming experience. More experienced gamers will find it amusing, but not spectacular.

Nord and Bert isn't one large game; rather, it's 8 small games which can be played in almost any order. Each revolves around a different kind of wordplay. The first is called "Shopping Bizarre." It takes place in a supermarket, and you score points by figuring out puns. To get past a door with many locks on it, you type the word "lox," and the locks change into chopped fish. Another section, called "Buy the Farm," gives you points for putting the cart before the horse and not crying over spilt milk.

Now, the thing about Infocom is that they're always experimenting with new ideas. This is admirable. One of the reasons Infocom has survived so long is that it has written games in all genres, rather than limiting itself to a endless series of Zorks. But there is one catch: experiments sometimes fail. **Nord and Bert** is one of those failed experiments. The biggest problem is most of the puzzles can't be solved by cleverness or trial-and-error, but only by trivia knowledge. When you see the wild oats, either you realize that you're supposed to sow them, or you don't.

In addition, the puzzles aren't well integrated into the plot. For instance, in the "Sow wild oats" example, the program responds by saying "You haven't even met the farmer's daughter yet." It then raises your score by a point. Now, "Put the cart before the horse" allows you to ride to new areas, and obviously brings you closer to the end of the game; but "Sow wild oats" doesn't do anything but raise your score. I interpreted the program's response as meaning "That's not important; leave it alone." Despite all appearances, though, it is impossible to complete that section of the game without sowing wild oats.

Since **Nord and Bert** cannot be solved by trial-and-error, the authors have put in a HINT command which you can use to get the solution to any puzzle. Unless you have more willpower than I do, you'll find that you, too, will finish the game in two days. You should avoid it.

Beyond Zork is, quite simply, like nothing else Infocom has ever done. It is a cross between a text adventure and a fantasy role-playing game. Before you start playing, you are asked to assign points to various attributes, such as strength, dexterity and luck. Many areas on the map have monsters which must be fought and killed, either with weapons, or with magic items such as the Staff of Annihilation. There are many random aspects to the game. Certain areas, such as the swamp and the forest, have different maps in every game. Magic items are also distributed randomly. For example, there is always exactly one potion in the swamp, but it's a different one every game. To compensate for the changing map, the game provides an onscreen map which shows your current location, nearby locations, and all exits.

Other features include definable function keys, windows, and an on-screen map with asterisks showing the nearby areas. Exits are shown with lines, either connecting asterisks or dead-ending to indicate areas that you haven't explored yet. GS owners might want to hold off on buying this, since Infocom is apparently working on a special GS version.

The game is set in the southern half of the continent of Quendor (which includes Borphee, home of the Enchanters' Guild), at about the same time as **Spellbreaker**. At the end of that game, the Age of Magic ended, and the Age of Science began. Your quest is to find the Coconut of Quendor, a legendary object that embodies the spirit of the Age of Magic. Once found, it will be preserved until the end of the Age of Science. Along the way, you'll meet many people and monsters, both familiar ("It is pitch black; you are likely to be eaten by a grue") and new (the minx, a catlike animal with a fondness for chocolate truffles).

Beyond Zork does have a few problems and some bugs. For example, there are two riddles in the game. On one of them, when I tried the wrong answer, I was given the message, "A hollow voice booms out, 'Fool!'," just like in **Zork II**. When I found the second riddle, I was convinced that the answer was "Time." This turned out to be wrong, and the command, "Answer 'time'," produced the message "I don't see any time here. [2]" (the [2] is meaningless, and probably part of the bug). Since I was holding the wand, I tried "Answer 'wand'" and was told "It is unlikely that the boulder would respond." Everything worked fine when I eventually found the right answer, but it was rather disconcerning to see how the program handled mistakes. In addition,

contd.

the game is occasionally slow, especially when long lists of items are involved: for example, rearranging your possessions when you have a lot of them, or going through rooms with a lot of things on the floor. This might be less of a problem on the GS or Macintosh versions.

The is also one of Infocom's hardest games. Although the puzzles are fair, there aren't a lot of clues, and after a month of playing I'm still quite a way from the end, despite the fact that I've spent countless hours discussing it with other players. Beginners should stay clear.

BOTTOM LINE: **Plundered Hearts** is a good, solid game, but it didn't really excite me the way that some of Infocom's other games have. Then again, historical romances don't really excite me. It's definitely a must-buy if you're a fan of the genre, but otherwise you might want to think twice before getting it. **Nord and Bert** has an interesting concept, but is flawed in execution; I do not recommend it. I like **Beyond Zork**, and think it's a must-buy for Infocom veterans, but anyone else should play some other games in the Zork series before tackling it.

Our Apple II members listening intently to a discussion of Word Perfect at the Apple][portion of the Nov. 28 main meeting at USUHS.

Photo by Peter Combes

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A FUNNY THING HAPPENED TO ME ON THE WAY TO THE OFFICE...

by Ron Cool

Remember me: Many people have asked directly or through close friends exactly what happened to me and why I did what I did. So, what follows is a TONGUE-IN-CHEEK resume provided for a public relations firm of my new employer. Inquiring minds now will know. I miss the personal, often daily, contact with everyone, particularly the Hotline and the Game-SIG, and will try to drop by when I am in the DC area, which unfortunately will be fairly infrequent. If anyone whould like to reach me, I am freezing my ROMRAM's off at 7 Spruce Lane, Ithaca, NY 14850, home phone (607) 257-4873, work (607) 257-1708, CompuServe 74746,2102. Here's my PR resume:

Ronald Wartow was born young in Baltimore, MD. After spending years making his parents happy with his academic excellence and overachieving through the high school, college, and law school, he became a member of the Maryland bar in 1965 and the Supreme Court of the United States bar in 1970. After jobs as an attorney with the Treasury and private practice from April 1969 through the end of August 1987, he worked at the U.S. General Accounting Office, where he earned several awards, gave many speeches on behalf of the Government, and (modestly) mentions that he attained a high level of expertise and respect in this particular legal field.

MEANWHILE...in the late '70's he became caught up in the Atari Video Control System-for-TV rage and became fascinated by electronic games, especially Asteroids in the arcades. Shortly thereafter, he bought his first computer, an Atari 800, 600XL, 800XL and spent many hours, even vacation time, playing the text adventure and fantasy-role playing computer games available on the Atari.

SOMETIME IN THE EARLY 1980's, he read a year-end review of computer games in *Games Magazine*. This review made it clear that the real, meaty, thought-provoking and best computer games, like Wizardry, could only be played on an Apple computer. So, he rushed right out and bought the newly-released Apple //e, shortly thereafter a Mac, and his gaming habit increased tenfold. He "got hooked" on the Wizardy series, and completed many other games. In 1984, he revived the Games Special Interest Group (GameSIG) of Washington Apple Pi, a huge (5400) Apple users' group in the Washington, DC area, which, to this day, remains a very active force with impeccable gaming credentials throughout the software industry. "Big name" computer gaming types congregate once a yearbefore several hundred club members as a testament to his efforts.

WHILE ALL OF THIS WAS GOING ON, he was the focal point of a story of people who play adventure games in *Personal Computing* (March 1986, p. 95), had constant contact with computer gaming's luminaries, had many gaming reviews published, and was the first Contributing Editor of *Questbusters*, a journal for adventure gameplayers. He became a beta tester of "monster" gaming programs for some companies, most notably Wizardry for the Macintosh.

In June 1987, he was asked to beta test **The Return of Werdna, the Fourth Scenario.** The game had been designed by Roe R. Adams III, a topnotch designer and writer. The game was the most complex, interesting and time-consuming (150 hours) yet played by our hero, who made many suggestions concerning the game's design, which were taken seriously and adopted. Because of this and stimulating and thought provoking conversations with Adams and programmer Robert Woodhead, Wizardry's co-creator, the impish and puckish nature of our hero, which his computer gaming had brought to the surface, exploded inside him. He realized that he could no longer maintain together a computer gaming life and the serious and stodgy posture often required in his attorney life. He now understood that he wanted to design innovative and more complex computer games.

SO...he decided to make his life's work that which gave him so much pleasure. After months of, "You're kidding! Give up being a lawyer for computer gaming?!", he accepted an offer to use his talents for Sir-tech Software, Inc. home of Wizardry, its sequels, and other programs.

AT THE MOMENT...he is based in Ithaca, NY with the programming/design side of Sir-tech. He will be spending time in Ogdensburg, N.Y., Canada and travel. His duties involve designing future games, and management and public relations responsibilities. Pray for him!

ACTIVE INTERESTS: Skiing, biking, tennis, computer game playing, reading, smiling, intellectual reparté, cuddling, lime jello, and jousting.

FINAL NOTE: I'd like everyone to know that my favorable review of Sir-tech's The Return of Werdna was written and given to the Journal editors weeks before any discussions leading toward employment were commenced with Sir-tech. At the time, I was a beta tester only, as the review indicated.

(Ed Note: We believe you, Ron, we believe you...)

Jim Frison looking for the "lost" IIgs Finder.

Photo by Peter Combes

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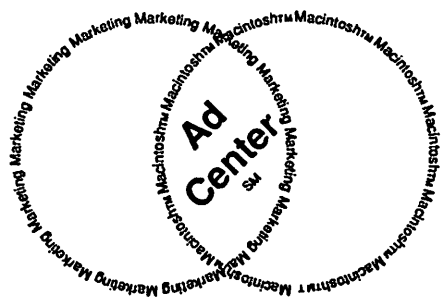

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CALCULUS FOR A NEW CENTURY:

Background Papers for a National Colloquium October 28-29, 1987

by Joseph A. Hasson

On October 28-29, 1987, an important National Colloquium was held at the National Research Council, sponsored by the National Academy of Sciences, the National Academy of Engineering and the Mathematical Association of America. It was attended by teachers and users of mathematics, including physicists, engineers, social scientists, computer scientists, etc. Its overarching theme was captured by the name of the Colloquium, Calculus for a New Century. Its genesis is linked to two significant conditions.

(A) First, Calculus is the mathematics course most dreaded by thousands of undergraduate students. Each year an estimated 700,000 or more students matriculate in Calculus courses in our Universities. According to the National Science Foundation, that number implies that about 31 percent of undergraduate students now take Calculus and that it is one of the most important courses taught in the University. However, about 300,000 students will fail the course and, then, repeat it—some as many as three or four times. Of those that pass this first course, a large proportion of students will get "C" grades. Regretably, other-non-mathematics departments will often require Calculus of their students, in part, with the aim of reducing and filtering the enrollment of majors in their subject matter. It has been said, for instance, that medical schools will use Calculus grades of applying students as a way of distinguishing among student applicants, particularly if performances in other subjects are close or indistinguishable.

On the other hand, about 40,000 instructors in our Universities and Colleges teach Calculus. "It is an absolutely dominant course", according to the Colloquium. Based on these results and other evidence, the teachers of mathematics have been inferring that part of the problem with Calculus is in how the subject is presented and taught. They feel a great need exists for restructuring the teaching of Calculus. Something must be fundamentally wrong when teachers and students alike are uninspired by a subject, especially when it is the foundation not only for advanced courses in Mathematics but also for a wide range of work in other fields where Math is applied. [Note: In fairness, I know a few other non-mathematical subjects which can be similarly criticized in that they end up confusing more than clarifying subject matter for students.] For instance, it is a demonstrated fact that other competing, industrialized countries produce many more engineers than does the United States:

"In the physical and life sciences and mathematics, the U.S. granted 106,000 first degrees in 1982, more than twice the number granted in the Soviet Union, and almost four times as many as were conferred by Japanese institutions. However, in engineering, the U.S. granted about 64,000 first degrees in 1982, while institutions in Japan conferred 74,000 and the Soviet Union, 330,000." [National Science Board, Science Indicators - The 1985 Report, p.2]

While the rate of new scientific discoveries is probably higher in the U.S. than in most other countries, the translation of those discoveries into techniques of production, based on sophisticated engineering requiring high powered mathematical knowledge, occurs at a lower rate in this country. Numerous instances of such occurrences could be easily cited. The essentials of this point are made in Recommendation 4 of the so-called Young Report as follows:

> ***Calculus is the mathematics course most dreaded by thousands of undergraduate students.***

"(T)he ability to use manufacturing technologies for competitive advantage over foreign firms has become one of the weakest performing areas (for the U. S.). It is recommended that (the U.S.) initiate actions intended to improve the development and use of manufacturing technologies to transform R&D results into competitive products and services for U.S. firms." [Report of the President's Commission on Industrial Competitiveness, Global Competition—The New Reality, Vol.II, p. 259. This is known as the Young Commission since it was headed by John A.Young, CEO and President of Hewlett-Packard.]

(B) A second condition motivated this Colloquium. It arises from the great advances that have occurred in computer technology. These advances have led many to conclude that the teaching of Mathematics cannot remain unaffected. The new technology must be harnessed so as to contribute constructively to mathematical pedagogy. Computer technology is affecting so many other strata of our economic, social and political lives; it must also affect the entire educational establishment. The process on several fronts has just begun. It is estimated that the computer presently affects only 7 percent of Math courses taught at the University. At this juncture, it must be adapted to the teaching of the Calculus and subsequently to other courses. The very holding of a special Colloquium on the subject, attended by many experts and leading persons not only from Mathematics but also other disciplines, attests to the subject's importance. One participant in this Colloquium expressed the view "that the computer will revolutionize [Mathematics] as greatly as did Arabic numerals, the invention of algebra and the invention of Calculus itself". [Gail S. Young, National Science Foundation]

A real question arises from these two crucial conditions. It is whether the teaching of the Calculus "will change haphazardly or whether its alterations can be planned and its subject matter and teaching invigorated"? The implication is that careful thought and planning are required. Decisions should be predicated on properly defined benefit-cost evaluations. Within this framework, the unresolved issue is what role precisely can the computer play in this revitalization process? The National Science Foundation would like to invest about $2 million a year over the next several years in Conferences, Workshops and Demonstration Projects, devoted to Calculus and other branches of Mathematics. The expected impact of this total effort could be revolutionary. It would affect teaching methods in the

contd.

Calculus and other Mathematics as well; it would require a rewriting of textbooks, a reorientation in the preparation of those who would teach Mathematics, a redefinition of the prerequisites of Calculus and would have a profound effect on students who take the course. The structure and workings of University Departments of Mathematics would be influenced. New software packages would have to be written, tested and judged acceptable. It was observed by Ms. Young that the role of Calculus in American Universities is derived from how the subject was taught in British Universities in the last part of the 19th century. "That in itself is reason to change." It is not being overly critical to note that British Universities have not been known for their innovativeness and their rate of adaptation has been quite slow—a condition recognized by the famous Robbins Report some twenty years ago.

...great advances have occurred in computer technology. These advances have led many to conclude that the teaching of Mathematics cannot remain unaffected.

Leaders of this move for restructuring Calculus are mindful of the failures that resulted some twenty years ago when the "New Math" was introduced into our schools. Considerable resistance was encountered at that time: from reluctant teachers who had to be won over and trained in it; from parents who knew nothing about the subject and had to be convinced of its merits. Adjustments in textbooks were necessary. Since that earlier effort, it is now admitted, bordered on disaster, considerable caution, investigation and evaluation will be required. The move can not be headlong; rather, it must be deliberate and careful.

An earlier conference on the teaching of Calculus was held in 1986 at Tulane University. It lead to the publication of a collection of papers called Toward a Lean and Lively Calculus by the Mathematical Association of America. A series of joint summer meetings was held with the Mathematical Association of America and the American Mathematical Society, highlighting various aspects of educational software. The computer magazine Byte features four Universities which have exerted considerable effort to computerize much of their instruction, including Mathematics. Leading Calculus textbooks are offering floppy disks with programs that augment visual representations and lend numerical reinforcement to selected topics in them.

A Calculus course embodies complexities that greatly transcend those in Algebra or Geometry courses. Some of those complexities include (i) scalar and vector functions, (ii) differentiation and integration, (iii) transcendental functions, (iv) physical concepts like velocity, acceleration, center of mass, gradient—even if students have not had a course in physics! (v) area of a surface and its curvature, (vi) infinite series, (vii) polar and spherical coordinates, (viii) the construction of a mathematical model which handles a concrete, real world situation and can be manipulated with the techniques of the Calculus.

In addition, many students arrive in college, with a traditional mathematical knowledge—Algebra, Plane Geometry, some with Solid Geometry and, even, an Introduction to the Calculus. Many are coming with some background in programming—e.g. Basic and/or Pascal—and hands-on experience in computers. How, then, can this exposure to computers be linked to facilitate the teaching of Mathematics, in general, and Calculus, in particular? In many Colleges and Universities, students are either encouraged or required to have access to or own a personal computer. Students can connect to mainframes and use library databases to help complete course assignments. There is a growing level of computer sophistication among college students.

Calculus software is available; some of which is tied in to particular textbooks. Its continued production and improvement are essential. Software packages will be operated right in the classroom and results projected onto overhead screens in lieu of chalk and blackboard demonstrations. Color and animation will enliven presentations and give them a lifelike resemblance. Some software packages are designed to be used by students in a tutorial mode in which case they can proceed at personally tailored paces. A student gets immediate feedback, indicating to him (her) a success or failure in utilizing a specific concept. A student will be given a polynomial function and with the aid of the computer be asked to find its zeros. Or he will be given a function and asked for its successive derivatives—first order, second order, nth order. There are programs that enable a student to find solutions of a second-order constant coefficient differential equation, distinguishing between its homogeneous and the non-homogeneous solutions. A question that arises in such cases deals with the extent to which a student should be required to go through the numerous complex steps on his own and when he should invoke the assistance of the computer. These same kinds of questions arise in other areas—e.g. Statistics where canned programs now enable one to find all manner of descriptive statistics—means, standard deviations, intercepts, slopes, R-sqs., correlation coefficients, F-ratios, Durbin-Watson statistics, analysis of variance, etc. A user of such programs need not know how to hand calculate such outputs; he must know how to input the basic or raw data and to interpret the output. He will be better able to interpret the output if he knows something about the underlying theory, the applicable formulae and the calculations one must go through to obtain the output. Much of the time-consuming drudgery is eliminated. The individual researcher can handle large masses of data which would have been foreboding without the computer.

A central question arises: How does the existence and widespread availability of computers affect the basic objectives of the Calculus course? There is no easy answer. It requires extensive consultation among Mathematicians with support from their Departments and users of the subject. It requires experimentation, trial-and-error, and, in general, an evolution.

At the National Colloquium, several significant questions were raised. They were raised because right answers to them are required if revisions in the teaching of the Calculus are to help clarify the subject for students.

Question 1: Students who have difficulty with the Calculus appear to be deficient in Spatial Intuition. That is, they cannot easily perceive space in three or four-dimensions. Such intuitive skills arise, for instance, in problems of volume and others that require the use of double and triple integrals whether in cartesian or polar coordinates. Can such perceptions be improved better with special graphics programs or with wire and plaster models?

Question 2: Functions of second or higher order when graphed yield irregular, undulating curves. These functions can be differentiated in order to find their slopes at a given point and

contd.

their minimum and maximum values. The profile of the resulting curves can be depicted by substituting alternative X-values. With a computer, all this can be done almost instantaneously. How important is curve tracing? What are the relative merits of performing these tasks with or without the computer? How well does each approach—the old fashioned way vs. the use of computer—lend itself to ascertaining how the configuration of the curve changes if the parameters of the equation are altered. In the function

$$Y = ao + a1X + a2X2 + \ldots \quad + anXn$$

where Y = dependent variable
X = independent variables
a's = parameters

the configuration of the curve and, indeed, the value of the function, Y = f(X), will change, given the X's, if the values of the parameters—the a's—change. With a computer, one can easily see how these changes affect the curve; substituting alternative a-values by hand and determining the changes can be both time-consuming and error-prone. Hence, an important idea can be easily communicated with the computer.

Question 3: A student should comprehend that the fundamental meaning of differentiation pertains to a rate of change—velocity—in the value of a variable and a change in its rate of change—acceleration. He should, also, know that differentiation in the Calculus follows certain basic rules: the product rule; the quotient rule; that differentiation of a constant is zero; the chain rule; implicit differentiation; the differentiation of transcendental functions. These same basic rules can be applied to obtain higher—second, third. . .nth - order derivatives.

With available software packages, all these derivatives can be easily determined with the computer. Will reliance on the computer result in a student's not fully understanding the processes involved in these differentiations? It will certainly save him time. But the issue involved here has to do with comprehension and conceptualization, not just the application of a technique.

How does the existence and widespread availability of computers affect the basic objectives of the Calculus course? There is no easy answer.

Question 4: This question has to do with the processes of integration. It is imperative that the student understand the basic concept of integration—i.e. determination of the area under a curve between two stated points in the case of a definite integral. He is taught different techniques of integration: by partial fractions; integration by substitution—both trigonometric and non-trigonometric; by power series; by parts. Alternatively, there are numerical integration techniques: rectangular and trapezoidal rules. The first set of procedures implies that the area sought is bound by a smooth curve; the second is based on a method of successive approximation where the area under the curve is subdivided into a series of sectors, each with a beginning and an end value. The total area is, therefore, defined as the sum of a series of rectangular sub-areas. The second procedure lends itself more easily to the solution of problems with the computer.

These are just a few of the questions that arise in the preparation of adequate software programs for instruction of the Calculus. A crucial problem is presenting the key concepts in an understandable manner while curtailing some of the time-consuming effort that often goes into solving problems. By curtailing this time, the student can expend more effort in mastering basic concepts. The learning process is lightened, made more enjoyable and, perhaps, the student's sense of discovery and curiousity enhanced. Learning and mastery of a subject becomes an interesting challenge rather than a drudge. The efficient use of time can also permit demonstrating the real world uses of the concepts. Some current applications which appear in current Calculus courses are: (i) Boyles' Law; (ii) work required to empty a tank; (iii) Buffon's needle problem; (iv) the problem of hydrostatic force; (v) centripetal force; (vi) electric field problems; (vii) Kepler's law of planetary motion. [Note: These few examples are taken from Ellis, R. and Gulick, D. Calculus with Analytic Geometry, 1978 edition.] Some students thrive on wholly abstract ideas; some Mathematicians view their subject not as a tool for solving real world problems but more as an "art form". I am certain you have known such Mathematicians. Its real-world applications are of no great importance to them. These purists are distinctly in the minority.

It is suggested that the effective use of the computer in the teaching of the Calculus might result in an alteration of the order in which the various subtopics are introduced. The order of topics in a current and widely used textbook is, in part, as follows [Ellis & Gulik, ibid.]:

(1) Functions
(2) Limits and Continuity
(3) Derivatives and Their Applications
(4) Integration and Applications
(5) Inverse Functions
(6) Sequences and Series
(7) Conic Sections
(8) Vectors, Lines and Planes
(9) Partial Derivatives
(10) Multiple Integration

The view among some experts is that order of teaching the subject should be revised. In this revision, it will be recognized that much of what is currently taught can be more easily summarized and presented in the form of a series of integrating algorithms as opposed to a series of techniques. Some feel that integrating the teaching of Calculus with the computer will "cut in half the time required to teach present courses." The balance can then be devoted to deepening an understanding of the subject and to better applying it to work-a-day situations. Application of the subject would require the building of models either in physics, economics, biology, etc. The subject would end up being better integrated and more relevant in the minds of students.

A few closing comments on the Colloquium, are briefly reviewed. The topics discussed were broken down into four groups:

Group I: Science, Engineering, Business
[Four papers were presented. They dealt with engineering, physics, business and biological sciences.]
Group II: Teaching and Learning
[Four papers were presented dealing with assessment, women and calculus, placement testing.]
Group III: Institutional Concerns

contd.

[Five papers were presented, dealing with textbook innovation, the role of high schools, perspectives from the Community College and from the University.]

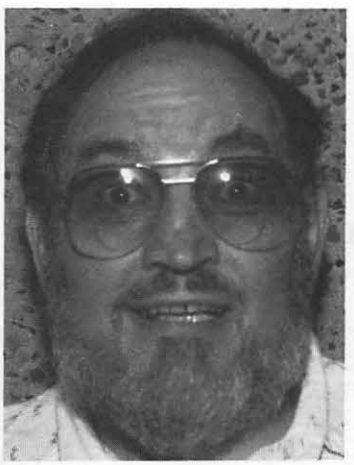
Group IV: Mathematical Sciences

[Three papers comprised this group. They dealt with Calculus curriculum in the '90's, computers, present problems and future prospects.]

For readers interested in this subject, the proceedings of the Colloquium will be published by the Mathematical Association of America in a volume entitled, Calculus for a New Century to be released January 1, 1988. That volume will include the presented papers, a survey of current calculus experiments, sample calculus final examinations and other documents on the reexamination of Calculus. A copy of the report relied on in preparing this material can be obtained from the National Research Council. The material was edited by Lynn Arthur Steen.

VOLUNTEER PROFILES
by Robert C. Platt

We continue our portfolio of WAP volunteers, without apologies to the scotch whiskey whose ads suggested the format.



Name: Marty Milrod
Occupation: Consultant
Residence: Bowie, MD
Computer: Macintosh SE with 68020 accelerator board
Favorite Drink: Herbal tea
Favorite Software: Microsoft Word 3.01
Service to WAP: Former Director-at-Large, developed and taught Introductory Mac Tutorials, Mac New Disk Librarian and designer of the WAP Disketeria disk labels.

Name: Bruce Field
Occupation: Electrical Engineer
Residence: Rockville, MD
Computer: Mac 512E and Apple //e
Favorite Drink: Regular coke
Favorite Software: Excel 1.04
Service to WAP: Director-at-Large, Apple II Q & A, WAP Tutorial Instructor, Former VP for Apple II.

Photos by Peter Combes

PASCAL NEWS
by Robert C. Platt

PIG. The Pascal Interest Group meets on the third Thursday of each month. The next meeting is on January 21, and new participants are always welcome.

The topic for November was strings and long integers. The PIG wrote a sample program to convert decimal and hexadecimal numbers to illustrate these Pascal data types.

Pecan. Pecan Software (718-851-3100), the publisher of the UCSD p-System has started to ship a new release: Version IV.2.2 Release 1.1, which is a general upgrade of the system. The IIgs system has been shipping for some time now, but the graphics and sound units are still being developed. Pecan is now shipping "Poly" a new multi-user version of the p-System.

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THE FIRST WAP JOURNAL INDEX

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Well friends, the complete index for all WAP Journal articles published in 1987 is available below by subject. A subsequent issue of the Journal will include a list by author.

We are anticipating that the remainder of the index, which will include the years 1980-1986, will be available by the time the next Journal is published. While it is uncertain at the moment exactly how this index will be made available, there will be a printout of it (which will at least include the years 1980, 1981, 1984, 1985, 1986 and 1987) at the WAP Office as of about January 1, 1988. This will include three sections, one by title, one by author and one by subject, each in alphabetical order.

The index by title has been prepared by eliminating articles ["a" "an" "the"] which are the first word. Authors are listed by last name, although the first names are also provided. When there is more than one author of an article, the alphabetizing is by the first listed author's last name, although the second author is also included in the listing.

As for subjects, an attempt has been made to use terms which a researcher was likely to look for. However, people certainly have different opinions about this, and any suggestions at all are welcome.

In order to complete the process as soon as possible, each article is only listed once in each of the three indexes which will be available at the WAP library. If there are enough requests for it, this can be changed so that there are multiple entries of each article in each index. With such an arrangement each author will have all of the articles which he has written listed under his name even if his name appeared last when there were multiple authors.

If you have any suggestions for improving the index after you have reviewed it, please send your comments to Harvey Kaye, care of the Pi Office, and they will be considered. Even if you are unhappy with a single listing, please let us know so that we can consider changing or adding to the index which already exists.

There are plans being considered to make the complete index available on WAP Disks for the Apple II and the Macintosh, by having the index available on disk as an ASCII text file, and possibly also as data base files, for example, as an AppleWorks Data Base file for the Apple II and as a popular Data Base file for the Mac.

For all of you authors, if you have suggested additions and/or corrections, please forward them to the Pi Office so that they can be reviewed. Actually, the best of all methods would be for all authors to submit a suggested indexing for each article submitted so that the author's input will be available to all future indexers. [It is not clear yet whether this will be me since so far I have done it single handedly, and am presently all "indexed out."] A suggestion to this effect was made some time ago on the Journal Board of the Telecommunications System (TCS), but no response was ever received.

The indexes will also be available by year for review in the library of the Journal Index Board of the TCS, which is on Conference 1, Board 3. There are some presently available and others which had been available but which have disappeared and are presently being prepared, so that this library will have a separate file for each year the Journal was published. Actually there will be three files for each year so that an on-line search can be made by title, author or subject. This will last as long as there is hard disk space available on the TCS.

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Accounting Clan Practical Accountant	Granite, David	02 87 16 09	Review of an accounting program.
Annapolis Apple Slice			
Annapolis Slice News	Johnson, Claire	01 87 13 09	News of Annapolis Slice group meeting.
Annapolis Slice News	Johnson, Claire	02 87 17 09	Annapolis Slice of WAP meeting of Dec 13.
Annapolis Slice News	Johnson, Claire	03 87 17 09	Report on the last meeting.
Annapolis Apple Slice News	Toth, Steven	04 87 18 09	sundry about the Annapolis Apple Slice.
Animation Take 1 (Apple II)	Oringel, Bob	04 87 35 09	Take 1 animation program reviewed.
Apple II			
Apple II News and Notes	Mossberg, Walt	03 87 12 09	PaintWorks+; Word Perfect IIgs V1.1; tass Times in Tonetown; new software and hardware
Apple II News and Notes	Mossberg, Walt	04 87 14 09	Apple II; Music Studio; Music Construction Set; Glen E. Bredon; Point-To-Point; MouseTalk.
Apple II News and Notes	Mossberg, Walt	05 87 12 09	RAM disk; Visualizer; Supersonic card.
Apple II News and Notes	Mossberg, Walt	08 87 21 09	Envoy Card for Apple II and IBM compatibility.
Apple II News and Notes	Mossberg, Walt	09 87 18 09	Word processors for IIgs: Multiscribe gs v2.0; Writer's Choice Elite, v1.0; Graphicwriter, v1.1; Mousewrite, v2.6.8B.
Apple II News and Notes	Mossberg, Walt	10 87 24 09	New Apple IIgs ROM, VGC chips; IIgs Finder; PC Transporter; AppleWorks Add-Ons;IIgs Switcher.
Apple II News and Notes	Mossberg, Walt	11 87 14 09	Sundry Apple II.
Button-Down Guide to Apple: Pt V	Hobbs, Raymond	01 87 24 09	Information on Apple II and Applesoft.
Apple II Software Current Versions	Platt, Robert C.	01 87 35 09	List of current versions of various Apple II programs.
Apple][+			
AppleWorks 2.0 on Apple][+	Scorer, Derek R.	06 87 24 09	Using AppleWorks v2.0 on the Apple][+.
Plus-Works+AppleWorks On][+	Levine, Boris	07 87 22 09	Plus-Works and AppleWorks on a][+.
Plus Works+AppleWorks on][+:Pt 2	Levine, Boris	10 87 27 09	Using AppleWorks on the Apple][+.

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Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Apple II WAP PD Disks			
Apple IIgs Disketeria News	Todd, David	09 87 82 09	WAP Apple //gs Disks: 2003 and 2004: Side
Apple IIgs Disketeria News	Todd, David	11 87 82 09	WAP 2007 M18 Golf Courses.
CP/M and ProDOS Disketeria Notes	Bell, John	04 87 89 09	DP/M WAP disk reviewed.
Disketeria Dispatch	Little, Jim	07 87 81 09	ProDOS 812 - Toddlers and Kids Game Room; 813/TAWUG-1; 814/TAWUG-2; 815/TAWUG-3; 816/TAWUG-4; 817/Telecom; CP/M 420.
Diskteria Dispatch	Little, Jim	06 87 82 09	Apple /// 1006; Apple II 503; 504; 229; GS 2001 and 2002.
Apple IIgs			
IIgs Disketeria News	Todd, David	08 87 85 09	WAP IIgs Disks: 2003 Freeterm.
IIgs Stuff	Meyer, Ted	08 87 18 09	Sundry Apple IIgs including books.
Apple IIgs Disketeria News	Meyer, Ted	06 87 82 09	IIgs WAP Disks: 2001; 2002.
Apple IIgs Sig Meeting Report	Meyer, Ted	11 87 10 09	September meeting report
Apple IIgs Sig Meeting Report	Meyer, Ted	12 87 09 09	Report on the Apple IIgs Sig meeting.
Apple IIgs Sig News	Matzen, Peg	07 87 25 09	Report on Apple IIgs Sig meeting in May.
Apple IIgs Sig News	Matzen, Peg	09 87 22 09	Report of July meeting.
Apple IIgs Sig News	Todd, David	10 87 18 09	August meeting report.
Apple IIgs Sig News&Mtg Report	Meyer, Ted	06 87 18 09	Apple IIgs new Sig.
Apple IIgs Stuff	Meyer, Ted	10 87 19 09	IIgs books.
Apple IIgs Stuff: Finder	Meyer, Ted	11 87 12 09	Apple IIgs System Disk Finder for beginner..
Apple IIgs Stuff: More Finder	Meyer, Ted	12 87 8 09	Further description of IIgs System disk v3.1 Finder.
Button-Down Guide to the Apple	Hobbs, Ray	03 87 28 09	IIGS.
GS Mod: A Case History	Wege, Ralph	08 87 16 09	Modifying an Apple //e to become an Apple IIgs.
Stripping Your IIgs System Disk	Todd, David	11 87 10 09	Apple IIgs System Disk stripped to its essentials.
Upgrading Apple //e To IIgs	Kelbaugh, Paul C.	07 87 26 09	Apple //e to Apple IIgs upgrade.
Apple ///			
Disk /// Backup: A Backup Program	Bloom, Allan M.	11 87 28 09	Apple /// Disk in WAP Disk library.
Your Apple /// New Members's Disk	Ottalini, David	04 87 10 09	Apple ///; New Member's Disk.
On the Trail of the Apple ///	Ottalini, David	01 87 10 09	disk label progrm; Forth ///; Apple /// hardware; manuals; WPL Apple Writer ///.
On the Trial of the Apple ///	Ottalini, David	02 87 10 09	Apple /// sundry.
On the Trail of the Apple ///	Ottalini, David	03 87 08 09	/// EZ Pieces upgrade 2.0 version; Business Basic; Taylor Pohlman; New products; Apple /// to IBM.
On the Trail of the Apple ///	Ottalini, David	04 87 9 09	Apple ///.
On the Trail of the Apple ///	Ottalini, David	05 87 10 09	/// EZ pieces Upgrade Dies; News.
On the Trail of the Apple ///	Ottalini, David	06 87 14 09	Apple ///.
On the Trail of the Apple ///	Ottalini, David	07 87 12 09	Sundry on the Apple ///.
On the Trail of the Apple ///	Ottalini, David	08 87 10 09	Apple /// hardware sources.
On the Trail of the Apple ///	Ottalini, David	09 87 11 09	Sundry on the Apple ///.
On the Trail of the Apple ///	Ottalini, David	10 87 14 09	/// meeting in Oct in Chicago; /// tapes for library; new WAP disks.
On the Trail of the Apple ///	Ottalini, David	11 87 26 09	Sundry Apple ///.
On the Trail of the Apple ///	Ottalini, David	12 87 39 09	Sundry on the Apple ///.
Apple Sundry			
Best of the Apple Items From TCS	Pastura, Lou	01 87 40 09	Comments on Apple IIgs and AppleWorks.
Best of the Apple Items from TCS	Coukouma, Euclid	02 87 34 09	Sundry.
Best of the Apple Items from TCS	Barnes, Alexander	03 87 24 09	Sundry.
Best of the Apple Items From TCS	Pastura, Lou	04 87 32 09	Sundry.
Best of the Apple Items From TCS	Pastura, Lou	05 87 36 09	Sundry.
Best of the Apple Items From TCS	Barnes, Alexander	06 87 26 09	Sundry.
Best of the Apple Items From TCS	Pastura, Lou	07 87 28 09	Sundry.
Best of Apple Items From the TCS	Pastura, Lou	09 87 34 09	Apple sundry.
Best of the Apple Items From TCS	Coukouma, Euclid	10 87 34 09	Sundry.
Best of the Apple Items From TCS	Pastura, Lou	11 87 24 09	Sundry Apple II.
Best of the Apple Items From TCS	Barnes, Alexander	12 87 32 09	Sundry.
Q & A	Field and Platt	01 87 16 09	Sundry.
Q & A	Field and Platt	02 87 12 09	Sundry.
Q & A	Field and Platt	03 87 10 09	Sundry.
Q & A	Field and Platt	04 87 12 09	Sundry.
Q & A	Field and Platt	05 87 16 09	Sundry and ProDos patch.
Q & A	Platt and Field	06 87 16 09	Sundry.
Q & A	Platt and Field	07 87 17 09	Sundry
Q & A	Platt and Field	08 87 24 09	Sundry.
Q & A	Platt and Field	09 87 14 09	Sundry.
Q & A	Platt and Field	10 87 16 09	Sundry.

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Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Q & A	Platt and Field.	11 87 16 09	Sundry.
Q & A	Platt and Field	12 87 14 09	Sundry.
Tech Tidbits	Goodin, Sue et al	12 87 18 09	Sundry.
Apple Writer			
Apple Writer 2.0: Hacker's Patch	Page, Chester H.	10 87 30 09	Apple Writer 2.0 reviewed.
AppleWorks			
AppleWorks Q & A	Rowell, Richard	05 87 18 09	AppleWorks tips.
AppleWorks SIG News	Matzen and Burns	01 87 12 09	News about the last meeting.
AppleWorks Sig News	DeVito, Ken	02 87 14 09	AW patch for booting up nonstop; numbering pages; upgrading to v 2.0.
AppleWorks Sig News	De Vito & Matzen	04 87 11 09	AppleWorks; Sig News; February 87 meeting.
AppleWorks Sig News	Matzen, Peg	09 87 22 09	Report on the July meeting.
AppleWorks Tax Template:IRS 1986	Koskos, Paul	02 87 16 09	Template for preparing the 1986 tax forms.
AppleWorks Tips and Techniques	Rowell, Richard	03 87 18 09	AppleWorks tips: set up; printers; AW support disks; word processor; spreadsheet; what is a template?
AppleWorks Upgrade	Van Horn, Lisa	03 87 17 09	Apple Computer on the AppleWorks 2.0 upgrade.
Counting the Ballots	Rowell, R. et al	08 87 43 09	AW used to count ballots in the last WAP election.
Macros For AppleWorks	Rowell, Richard	07 87 20 09	Using macros in AW with MacroWorks, SuperMacroworks, AutoWorks and KeyPlayer.
"AW User's Group's Greatest Hits"	Kelbaugh, Paul	07 87 24 09	Public domain templates for AppleWorks.
Printing Columns In AppleWorks	Pastura, Lou	06 87 42 09	Printing in columns using AppleWorks.
Taxmaster for AppleWorks:A Rev.	Oringel, Bob	03 87 19 09	AppleWorks; tax software, Taxmaster.
AV SIG Successful Grand Opening	Williams, Jay	12 87 52 09	Report on first meeting of AV [Arts and Video] SIG.
Basic View From the Hill	Norling, Rich	02 87 38 09	About the new Basic.
Boards Ohio Kache Systems Board	Brennan, Kim	01 87 31 09	Describes a kache system used with a hard disk.
Books			
Book Reviews	Platt, Robert C.	05 87 82 09	The Third Apple and Advanced Macintosh Pascal.
Book Reviews	Platt, Robert C.	09 87 53 09	Apple IIgs Firmware Reference and How to Write Macintosh Software.
Book Reviews	Platt, Robert C.	10 87 62 09	Complete HyperCard Handbook by Danny Goodman.
Future of American Business	Hasson, Joseph A.	02 87 42 09	US being outdone in world markets.
In Search of Most Amazing Thing	Zee, Linda Van	08 87 33 09	Review of book by Tom Snyder and Jane Palmer.
Mac Assembly: Two Book Reviews	Field, Bruce F.	04 87 80 09	Assembly Language Primer for the Macintosh and Programming the Macintosh in Assembly Language.
Member Reference Book	Warrick, Tom	09 87 43 09	Report on the New Member Reference Book.
View From the Hill	Norling, Rich	12 87 80 09	Odyssey: Pepsi to Apple... by John Sculley.
Calendars			
Calendarmaker: A Review		08 87 82 09	Making a calendar for appointments and dates.
Create A Calenday: A Review	Muchow, Steven	10 87 28 09	Create A Calendar is reviewed.
Computer law			
You Be the Judge	Kaye, Harvey	05 87 44 09	Copyright infringement of computer programs.
CP/M			
CP/M & ProDos Disketeria Notes	Bell, John T.	07 87 19 09	WAP CP/M disk 224.
PCPI Z80 Card & WordStar Pro:	Lustig, Henry	05 87 20 09	CP/M on the Apple: A Review.
Data bases			
Food Processor, The	Oringel, Bob	03 87 23 09	Nutrition software.
Introduction to dBASE II	Hayman, Gary	02 87 22 09	How to use a CP/M data base.
Desktop Publishing			
dPub Sig Meeting Report — Oct 7	Yockey, Cynthia	11 87 50 09	Report of October meeting.
dPub SIG News	Payne, Steven	01 87 33 09	News about desk top publishing.
dPub Sig News	Payne, Steven	02 87 46 09	Notes on meeting of Jan 7.
dPubSIG	Payne, Steven	10 87 45 09	Report of the Sept meeting.
dPubSIG News	Payne, Steven	04 87 38 09	Report of meeting.
dPubSig News	Payne, Steven	05 87 57 09	dPubSig News
dPubSig News	Payne, Steven	06 87 41 09	Report on May meeting.
Desktop Publishing To Go	Yager, L & J	04 87 40 09	Desktop publishing without owning a LaserWriter.
Desktop Pub SIG Meeting - Nov 4	Yockey, Cynthia	12 87 52 09	Report on Nov 4 87 meeting of dPub Sig.
Quark Xpress: A Review	Rohr, Jay	08 87 64 09	Quark Xpress page layout program review.
Postscript" To Xpress & GW 1.1	Rohr, Jay	09 87 56 09	Addendum to Quark Xpress and Graphic Works 1.1.
dPub software Ready, Set, wait a min.	Angelides, Alicia	06 87 50 09	dPub software review of Ready, Set, Go! v3.0.EdSig
Education			
Computer Learning Month: Oct.	Kirby, Patricia	12 87 37 09	Main meeting report on the education program
EDSIG News	Kirby, Patricia	07 87 13 09	Report on the May meeting.
EDSIG News	Kirby, Patricia	11 87 33 09	Report of general meeting Education program planned.
EEDSIG News	Kirby&Weissman	03 87 29 09	EdSig meeting report.
Computers In Education	Hasson, Joseph A.	08 87 30 09	Computers in the schools.

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Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
On-line Offerings	Kirby, Patricia	12 87 36 09	On line learning.
Excel			
An Automated Excel Timesheet	Butler & Lanford	01 87 64 09	Using Excel to provide an automated timesheet.
Excelling on Your Mac, Part 9	Morganstein, David	01 87 62 09	Describes problems and good features.
Excelling On Your Mac: Part 10	Morganstein, David	03 87 68 09	Excel; random function.
Excelling on Your Mac: Part 12	Morganstein, David	05 87 67 09	Using Excel.
Excelling on Your Mac	Morganstein, David	07 87 50 09	Information on using Excel.
Excelling on Your Mac: Part 14	Morganstein, David	08 87 68 09	More on Excel.
Excelling On Your Mac: Part 15	Morganstein, David	10 87 53 09	Another article in this series on Excell.
Excelling On Your Mac: Part 16	Morganstein, David	12 87 72 09	Continuation of this series on Excel.
Library Lookup Procedure In Excel	Byrd, Richard J.	04 87 72 09	Excel use for real estate settlements and a library.
Using Excel for Portfolio Analysis	Trusal, Lynn R.	01 87 60 09	Spreadsheet for current value of stock portfolio.
Advanced Excel Graphics	Lanford, Audri G.	02 87 58 09	Plot a continuous independent variable using Excel.
Fantasy T*R*A*S*H	Seelig, Fred	08 87 44 09	A Mash type script.
FCC Let FCC Know What You Think!	Warrick, Tom	09 87 3 09	FCC is considering raising the hourly charges.
Fed SIG			
Fed Sig News	Adkins, Dan	09 87 40 09	Report on Fed Sig.
FedSig Corner	Crawford, Steve	10 87 54 09	Report on FedSig August meeting.
Forth Proforth][	Page, Chester H.	02 87 32 09	A Forth.83 implementation for the Apple][.
Games			
Abandoned Airstrip at Duvall	Johnston, Thomas	02 87 19 09	Flight Simulator II—airstrip which you design.
Arcticfox: A Review	Black, Forrest	01 87 38 09	A tank war game.
Balance of Power (Apple II): A Rev.	Greco, Philip	11 87 35 09	Balance of Power reviewed (Apple II).
Bard's Tale II—The Destiny Knight	Hakim, Ray	07 87 41 09	Bard's Tale II game review.
Battlecruiser: A Review	Hancock, Chris	06 87 35 09	Battlecruiser game review.
Battlefront: A Review	Hancock, Chris	03 87 35 09	Games; Battlefront.
Battles In Normandy: A Review	Hancock, Chris	11 87 36 09	Battles In Normandy reviewed.
Bop 'N' Wrestle: A Review	Hakim, Davy	03 87 34 09	Games; BOP 'N' WRESTLE.
Bronze Dragon(Conquest of Infinity)	Wartow, Ron	04 87 22 09	Bronze Dragon game reviewed.
Bureaucracy: A Software Review	Hall, Charles Don	06 87 36 09	Bureaucracy game reviewed.
Dark Castle; A Review	Porter, David L.	05 87 27 09	Dark Castle game review.
Deep Space—Operation Copernicus	Malka, Jeff	05 87 28 09	Deep Space—Operation Copernicus game review.
Earth Orbit Stations: A Review	Soboroff, Ian	10 87 41 09	Earth Orbit Stations reviewed.
F-15 Strike Eagle: A Review	Soboroff, Ian	02 87 19 09	A military flight simulator.
Fool's Errand: A Review	Payne, Steven	11 87 37 09	Fool's Errand reviewed.
GameSIG News	Payne, Steven	01 87 36 09	News of GameSIG meeting.
GameSig News	Payne, Steven	02 87 18 09	News of GameSIG meeting.
GameSig News	Payne, Steven	03 87 32 09	Games, news, meeting.
GameSig News	Payne, Steven	04 87 20 09	Report of Game Sig meeting.
GameSig News	Payne, Steven	05 87 27 09	News of GameSig.
GameSig News	Payne, Steven	06 87 34 09	Meeting report.
GameSig News	Payne, Steven	08 87 36 09	Report of last meeting.
GameSig News	Johnston, Thomas	09 87 46 09	Report on upcoming event.
GameSig News	Payne, Steven	10 87 40 09	August meetingon games.
GameSig News	Payne, Steven	11 87 34 09	Report of October meeting.
GameSig News	Payne, Steven	12 87 38 09	News of the GameSig.
GameSig Suggestions for Santa	Payne, Steven	12 87 38 09	Gift suggestions for computer games.
Gemstone Healer: A Review	Hakim, Davy	05 87 29 09	Gemstone Healer game review.
Guild of Thieves (Apple II): A Rev.	Mulcahy, K.C.	10 87 41 09	Guild of Thieves reviewed.
Guild of Thieves (Mac): A Review	Zerolis, John	10 87 40 09	Guild of Thieves reviewed.
Hardball for the Mac: A Review	Lindstrom, Peter	03 87 35 09	Games; Hardball.
Hollywood Hijinx & Moonmist	Hall, Charles Don	05 87 30 09	Hollywood Hijinx ; Moonmist game review.
Index of Game Reviews In WAP Journal		09 87 48 09	Game review index.
Indiana Jones In Revenge of Ancients	Payne, Steven	06 87 38 09	Indiana Jones In Revenge of the Ancients review.
King of Chicago: A Review	Shipley, Lester	04 87 23 09	King of Chicago game reviewed.
Lords of Conquest: A Review	Mulcahy, K.C.	02 87 20 09	A strategy games for three or more players.
Lurking Horror & Stationfall	Hall, Charles Don	10 87 42 09	Lurking Horror and Stationfall reviewed.
Mac Pro Football: A Review	Lindstrom, Peter	08 87 37 09	Mac Pro Football game review.
Marble Madness: A Review	Soberoff, Ian	05 87 29 09	Marble Madness game review.
NFL Challenge: A Review	Hoff, Marc S.	03 87 32 09	NFL; games; football.
Ogre For the Mac: A Review	Stetekluh, Jeff	11 87 34 09	Ogre reviewed.
Outlining A Runway In Fl. Sim. II	Johnston, Thomas	04 87 27 09	Drawing a runway for Flight Simulator II.
Pawn on the Mac: A Review	Porter, David L.	04 87 21 09	The Pawn game reviewed.
Phantasie III: A Review	Hall, Charles Don	06 87 34 09	Phantasie III: The Wrath of Nikademus game review.
PHM Pegasus: A Review	Hutchinson, Reid	05 87 31 09	PHM Pegasus game review.
Questbuster's Cartography System	Greco, Philip	10 87 44 09	QuestBusters reviewed.

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Realm of Impossibility: A Review	Lucas, Tom	04 87 26 09	Realm of Impossibility game reviewed.
Realms of Darkness: A Review	Granite, David	06 87 37 09	Realms of Darkness game reviewed.
Rebel Charge at Chickamauga	Soboroff, Ian	08 87 38 09	Rebel Charge at Chickamauga game review.
Ring Quest: A Review	Black, Forrest	05 87 31 09	Ring Quest game review.
Robot Rascals: A Review	Hakim, Davy	01 87 37 09	Each player chooses a robot and takes it on a quest.
Run5 Magazine: A Review	Hancock, Chris	04 87 26 09	Run5 Magazine about games.
Shadowgate: A Review	Payne, Steven	07 87 40 09	Shadowgate game review.
Shanghai: A Review	Porter, David L.	01 87 37 09	Mah-Jong tiles stacked in a pile called a dragon.
Simulating Airstrip In Fl. Sim. II	Johnson, Thomas	02 87 18 09	Describes new features of Flight Simulator II.
Space Quest: A Review	Hoff, Marc S.	08 87 36 09	Space Quest game review.
Spy Adventures In Europe: A Rev.	Hancock, Chris	11 87 36 09	Spy's Adventures reviewed.
Starglider: A Review	Muchow, Steven	07 87 42 09	Starglider game review.
Sub Battle Simulator: A Review	Stetekluh, Jeff	03 87 33 09	Submarine game; Sub Battle Simulator.
U.S.A.A.F: A Review	Hutchinson, Reid	01 87 38 09	Daylight bombing campaign overGermany-WW II.
Ultima Hook	Gregg, John	09 87 44 09	Report on Ultima I.
Ultima I: A Review	Wartow, Ron	03 87 34 09	Games; Ultima.
WAP World Builder Contest	Platt, Robert C.	08 87 38 09	WAP Contest design the best adventure.
War In the South Pacific: A Review	Mangus, Ben	04 87 23 09	War In The South Pacific game reviewed.
Warship: A Review	Mangus, Ben	01 87 36 09	Tactical naval game—Pacific Theater 1941-1945.
Wizardry IV-The Return of Werdna	Wartow, Ronald	09 87 46 09	Wizardry IV - The Return of Werdna game reviewed.
World Builder Contest	Platt, Robert C.	09 87 82 09	Information on a game writing contest.
World Builder: A Review	Payne, Steven	05 87 32 09	World Builder game review.
Wrath of Denethenor: A Review	Hall, Charles Don	04 87 24 09	Wrath of Denethenor game reviewed.
Graphics			
Apple II Hi-Res To Typewriter Art	Bloom, Allan M.	09 87 31 09	LHGR140 program is reviewed.
Canvas	Milrod, Martin	11 87 68 09	Canvas reviewed.
Graphics Alerts	Rohr, Jay	10 87 46 09	Stepping Out and Diskexpress reviewed.
GraphicWorks: A Review	DeMay Jr., J.T.	04 87 44 09	GraphicWorks program reviewed.
PaintWorks Plus: A Review	Brennan, Kim	07 87 41 09	PaintWorks Plus is reviewed.
Pro3D	Monks, Terry	02 87 60 09	Pro3D: a surface modeling 3D graphics program.
Zany Zingers&Char. for Take One	Oringel, Bob	05 87 23 09	Animation graphics.
TCS Graphics	Raesly, Leon H.	01 87 22 09	Reproductions TCS graphics.
Tips and Graphics	Rohr, Jay	05 87 52 09	Graphics and printing on a Mac.
Turtle Graphics For the Apple II	McCarthy, Guy	04 87 28 09	Turtle graphics in Applesoft.
Hard disks			
CMS SD-80 Group buy	Rall, Eric	12 87 81 09	Review of the CMS SD-80, an 80 meg hard drive.
Hard Disk Tips	Seelig, Fred	10 87 64 09	Various aspects of hard disks.
History Hist. Chronology of Computers	Hasson, Joseph A.	12 87 42 09	Chronology of Computers.
HyperCard			
Hypercard's Author at WAP Mtg	Yockey, Cynthia	12 87 56 09	Meeting with Bill Atkinson [Hypercard author].
Long Word Wiser	Love, John A., III	12 87 64 09	A script for HyperCard.
Q & A With Bill Atkinson	Platt, Robert C.	12 87 57 09	Sundry on HyperCard by Bill Atkinson.
Simple Script For Hypercard	Chapman, Rick	12 87 60 09	A script for Hypercard.
IBM View of Big Blue	Wolov, Robert	11 87 62 09	About IBM.
Journal Journal Index	Kaye, Harvey	03 87 42 09	About the Index for the Journal.
Languages			
Button-Down Guide to the Apple	Hobbs, Raymond	07 87 14 09	Assembly language.
Button-Down Guide to the Apple	Hobbs, Raymond	09 87 24 09	Assemb. lang. program & not machine lang.
C And the Apple II	Bell, John T.	12 87 26 09	Information on using C language on Apple II
Oh No - he's back!!	Love, John A., III	07 87 67 09	Microsoft's BASIC Interpreter, V3.
LaserStart Copy Protection	Romaine, Rusty	09 87 74 09	Problems with LaserStart.
Law Intellectual Property Rights	Hasson, Joseph A.	05 87 45 09	Foreign trade bill and intellectual property rights.
Letter Happy New Year From London	Youell, A.&Siew	01 87 52 09	Letter from the Youells in London.
Library Page from the Stack	Platt, Robert C.	03 87 75 09	Apple II library disk 811 - Adventures.
Lisa Installing "The RomSwitcher"	Hurd, David A.	03 87 48 09	Allows Lisa owner to have both a Lisa and a Mac.
Macintosh			
Best of the Mac Items From TCS	Baldridge, Bill	10 87 70 09	Sundry Mac.
Best of the Mac Items From TCS	Baldridge, Bill	11 87 72 09	Sundry Mac.
Bits and Pieces	Trinder, Peter	08 87 63 09	Mac SE fan situation.
Boy, Are You Going To Love These!	Milrod, Martin	11 87 69 09	Suitcase reviewed.
Dealer's Corner	Ferris, Dave	07 87 55 09	Mac II after & upgrading your Mac +.
Developer's View	Lanford, Jim	04 87 58 09	About the new Macs.
Growing Up Mac	Rohr, Jay	03 87 46 09	Mac.
Hardviews	Morganstein,David	11 87 64 09	MacScan reviewed.
Letter to the Editor	Hayne, William J.	01 87 79 09	Experiences with Mac.
Mac Meeting Report — Sept. 26	Yockey, Cynthia	11 87 56 09	Report of the September meeting.

contd.

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Macintosh and Buick	Sandberg, Chris	04 87 66 09	Using the Mac to provide information about Buick.
Macintosh Bits and Bytes	Trusal, Lynn R.	01 87 56 09	Mac information such as Mac home control; Apple
Macintosh Bits and Bytes	Trusal, Lynn R.	02 87 52 09	Mac vs the VAX; other sundry.
Macintosh Bits and Bytes	Trusal, Lynn R.	03 87 56 09	Spell checkers, sundry.
Macintosh Bits and Bytes	Trusal, Lynn R.	04 87 62 09	Sundry Mac.
Macintosh Bits and Bytes	Trusal, Lynn R.	05 87 62 09	Macintosh/IBM hard disk; Adobe Illustrator; sundry
Macintosh Bits and Bytes	Trusal, Lynn R.	08 87 54 09	Sundry.
Macintosh Bits and Bytes	Trusal, Lynn R.	09 87 66 09	Sundry on the Mac.
Macintosh Bits and Bytes	Trusal, Lynn R.	10 87 60 09	Sundry.
Macintosh Bits and Bytes	Trusal, Lynn R.	12 87 76 09	Sundry on Mac.
MacNovice Column	Begleiter, Ralph J.	01 87 53 09	Information for relatively new Mac users.
MacNovice Column	Begleiter, Ralph J.	02 87 47 09	About an easy first project with Excel.
MacNovice Column	Begleiter, Ralph J.	03 87 53 09	Hard disk drive.
MacNovice Column	Begleiter, Ralph J.	04 87 50 09	More and MacDraw to create a family tree.
MacNovice Column	Begleiter, Ralph J.	05 87 60 09	Fragmentation.
MacNovice Column	Begleiter, Ralph J.	06 87 64 09	Help for the novice with a Mac.
MacNovice Column	Begleiter, Ralph J.	07 87 48 09	Finding a lost file on a Mac.
MacNovice Column	Begleiter, Ralph J.	08 87 52 09	Help on the Mac for beginners.
MacNovice Column	Begleiter, Ralph J.	09 87 58 09	Information for novice Mac users on Word.
MacNovice Column	Begleiter, Ralph J.	10 87 48 09	About trashing.
MacNovice Column	Begleiter, Ralph J.	11 87 58 09	Sundry Mac.
MacNovice Column	Begleiter, Ralph J.	12 87 54 09	Macintosh filing system to store and find documents.
New Macs In England	Trinder, Peter	04 87 59 09	About the new Macs.
Six MacMagazines	Walker, Bonnie	06 87 66 09	Mac magazines.
Smell" of Mac Expo	Milrod, Martin	10 87 52 09	Mac Expo report.
What's It like at Boston Mac Expo?	Sicard, Chuck	10 87 50 09	Mac Expo report.
Technical Writing On the Macintosh	Chapman, Rick	08 87 58 09	Macintosh used to type a Ph.D. dissertation.
View From the Hill	Norling, Rich	04 87 56 09	About the new Macs
Mac Disketeria			
Help!! A Request for Lib. Volunteers	Weikert, Dave	02 87 72 09	More volunteers are needed to help.
Mac II			
Smith/Hardis Correspondence	Smith & Hardis	06 87 62 09	About a review of the Mac II.
Mac Keyboard Mac-101 Keyboard	Bethel, Charles	09 87 71 09	About Mac keyboard Mac 101.
MacMoney			
Home Accounting With MacMoney	Sicard, Charles M.	06 87 68 09	MacMoney, review home accounting program.
Macmoney Part 2: New Ver Info	Sicard, Chuck	09 87 70 09	Follow up article on the software MacMoney.
Macmoney: Part 3: Version 3.0	Sicard, Chuck	12 87 83 09	Macmoney v3.0 reviewed .
Mac Programmers			
Mac programs—Get the Picture?	Platt, Robert C.	01 87 80 09	Exploring pictures in the Mac Programmer's Group's efforts to write a lesson authoring system.
Mac Programming Group News	Shaffer, Bob	01 87 51 09	News of October meeting.
Mac Programmers Group News	Platt, Robert C.	09 87 74 09	Report on meeting of Mac programmers.
View From the Hill	Norling, Rich	07 87 52 09	Apple's Mac Programmer's Workshop [MPW].
Mac Programs			
Developer's View	Lanford, Jim	01 87 78 09	A brief review of graphic programs.
Macintosh "Vaporware" Advisory	Begleiter, Ralph J.	01 87 51 09	The final report about Multiwrite.
Mac SE Memory Upgrade For the SE	Morganstein, David	09 87 72 09	Adding memory to the Mac SE.
Mac Software Musements	Seelig, Fred	10 87 66 09	About various software for the Mac.
Mac Sundry			
Best of the Mac Items from TCS	Baldridge, Bill	01 87 81 09	Sundry Mac.
Best of the Mac Items From TCS	Baldridge, Bill	02 87 64 09	Sundry Mac.
Best of the Mac Items from TCS	Baldridge, Bill	03 87 76 09	Sundry.
Best of the Mac Items From TCS	Baldridge, Bill	04 87 83 09	Sundry Mac.
Best of the Mac Items From TCS	Baldridge, Bill	05 87 76 09	Sundry.
Best of the Mac Items From TCS	Baldridge, Bill	06 87 74 09	Sundry.
Best of the Mac Items From TCS	Baldridge, Bill	07 87 74 09	Sundry.
Best of the Mac Items from TCS	Baldridge, Bill	09 87 76 09	Sundry about the Mac.
Best of the Mac Items from TCS	Baldridge, Bill	12 87 84 09	Sundry on the Mac.
Developer's View	Lanford, Jim	07 87 54 09	SCSI disks; Mac II memory & monitors; 68020 vs 80386; Fndr 5.5&Sys 4.1; used Mac prices.
Developer's View	Lanford, Jim	08 87 74 09	Sundry.
Developer's View...	Lanford, Jim	09 87 75 09	Sundry.
Developer's View	Lanford, Jim	11 87 60 09	24 bit color; HyperCard, big screens.
Macintosh Bits and Bytes	Trusal, Lynn R.	06 87 69 09	Fiber-optic AppleTalk Nerwork; big screen.
Macintosh Bits and Bytes	Trusal, Lynn R.	07 87 65 09	Tree and bullet charts using MORE and MacDraw.
Macintosh Bits and Bytes	Trusal, Lynn R.	11 87 63 09	Multiuser Helix reviewed.

contd.

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•Directory•
1-Radius Specials
2-Productivity SW
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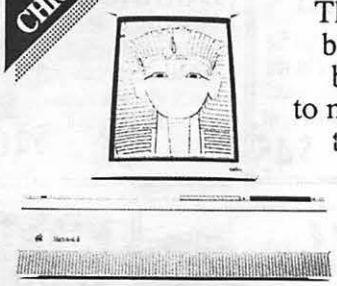

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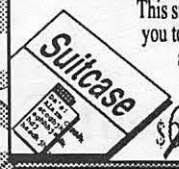

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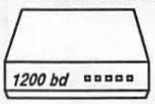

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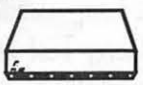

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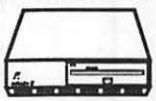

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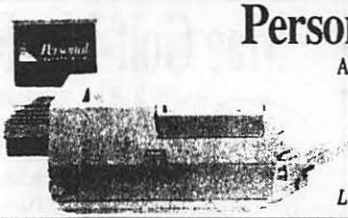

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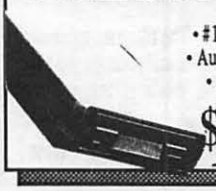

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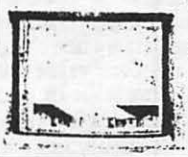

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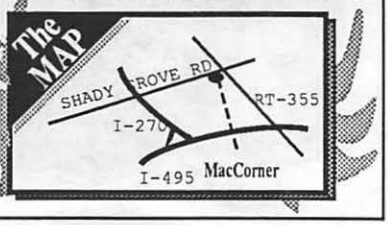

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Mac Q&A	Hardis, Jonathan	01 87 48 09	Answers to questions WAP members have asked.
Mac Q & A	Hardis, Jonathan	03 87 50 09	Sundry.
Mac Q & A	Hardis, Jonathan	04 87 60 09	Sundry
Mac Q & A	Hardis, Jonathan	06 87 59 09	Sundry.
Mac Q & A	Hardis, Jonathan	08 87 48 09	Sundry.
Musements	Seelig, Fred	03 87 62 09	Games and puzzles; PTS Systems; sundry.
Musements	Seelig, Fred	04 87 74 09	Sundry
Musements	Seelig, Fred	05 87 73 09	Sundry.
Musements	Seelig, Fred	08 87 69 09	Sundry.
View From the Hill	Norling, Rich	01 87 66 09	Comments on state of the microcomputer industry.
View From the Hill	Norling, Rich	03 87 60 09	
View From the Hill	Norling, Rich	05 87 71 09	IMB new computers; Apple Developers Conference.
View From the Hill	Norling, Rich	06 87 72 09	Sundry on software.
View From the Hill	Norling, Rich	11 87 66 09	Sundry Mac.
Radius Accelerator Card, Word 3.01 Fixes and Dealer Support	Watts, Barry D.	11 87 71 09	Mac sundry.
Mac WAP PD Disks			
Mac Disketeria Notes	Milrod, Martin	02 87 74 09	70-72: Utilities IX-XI; 73: Word Proc.; 74-80 Fun & Games IX-XV
Mac Disketeria Notes	Weikert, Dave	03 87 84 09	48.3: Fonts V; 81-82: Utilities XII-XIII; 83 Telecom III; 84-85 Fun & Games XVI-XVII
Mac Disketeria Notes	Weikert, Dave	04 87 90 09	51.2: Telecomm II; 57.1: New Members 1986; 59.1: CE Software Sampler; 86: Utilities XIV; 87: Utilities XV; 88: DAs & F Keys VIII; 89: Fun & Games XVIII; 90: Utilities XVI.
Mac Disketeria Notes	Milrod & Weikert	05 87 83 09	80: Fun & Games XV; 91: Fun & Games XI with Phraze Craze Plus; 92: Education II; 93A: Fonts VI; 93B: Fonts VI; 94: Painting IV.
Mac Disketeria News	Milrod & Weikert	06 87 83 09	93A errata; 95 Fun & Games XX; 96 Fun & Games XXI; 97 Fonts VII; 98 DAs IX; 99 Inits I
Mac Disketeria Notes	Milrod & Weikert	07 87 82 09	100: Fonts VIII; 101: Fonts IX; 102: Sounds I; 103: Utilities XVII; 104: Fun & Games XXII.
Mac Disketeria Notes	Milrod, Martin	08 87 83 09	105: Fun & Games XXIII; 106: Fun &Games XXIV; 107: DAs X; 108: Fun&Games XXV; 109 Sounds II
Mac Disketeria News	Milrod & Weikert	09 87 83 09	110: Fonts XI; 111: Sounds III; 112: Utilities XVII; 113: Fonts XII; 114: DAs XI
Mac Disketeria Notes	Milrod & Weikert	10 87 78 09	115: Telecommunication IV; 116: DAs XII; 117: Utils XIX; 118: Paintings V; 119: Utilities XX.
Mac Disketeria Notes	Milrod& Weikert	11 87 79 09	120: Inits II; 121: Utilities XXI; 122: DAs XIII 123: Graphics II; 124: Paintings VI
Mac Disketeria Notes	Milrod & Weikert	12 87 91 09	125: Sounds IV; 126: DAs XIV; 127: Paintings VII; 128: Fun & Games XXVI; 129 Telecom V; Mac DA Series.
MacWorld			
MacWorld Plus: Review Corner	Burger, James M.	05 87 69 09	MacWorld, new products announced.
Review Corner: MacWorld Plus	Burger, James M.	03 87 71 09	MacWorld.
Developer's View	Lanford, Jim	02 87 50 09	About MacWorld Expo.
Magazines A Look At "Mac"azines	Ward, Mike	04 87 82 09	Computer magazines review.
Manuals Quick1 I Need It Fast!	Rohr, Jay	06 87 46 09	Failure to read manuals creates work.
Mapmaking			
I Am Moving To Texas	Goldberg, Jo Ann	02 87 62 09	A continuation of the review of MapMaker 2.0.
Mapmaker: A Review	Goldberg, Jo Ann	01 87 76 09	MapMaker and its extensive set of map files.
Meetings			
Meeting Report - August 22	Payne, Steven	10 87 12 09	Report of August 22, 1987 general meeting.
Appleworld '87-A Spec Report:Pt 1	Warrick, Tom	04 87 54 09	Report on AppleWorld '87.
Appleworld '87-A Spec Report:Pt II	Warrick, Tom	05 87 48 09	AppleWorld meeting.
Developer's View	Lanford, Jim	05 87 72 09	Spring Developers Conference; MMU; Mac II.
Meeting Report	Platt, Robert C.	07 87 8 09	Report on the May meeting.
Meeting Report	Platt, Robert C.	09 87 7 09	Report of the July meeting.
Memory			
Macmemory Upgrades	Trinder, Peter	07 87 72 09	About Max2 and TurboMax.
Thoughts On Size of Human Ram	Shapiro, Phil	07 87 43 09	About storage capability of the human brain.
Microprocessors			
Intel Vs Motorola Microprocessors	Trusal, Lynn R.	05 87 65 09	Mac and IBM CPU chips are compared.
Money Manager Program			
Family Home Money Manager: Pt 9	Mason, Brian G.	02 87 28 09	Another section of Money Manager prog. & listing.

contd.

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Monitors Initron-Rinitron-Trinitron!	Raesly, Leon H.	01 87 29 09	Using Sony color TV monitor with //gs.
Music			
I Love Apple Music: Part 1	Hayman, Gary	06 87 22 09	Simple music with an Apple.
I Love Apple Music: Part 2	Hayman, Gary	07 87 38 09	Program listings for making music with the Apple.
I Love Apple Music: Part 3	Hayman, Gary	08 87 26 09	Part 3 of this series about music on the Apple.
I Love Apple Music: Part 4	Hayman, Gary	09 87 26 09	Writing from sheet music into the computer.
I Love Apple Music: Part 5	Hayman, Gary	10 87 20 09	About music including a program.
I Love Apple Music: Part 6	Hayman, Gary	11 87 18 09	Continutation of series including programs.
Music Sig News	Hobbs, Raymond	01 87 20 09	News of November meeting.
Music Sig News	Hobbs, Raymond	02 87 37 09	Report on the Dec meeting.
Music Sig News	Hobbs, Raymond	09 87 25 09	Report on May meeting.
Music Sig News	Hobbs, Raymond	10 87 18 09	Report on June meeting.
Music Sig News	Hobbs, Raymond	12 87 31 09	About the October meeting of Music Sig.
Musical Apple	Hobbs, Raymond	01 87 18 09	Apple //GS and music synthesis.
Musical Apple	Hobbs, Raymond	03 87 44 09	Music; sequencing.
Musical Apple	Hobbs, Raymond	05 87 34 09	An imaginary music synthesis system.
Musical Apple	Hobbs, Raymond	06 87 20 09	Making a recording on computer.
Musical Apple	Hobbs, Raymond	07 87 34 09	Designing instruments and make recordings.
Musical Apple	Hobbs, Raymond	12 87 28 09	About synthesis (Part 1).
Pascal			
Pascal News	Platt, Robert C.	01 87 74 09	News of November meeting , TML Pascal Up
Pascal News	Platt, Robert C.	02 87 40 09	Sundry points.
Pascal News	Platt, Robert C.	03 87 38 09	Pascal news.
Pascal News	Platt, Robert C.	04 87 37 09	PIG lib.; handles; USUS Pecan news; MPW V2.0.
Pascal News	Platt, Robert C.	05 87 26 09	Sundry news of PIG.
Pascal News	Platt, Robert C.	06 87 25 09	Pascal on the //gs; Modula-2.
Pascal News	Platt, Robert C.	07 87 58 09	Report on May PIG meeting.
Pascal News	Platt, Robert C.	08 87 34 09	How to set up a RAM disk under Apple Pascal 1.3.
Pascal News	Platt, Robert C.	09 87 49 09	Recent technical news report.
Pascal News	Platt, Robert C.	11 87 48 09	Sundry Pascal.
Pascal News	Platt, Robert C.	12 87 83 09	Report October meeting of the Pascal SIG.
Program Interface SIG (PI-SIG)			
PI-SIG News	Golden, Robert	01 87 17 09	News of meeting of Dec 1 86.
PI-SIG News	Golden, Robert	02 87 27 09	Meeting of the Pi Sig on Jan 5.
PI-SIG News	Golden, Robert	04 87 16 09	News of Pi Sig meeting.
PI-SIG News	Urban, Walter	05 87 26 09	Apple //gs information.
PI-SIG News	Golden, Robert	06 87 19 09	Pi Sig meeting report.
PI-SIG News	Golden, Robert	09 87 49 09	Report of recent meeting.
PI-SIG News	Golden, Robert	10 87 18 09	Report on Sept and Aug meetings.
PI-SIG News	Golden, Robert	11 87 30 09	October meeting report.
PI-SIG News	Golden, Robert	12 87 25 09	Report on the Program Interface meeting.
Print Shop			
Print Shop For the //gs	Ward, Chuck	12 87 22 09	Apple //gs version of Print Shop.
Hi-Res to Print Shop	Brown, Charlie	01 87 32 09	Hi-res screen to Print Shop graphics.
Printers			
Epson Printers Never Grow Old	Zittel, Randy	01 87 39 09	Changing Epson printer to near letter quality.
Faster Printing With Imagewriter II	Boren, John J.	05 87 56 09	Printer speed of ImageWriter II.
Imagewriter Print-Fading Problem Fix	Byrd, Richard J.	05 87 56 09	Imagewriter II problem solved.
Laser Printing and Mac Typesetting	Trusal, Lynn R.	11 87 52 09	Macintosh computer and the LaserWriter.
Solutiions to Gemini 10 Problems	Bishop, Ken	01 87 13 09	Gemini 10 printer solution to use with AppleWorks.
ProDOS ProDOS Bug Squashed	Vier, Tom	01 87 30 09	Correction of a bug in ProDOS.
Programs			
Beagle Compiler STR$ Func. Patch	Morton, John R.	02 87 27 09	
Views and Reviews	Hobbs, Raymond	01 87 34 09	Graph Master.
Playback Program Documentation	Seaquest, Steve	07 87 62 09	Computer Aided Instruction (CAI) lesson.
RAM			
Ramup: A Review	Gatewood, Tom	03 87 20 09	RAM, RamDisk, Ramup.
Letter to the Editor	Carpenter, Chuck	08 87 46 09	AE replies to a letter to the Editor.
Ramup: A Review	Ward, Chuck	10 87 30 09	Ramup reviewed for use on a RAM disk.
Reading Reading Fun: A New Disk	Shapiro, Phil	11 87 22 09	A disk with reading material - Shareware.
Softswitch			
Button-Down Guide to the Apple	Hobbs, Ray	05 87 24 09	Softswitch
Software			
Associate Producer (Apple II)	Oringel, Bob	10 87 29 09	For use in producing TV and movies.
Developer's View	Hole, Bill	12 87 82 09	Programmers Online Companion reviewed.
Documax: A Review	Doherty, Dave	11 87 23 09	Text-file utility - searches, allows cutting & pasting.

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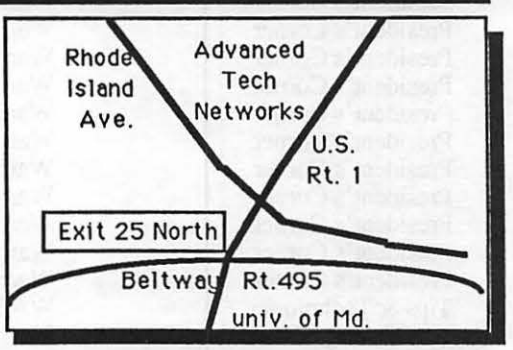

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Elegant Desk Accessories	Condit, David E.	08 87 81 09	SmartScrap & The Clipper reviewed.
Mindwrite Replies	Raab, Susan	06 87 67 09	Response to a review of MindWrite.
New Exhibit and Its Ribbon-Cutters	Romaine, Rusty	09 87 40 09	Report about a new exhibit at The National Archives which features a IIgs and Scholastic Software.
Patentability of Software	Hasson, Joseph A.	06 87 54 09	Software patentability.
Printrix For the Apple II: A Review	Oringel, Bob	12 87 24 09	Printrix for the Apple II is reviewed.
Ramup 3.0 (Apple II): A Review	Oringel, Bob	12 87 25 09	Ramup 3.0 for the Apple II is reviewed.
Sensible Grammar (Apple II): A Rev	Oringel, Bob	12 87 24 09	Sensible Grammar for the Apple II is reviewed.
Shalom Davka: Judaic Softwre Rev.	Spintman, Judi	09 87 73 09	Judaic software reviewed.
Softviews	Morganstein, David	01 87 68 09	Reviews of Tops and dMac.
Softviews	Morganstein, David	02 87 56 09	LaserServe and LaserSpool. Also MacInUse.
Softviews	Morganstein, David	03 87 74 09	DiskTop; Tax Pro 1987.
Softviews	Morganstein, David	08 87 76 09	APL*PLUS review.
Softviews	Morganstein, David	09 87 62 09	Reviews of the software products: InBox and McMax.
Softviews	Morganstein, David	10 87 56 09	InBox and Passage reviewed.
Softviews	Morganstein, David	12 87 68 09	Pict-O-Graph and Quick Keys reviewed.
Software Industry:Econ. Struc.: Pt 1	Hasson, Joseph A.	09 87 48 09	Report on the software industry.
Software Industry:Econ. Struc.: Pt 2	Hasson, Joseph A.	11 87 39 09	Economic review of software industry.
Using Ramstart 2.0+ with LaserWriter	Reese, Jim	08 87 80 09	Ramstart 2.0+ review.
View and Reviews	Hobbs, Raymond	02 87 44 09	Filemaker Plus, 12 computer magazines.
Views and Reviews	Hobbs, Raymond	10 87 38 09	Softswitch and Performer reviewed.
Views and Reviews	Hobbs, Raymond	12 87 44 09	AST-Vision plus and JamBox 4+ are reviewed.
Don't Upgrade To Finder 5.5/System 4.1... Until You Read This First	Warrick, Tom	07 87 56 09	About new Finder v5.5 and System v4.1.
Spelling			
Webster's New World Spelling Checker	Bishop, Ken	04 87 30 09	Webster's New World is reviewed.
Stock SIG			
Stock SIG News	Thompson, A. D.	01 87 14 09	Mutual funds, market timing trends, portfolio.
Stock SIG News	Thompson, A. D.	02 87 37 09	
Stock SIG News	Thompson, A. D.	03 87 16 09	Mutual Fund Report; timing trends; "Filter Off."
Stock SIG News	Thompson, A. D.	04 87 18 09	Report on meeting of Stock Sig.
Stock SIG News	Thompson, A. D.	05 87 22 09	Mutual funds; forecasting.
Stock SIG News	Thompson, A. D.	06 87 39 09	Report on April meeting.
Stock SIG News	Thompson, A. D.	07 87 47 09	Report on the May meeting.
Stock SIG News	Thompson, A. D.	08 87 35 09	Report on the June meeting of Stock Sig.
Stock SIG News	Thompson, A. D.	09 87 38 09	Report on July Stock Sig meeting.
Stock SIG News	Thompson, A. D.	11 87 55 09	Report of the September meeting.
Stock SIG News	Thompson, A. D.	12 87 46 09	Report on the Oct 87 meeting of StockSig.
Sundry			
Cumber's Corner	Cumber Jr., J. F.	06 87 40 09	Sundry about software support for the Mac.
Editorial		01 87 03 09	
Editorial		02 87 03 09	MacWorld Expo.
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Editorial		05 87 03 09	User groups.
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President's Corner	Warrick, Tom	01 87 04 09	Sundry.
President's Corner	Warrick, Tom	02 87 04 09	
President's Corner	Warrick, Tom	03 87 04 09	New Directors-at-Large; FedSig; USUHS.
President's Corner	Warrick, Tom	04 87 04 09	Sundry.
President's Corner	Warrick, Tom	05 87 04 09	Finder 5.4 & Sys 4.0; Mailbag; Microsoft Word 3.0
President's Corner	Warrick, Tom	06 87 04 09	Sundry.
President's Corner	Warrick, Tom	07 87 04 09	Sundry.
President's Corner	Warrick, Tom	08 87 04 09	Sundry.
President's Corner	Warrick, Tom	09 87 04 09	Sundry.
President's Corner	Warrick, Tom	10 87 04 09	Sundry.
President's Corner	Warrick, Tom	11 87 04 09	Sundry.
President's Corner	Warrick, Tom	12 87 04 09	Sundry.
Tips & Techniques	WAP Membership	08 87 42 09	Sundry.
System/Finder Preventing Bombs	Morganstein, David	08 87 78 09	Prevent bombing using the new System/Finder.
Telecommunications			
Auto Logon ASCII Express Macro	Rowell, Richard	06 87 33 09	Automatic logon to TCS on ASCII Express Pro.

contd.

Subject/Article Title	Author	Mo.Yr.Pg.V	Keywords
Growing TCS, The	Raesly, Lee	06 87 32 09	TCS adds a second line and some new boards.
Lists-Lists-Lists	Raesly, Leon H.	01 87 26 09	WAP TCS and lists in library.
Take the Plunge!	Raesly, Leon H.	10 87 32 09	Getting into telecommunications.
Telecom Sig News	Harvey, Dave	03 87 14 09	Report on the Jan 87 meeting.
Telecom Sig News	Harvey Dave	09 87 42 09	Report on the Telecom Sig July meeting.
Who Me, A Sysop?	Raesly, Leon H.	03 87 39 09	Sysoping; TCS; telecommunications.
Xfer.Help	Raesly, Leon H.	05 87 40 09	Uploads and Downloads on the WAP TCS.
Tests Ultimate Apple Trivia Test	Woz, Ellen Tom	06 87 28 09	Trivia on the Apple.
Trademarks and Computers	Kaye, Harvey	07 87 46 09	Trademarks used to identify software products.
Tutorials			
Fall WAP Tutorials	Platt, Robert C.	09 87 82 09	Listings of tutorials to be given in the Fall.
WAP Spring Tutorials	Platt, Robert C.	02 87 73 09	A schedule of WAP tutorials for this spring.
WAP Tutorials	Platt, Robert C.	12 87 90 09	About the WAP tutorials.
Users Power User Primer	Seelig, Fred	05 87 58 09	Power users.
Volunteers Volunteer Profiles	Combes, Peter	12 87 46 09	Weikert, David and Schwartz, Dana, profiles.
Word Processing			
Guide To Formulas In Word 3.0	Silverstone, H. J.	08 87 61 09	Formula use with Word 3.0 program.
Magic Slate: A Review	Kreisberg, David	02 87 17 09	Review of Magic Slate for adutls & children.
Microsoft Word's Newest: V3.0	Walker, Bonnie L.	04 87 48 09	Word word processor V3.0 reviewed.
MindWrite: A Review	Seelig, Fred	04 87 46 09	MindWrite word processor reviewed.
Word Perfect 1.1: A Review	Berman, Howard	08 87 25 09	Review of Word Perfect v1.1.
Word 3.0 Command Summary	Warrick, Tom	08 87 78 09	Command summary for Word 3.0.
WPL MultiPrint For AppleWriter	Hayman, Gary	03 87 22 09	AppleWriter; word processor; multiple copies.

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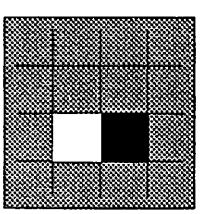

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WAPACROSTIC
by Dana J. Schwartz

Using the Definitions, fill in Words. Transfer each letter into the corresponding square of the grid. The resulting quotation will read across. The first letters of the Words column spell out the Author's name and the Title of the work, reading down.

		1 G	■	2 T	3 L	4 N	5 U	6 M	7 U	■	8 L	9 N	10 I	11 K	12 O	13 W	14 U	15 P	16 J							
■	17 L	18 R	19 B	20 J	■	21 K	22 E	23 I	24 P	25 O	■	26 W	27 F	28 X	29 S	■	30 U	31 B	32 X	■	33 G					
34 F	35 R	■	36 J	37 G	38 U	39 P	40 O	41 E	■	42 W	43 M	44 G	■	45 A	46 H	47 P	48 M	■	49 R	50 E	51 F					
52 G	■	53 U	54 T	■	55 A	56 X	■	57 X	58 C	59 J	■	60 S	61 N	62 V	63 A	64 D	65 R	66 I	■	67 C	68 K					
69 T	70 M	71 Q	72 H	■	73 S	74 C	75 F	76 P	77 N	78 M	79 B	80 G	■	81 Q	82 J	83 B	■	84 Q	85 G	86 H	■					
87 Q	88 N	89 W	■	90 L	91 E	92 S	93 B	94 M	95 R	96 N	97 Q	■	98 H	99 V	■	100I	101J	■	102R	103C	104M					
105X	■	106T	107R	108P	■	109H	110I	111K	112R	113S	■	114R	115H	116W	117B	118Q	■	119N	120U	121S	122R					
123W	124T	125D	126X	■	127J	128M	129E	■	130T	131H	132W	133K	134E	135D	136S	■	137H	138W	139C	140R	141X					
■	142B	143X	144W	■	145R	146K	147B	148T	149D	■	150L	151H	■	152X	153U	■	154I	155G	156L	157C	■					
	158E	159T	160M	161D	■	162R	163G	164P	165O	166X	■	167T	168M	169I	■	170O	171S	172C	173K	■						

Definitions	Words
A. Hostile Frame of Mind	140 55 102 63 145 45 18
B. Need to Eat	19 93 147 79 142 31 83 117
C. "Wouldn't it be _"	172 139 67 103 74 58 157
D. Small Tax	125 64 135 161 149
E. Spoke Pompously	158 50 91 41 22 134 129
F. Formed from Alegheny & Monongahela	75 34 27 51
G. Noticeably	80 37 163 1 155 52 33 85 44
H. Upper Body Garment Portion	137 115 46 72 98 109 131 151 86
I. Conducted Oneself	100 66 110 10 154 23 169
J. Imitate	101 36 82 59 127 20 16
K. Snake, for one	11 68 146 21 133 173 111
L. Without Charge	8 156 3 17 150 90
M. Grace Hopper's Favorite Time	43 104 168 94 78 48 160 6 128 70
N. Ask About (var)	61 4 119 9 77 88 96
O. Make Cloth	170 25 12 165 40
P. Removed the Cream	24 39 164 76 47 15 108
Q. On a Ship	87 81 71 84 118 97
R. Repugnance	107 162 114 65 112 122 35 49 95
S. In a Stylish Manner	60 121 92 73 171 113 29 136
T. Boat Shaped	69 167 130 124 2 159 148 106 54
U. Baseball Events	53 120 7 153
V. Briers	14 30 99 38 5 62
W. Surround	89 13 26 132 116 42 123 138 144
X. Furtively	141 56 166 57 105 32 143 152 28 126

ANSWERS TO LAST MONTH'S WAP ACROSTIC

We regret to announce that Mike Hartman is retiring as Chairman, and a volunteer is needed to lead that group. Given the Pascal Interest Group's proud history as WAP's longest running SIG, it would be a shame if no one volunteered to fill this vacuum.

Author: Robert C. Platt
Work: Head PIG Needed
Source: WAP Journal—Nov 87—p48

Words

A. Reconfiguration	G. Cannon	N. Earthenware	T. Nectarous
B. Ottoman	H. Paralysis	O. Asphaltum	U. Entrust
C. Bereaved	I. Lithesome	P. Deceased	V. Evolution
D. Ewing	J. Amuse	Q. Pushdown	W. Detouring
E. Rainspout	K. Thrills	R. Inhaled	X. Eggnog
F. Talkative	L. Totters	S. Gifts	Y. Divine
	M. Harrumphing		

AV-SIG MEETING—Dec. 2

by Jay Williams

Ten persons met for the second meeting of AV-SIG. This was a little fewer than the first meeting, possibly due to the dPubSig meeting held at the same time. Nevertheless, some interesting dialog took place and demonstrations of Adobe Illustrator and Animation (VideoWorks II) were presented. Besides doing an illustration on Illustrator, some experimentation was done with a video camera and MacVision to create bizarre images of the volunteer attendees. More was added to the SIG's "Gallery book" and the beginning of an animation project which was started. The next meeting will be held at AV-SIG member Nancy Seferian's home at 6:30 pm, Thursday, Jan. 7th. For more information call 728-1009 or 333-5817.

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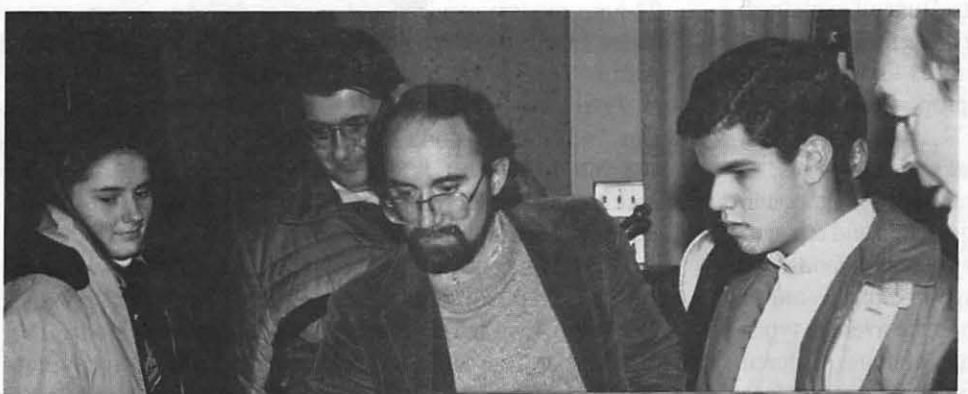
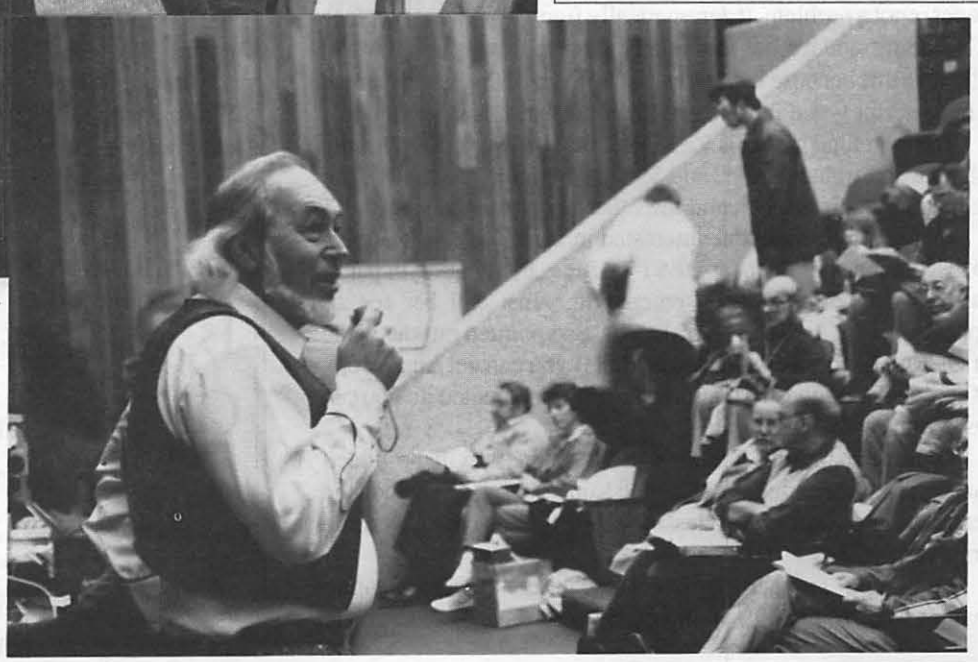


Dirk Bakker Demonstrating Word Perfect.



Lee Raesly conducting the Apple][portion of the main meeting.

Photos by Peter Combes

DESKTOP PUBLISHING SIG MEETING—Dec. 2

by Cynthia Yockey

While optical character recognition (OCR) has been available for years in offices with NMCs (non-Mac computers), companies making this equipment have been unusually dim in recognizing the potential of the desktop publishing boom for their product. So it is only recently that reliable OCR products have become available to Mac-using firms that need to key in mountains of typewritten contracts or manuscripts without the labor and time costs of doing it manually. One of these new OCR/digital scanner products was demonstrated at December's meeting by representatives from DEST and MacCorner, along with Letraset's *ImageStudio*, which permits editing of any halftone or grey scale file.

DEST's PC Scan 2000 for the Mac

"We didn't anticipate the response from Mac users," said DEST's Renee Bunnell, "but we've been inundated with orders." DEST has two models of scanner for the Mac, one edgefed (the paper is drawn into the machine) and one flat-bed. Both can scan graphics or do OCR, which is a function of the software. A new feature of the graphics capability is the ability to scan at 300 dpi with 256 shades of grey scale information, which a handout showed to be of much higher quality than a 300 dpi scanned halftone.

OCR technology does have some limits, Bunnell explained: the DEST product can recognize over 25 *typewritten* typefaces, including dot matrix and some laser typefaces like Times, but cannot read *typeset* print. It can read some proportionally spaced typefaces, but not others. To be read in OCR, type must be 10 or 12 pitch. OCR will not read logos, marks on the pages, or signatures. Characters that it can't read are shown as a pound sign, but these can be easily found by using "search and replace" or a spellchecker. OCR cannot read copy printed in landscape mode. But it can read and "key in" a page in either Word or MacWrite format in about 25 seconds, while the average typist takes 10 minutes, and it reads numbers and columns. Colored paper is not a problem, it automatically figures out what typeface it's reading, and it reads more typefaces than it says it will (note: I believe this because I got an earlier version of this set-up to read a manuscript typed in italics, which it doesn't claim it can do).

The edgefeed model is $2,195 for the hardware, $495 for the Macintosh Publish Pac™, and $95 for the interface cable. The flatbed model is $2,395, and the other prices are the same.

Bunnell invited anyone interested in DEST's OCR/scanners to test out the equipment at DEST's offices by bringing in pages they would normally need entered in. Just call her for an appointment at (703) 534-0501. She also pointed out the value of OCR in file conversion, noting that if you can get a hard copy of something, it doesn't matter what program created it: you can get it onto your Mac with OCR.

Future capabilities for the DEST scanners will be added through software upgrades, Bunnell said. These will include the recognition of more typestyles, including typeset characters, and graphics features.

The DEST scanner's graphics capabilities include scaling images from 13 to 200% in increments of 1%, and the ability to save files in virtually every graphics file format ("as new formats come out, DEST will support them"). The equipment is compatible with the MacPlus, Mac SE, and Mac II, but reading and storing 256 levels of grey will require two to four megs of RAM, plus at least three megs of storage.

ImageStudio

Letraset's new *ImageStudio* gives users extensive editing power over scanned photos, permitting changes in contrast, posterization, bleeding colors with a waterdrop tool, blurring images with a finger tool, and even offers a charcoal tool that works like a stick of charcoal. In addition, these tools can be customized. Other attractive tools include filter effects like a star filter that can be rotated, and a soft-focus filter.

ImageStudio retails for $495.

Making Slides on the Mac

Julie Dargas researched Mac slidemaking services in the D.C. area and found two programs available: *Carousel Color Slide Software*, with lots of features but no local production outlets; and *ImageMaker MacDriver*, with limited features and three local production outlets.

Carousel retails for $249.00 (30-day trial), has 2,000 or 4,000 line resolution, gradient color (boxes, text and background), with 24-hour modem services and express delivery for six or more slides from 20/20 Data Systems, Inc., 7000 Cameron Road, Austin, Texas 78752, phone 512-454-2508.

ImageMaker retails for $149.00 from Presentation Technologies, 743 North Pastoria Avenue, Sunnyvale, CA 94086, phone 408-749-1959. It offers 8,000 line resolution, limited colors (six background and 22 foreground), and limited fonts. Local processing is available as follows:

- Laser Images, 1144 Eighteenth Street, Suite 200, Washington, D.C. 20036, phone (202) 293-7414 , $10.00 per slide, $12.00 per hour to rent machine and software, no modem.
- Master Copy, Inc., 8601 Westwood Center Drive, Vienna, VA 22180, phone (703) 893-7878, $7.50 per slide (less in quantity), two-day turnaround, no modem.
- Imagination Center, 1605 St. Paul Street, Baltimore, MD 21202, phone (301) 385-3000, $7.00 per slide, $30 per hour to rent machine and software, no modem.

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A PRINTER FOR THE REST...AH,...MORE OF US

A Review of the General Computer Personal Laserprinter

by Robb Wolov

Laser printers are wonderful! They are wonderful in the same sense that car devotees find six figure European grand touring machines wonderful. But, while the car fan may find it hard to justify, let alone utilize a high powered GT in this land of the "double nickel", anyone who is at all serious about the written word can delight in what a laser printer does for the appearance of his text. What both groups have in common, unfortunately, is that it requires a big ticket to join each respective club. Like the driver of a Japanese "econobox" who lusts in his heart for a Lotus Esprit or Ferrari Testa Rosa, I too lusted for my own laser printer (sometimes while driving my econobox!). Having recently come over from the IBM world, business correspondence would not hack it on my 9 pin Epson. I emulated formed type with a software program called FanciWord which simulates the performance of a 24+ pin printer by passing over each line up to 13 times! I did not expect the Imagewriter II to fare much better. In addition, I make lecture slides from time to time by photographing Kodalith reversal slides from text copied with a manual, fixed type typewriter after previously designing and laying out the slides on my computer. My own laserprinter would let me do this in one step, at anytime. The soon to be released Imagewriter LQ would give me acceptable correspondence, having seen 24 pin dot matrix output from other printers (the LQ is 27 pin). However, I didn't feel any matrix printer could stand up to the scrutiny of a close-up photo and projection of its output. But, my dot-matrix budget could not accommodate an Apple LaserWriter or any other laser for that matter, until the General Computer Personal Laserprinter.

Fact: Postscript laser printers are pricey . I call $3800 to $5000 pricey (damn expensive if you ask me!). Fact: Postscript printers are anticipated to remain expensive for the foreseeable future. Fact: there is a lot of specialized hardware in a Postscript printer which accounts for some of this cost. A LaserWriter has its own CPU (central processing unit) with additional RAM (random access memory) essentially a second computer hung onto a glorified copy machine. While the ability to use such a device in an Appletalk network, to be shared by several people in an office setting, helps to offset the expense of such a unit, it is difficult for an individual to justify such an expense in a nonbusiness setting. If one is willing to forgo some capabilities, much of this additional hardware can be removed, drastically lowering the cost. This is precisely the design philosophy behind the General Computer Personal Laser printer (PLP). By turning over the page layout functions normally handled by the printer's CPU to the user's Macintosh, the expense of this internal second computer is eliminated. Additionally, the PLP is designed to use the Mac's internal Quickdraw routines rather than the Postscript page description language, thus saving royalty expenses normally passed on to the user. To fully appreciate the PLP and understand the idiosyncrasies of a Quickdraw device, let's look at laser printers in general.

Briefly, a laser printer functions much like a computer that has been designed to draw to a copier mechanism rather then the conventional cathode ray tube screen. The page that you have created with your word processor or drawing program is sent to the printer via an Appletalk line in the case of the LaserWriter or the SCSI port in the case of the PLP. This by the way is the first difference between these two beasts. The PLP via the SCSI port is by definition a one user printer. No networking through the SCSI. The LaserWriter, via the slower Appletalk network is designed to serially store tasks from several user's, in essence to "batch process" jobs, freeing the individual user's computer. The PLP owner must wait while his Mac controls the printer.

In the case of Postscript based printers, the page is "translated" using Postscript, a graphics computer language to generate a new page using prestored or downloaded fonts (families of similarly shaped letters and characters) and to do the calculations to generate the geometric shapes comprising the graphics found in the original. Once done, a semi-conductor laser precisely "draws" this page onto an electrically charged drum, neutralizing the charge correspondingly to the image. A dry ink powder—the toner, also electrically charged—is attracted to these selected portions of the drum and then transferred to a sheet of paper. The transferred toner image is then "set" by passing the paper between heated rollers, fusing the ink to the paper.

It is the use of a second, internal computer, plus the Postscript language to control this process, which General Computer has eliminated in the PLP. GCC uses the Quickdraw routines stored within the Mac's ROM which the Mac uses to draw its own screen. This points out a beneficial difference in favor of the PLP. Since the user's computer runs the show, any upgrade of that computer (e.g. an accelerator card, more ram, etc.) is reflected by faster printing by the PLP. Obviously such upgrades improve the running of all software, not just print functions. By substituting Quickdraw for Postscript, General Computer has eliminated what is considered by some to be one major, though not sole cause, for the price disparity between Postscript and non-Postscript compatible devices.

As an aside, Adobe Systems, the owner of Postscript, is aware and has apparently felt pressured by this bad press. John E. Warnock, the president of Adobe, felt it necessary to go public recently with their royalty pricing structure. Usually charging from $100,000 to $250,000 as an advance against future royalties, Adobe begins per-unit royalties at $200. This is estimated to actually be closer to $600 per printer. There is a move afoot in the industry to "clone" Postscript to circumvent some of this expense.

What does this lack of Postscript mean for the PLP owner? It depends on your intended use. If you are heavily into graphics, without Postscript available such Postscript intensive programs as Adobe Illustrator will give results hardly different from MacPaint or SuperPaint. Gray scales come out as paint patterns rather than the nice smooth scales we have come to expect as professional caliber output, since the LaserWriter and its worka-

contd.

likes depend on Postscript for their software special effects. The results of such programs as Cricket Draw and aforementioned Illustrator can be downright crude. Quickdraw is argued by some to be every bit as powerful as Postscript, but until now there have been no print devices to use it and therefore no software to control it. Aldus Pagemaker (the most recent 2.0a version) can indeed use Quickdraw and takes control of grays to give results equivalent to any Postscript device. But until there are more PLP's out there, there is little incentive for software developers to write for Quickdraw lasers. Taxan has just recently announced their plans to market a Quickdraw laser printer in the first quarter of 1988. The much rumored "Solo", an Apple PLP equivalent is anticipated as a competitor by the folks at General Computer by this January or February. With such products plus the imminent delivery of the Imagewriter LQ, there may be enough Quickdraw printers to make it worth the effort to developers. For basic graphs and simple line drawings, it is a dead heat. A side-by-side comparison I recently conducted between the PLP and Apple Laserwriter showed the qualitative results to be effectively equivalent.

In pure text handling the results of the PLP are exemplary. Both printers use geometrically defined fonts called outline fonts which can be scaled up and down without loss of quality. Instead of the Adobe family of fonts, General Computer uses outline fonts by Bitstream. Times, Helvetica, Courier, Symbol, Zapf Calligraphic and Swiss Narrow are supplied with the PLP. For another $300, General Computer makes a "Plus Kit" available with 7 more font families which brings the PLP in line with the LaserWriter Plus, plus Cooper Black and Futura Extra Black, headline fonts not found as Postscript equivalents. Print quality, compared to the Apple printer is equivalent. Text and line drawings are razor sharp, befitting a 300 by 300 DPI printer. The weight of the fonts are not all equivalent to their Postscript counterparts. Times is just a shade less heavy than on the Apple, giving, as Steve Roth of Personal Publishing found, an "airier feel." I agree. The PLP Print Manager allows for switchable kerning (the tucking together of certain letter combinations to improve printed appearance).

Pleasantly surprising, blacks are blacker on the PLP due to improvements in the second generation Ricoh engine used. This is also a "black write" device like the Canon CX engine of the current LaserWriters. The laser draws those areas to remain black on the final image.

Construction of the PLP is sound and solid for a personal, one user, printer, but not quite "industrial strength" as is required of the Apple product in a heavy use network environment. It has been designed so routine service can be performed by the user, with "consumable hardware" priced accordingly. A replacement toner cartridge is less than $30 compared to the Canon equivalent listing for over $100 (however the manual leads the user to expect about 1500 copies per cartridge verses the 3000 for the Apple, but these numbers are variable depending on the percentage of black in the print).

One of the darker secrets of laser printers, is that while all are designed to print beautiful text on regular sheet stock, little is mentioned of the inevitable envelope that must be printed to mail it out! The Apple LaserWriter uses a robust paper cassette that requires envelopes be manually fed individually. There are no paper guides to prevent skewing if the user is a bit careless in loading. Users of the LaserWriter have informed me that they have experienced a fair number of paper jams once the printer swallows the envelope. The PLP in some ways offers a better solution than its more expensive counterpart. It uses a simpler, cheaper loading tray but with self-centering paper guides which allow stacking of envelopes. I have experienced no paper jams to date.

There is one catch, but with a simple software workaround. Regardless of whether you are printing sheets or envelopes the software for the PLP treats all tasks as sheets (Apple's drivers are no better). Page setup gives a choice of US Letter, US Legal, European A4 and Japanese B5 standard sizes. When you physically adjust the paper tray to load envelopes, they are sent through the middle of the loading track. However, the software is written to print at the top of what would be the sheet size chosen. It misses the envelope! A simple solution is to create a new word processor document with your mailing and return addresses spaced appropriately, but with a 3-4" margin from the top. This will get the print to the paper. There is no clear explanation on the technique of printing envelopes in the owners manual, and it is not readily apparent to the first time user. Frankly I hope that future versions of the PLP set-up driver and print manager software allow for more direct formatting of envelopes. General Computer is still at version 1.0 with a new driver and print manager expected by the first of the year or early 1988. Unfortunately, Lofty Becker's wonderful DA "Envelope" is not compatible with the PLP's software formating.

All software designed to work with Quickdraw routines have been found to work with the PLP. The drivers for the printer even allows for its own smoothing algorithms to clean up the "jaggies" in bit-mapped mode. The only exception to date has been myDiskLabler v. 2.6.2 which gives grossly distorted results, perhaps because it was designed for the mechanical characteristics of the Imagewriter. The PLP software appears to work with the new system software (e.g. Finder 6.0; System 4.2) but you do not want to run it under Multifinder or with ramdisks or caches which by their nature lock up ram and deny its use to the printer.

Do I recommend the PLP? If you are a single user, with text heavy applications, not involved in elaborate Postscript dependent graphics then you are the user for which this product was targeted. This last qualification, Postscript limitations, may be amended in the future as more software, like Pagemaker, comes to market that utilizes Quickdraw for special effects. Of course, as Quickdraw evolves, as is expected in the coming years, and is reflected in ROM upgrades, improvements will be immediately available to the PLP user.

At a list price of $2600, the PLP is not quite a laser for the rest of us, but will get more of us into the game. The PLP is currently about $2000 less then its Postscript counterparts, and is being strongly discounted. If "Solo" does come to market, the folks at GCC have told me that they are prepared to go to price war with Apple. Either way, users will benefit with cheaper, more affordable hardware and the initiative for more software to be written to take advantage of this new flock of printers.

N.B.

As you may have read since this writing (11/30/87) Apple's "Solo" printer is out from under wraps and has been "pre-

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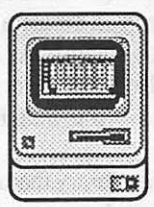

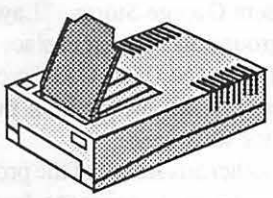

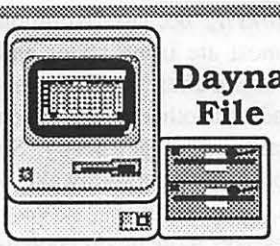

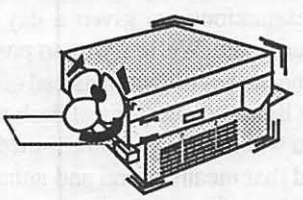

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MAC MEETING REPORT—Nov. 28

by Cynthia Yockey

Demonstrations of programs for various aspects of the visual arts dominated November's meeting: *VideoWorks II*, an update of the animation program *VideoWorks*, with many added features and without costing many additional dollars; *"Draw it again, Sam,"* a MacDraw-like program that has layers so you can vary chosen elements and not have to re-draw everything else; and *MiniCAD*, a computer-assisted-design program.

The other big news is that WAP is now licensed to distribute Multi-Finder, which it is selling in a four-disk set for $20 without documentation. You can also get it free from dealers if you bring in your own disks, or on bulletin boards. But by forking out $49.00 (less at dealers with WAP discounts) you can get Official Disks *and* documentation. This is Apple's new way of distributing System updates and ensuring their purity without making the price of the subscription too high for the general market.

Business

More volunteers are needed to be listed as experts for the Hotline. Call the office if you have knowledge of one or more applications that you would like to share with someone who has been stumped, stymied and confounded by its intricacies. This is your chance to be a Good Samaritan without leaving the comfort of your home—the comfort of a bath, maybe, but not the comfort of your home.

Also, be aware that the meeting location may change in January. The choices are to stay at USUHS, or switch to Georgetown University Medical School or the University of the District of Columbia. Call or write to make your preference known. As you might guess, the majority who showed up at USUHS for this meeting preferred that location.

If you own Danny Goodman's HyperCard book

An errata sheet is available through WAP.

If you don't own *The Complete HyperCard Handbook*, it is still available for $17.95 plus tax ($18.85) at the WAP office for a limited time (until supplies run out and they stop ordering more). No mail orders, please. The book retails at $29.95.

VideoWorks II

"Apple is convinced desktop presentations will be bigger than desktop publishing," said Marc Canter, one of the founders of MacroMind and maven of *VideoWorks II*, "because 20 million presentations are given a day and most are using slides and overheads. We're trying to push the world ahead and have this done on the computer instead of offloading to other media. When the lights go out (for a slideshow), someone will get sleepy. So you want to use your multi-media tools to keep people awake—and that means sound and animation."

According to Canter, presentations have more market potential than desktop publishing because they are used as part of the sales process in competition with someone else also doing a presentation to get the same money. It's not hard to see the equation: better presentation = sale. Professional applications for *VideoWorks II* include training, product demonstration, point-of-sale advertising, and any time you want to give your clients a moving message—which is what animation is all about.

VideoWorks II is both a black and white and color animation program that includes a text editor and a paint program with new tools like Air Brush, Lasso, Flip Vertical, Flop Horizontal, Registration Points, Distortion, Skew, Rotate and Perspective. Because it comes with clip art and clip animation, Canter says you can get results from the program without being an artist. It is also possible to print any frame of your animation.

Canter's presentation was a blizzard of products in varying stages of availability from Now, to Stable Pre-release Available Now, to Real Soon Now. *VideoWorks II* is available now (retail $195, upgrades $107.50). Canter said he is keeping the price down so more people will be able to buy the product and that he will soon bundle a digitizer with *VideoWorks II* so people can create their own sounds for their presentations. These sounds, he added, will also be usable in *HyperCard.*

The stable pre-release product is *VideoWorks Interactive*, scheduled for release in March 1988 and retailing for $495. It has all the animation features of *VideoWorks II*, plus a procedural language that lets you create interactive applications, simulations or prototypes. "Buttons," which can be any designated area of the screen, will activate a jump to another document or start a macro or test routine when clicked. A MacroMind flyer says these "buttons" can be moving artwork or animation instead of static artwork.

The products available Real Soon Now include *Clip Animation*, *ClipSounds*, *ClipCharts* (animated ones you can adapt for your business), *VideoWorks II Compiler*, and *Videoworks II HyperCard Driver* with sample stacks and movies, plus three sets of movies (one black and white, two in color).

"Draw it again, Sam..."

Although Bogart failed as a successful image for Mac Underground, an on-line publishing and sales venture which my roommate always thought was really named Mac Underworld because of the sleazy logo, Aba Software Inc. is using him and a take-off on the line he never said in *Casablanca* for its new drawing program. They are also offering a 25% discount *on each package of the program ordered* to any member of a computer users' group who orders it before December 31 by calling them at 1-800-234-0320.

"We're the first product with layering," said Aba Vice President George Storm. "Layering lets you create a complex background and leave it in place while you create other shapes on top of it." (NOTE: CAD products also have layering and I assume that he means he's the first to bring that feature to graphics software.)

Another advantage of the program is its library feature, which gives users ready access to frequently used art. An Aba flyer claims you can have up to 500 objects per library and an unlimited number of libraries.

An example of one of *Sam's* uses, according to Storm, is houseplans with the floorplan in one layer, the electrical plan in another, and the plumbing plan in a third. Layers can be printed individually, simultaneously, in combinations, with registration marks, and in combinations of colors in the same layer.

One useful aspect of *Sam* is that a tool stays a tool while

contd.

you're working with it and doesn't turn back into a pointer every time you let up the mouse button. Features to be added soon are painting tools for bit-mapped work and rotation of text.

Sam retails for $150 (and Aba gave away two copies to lucky WAP members at the demo).

Job hungry Mac'ers take note: As he concluded the demonstration, Storm said to the audience, "I am in a hiring mode. I am looking for hackers who really care about the Mac—also artists and draftspeople." He can be reached at P.O. Box 850, Two Davis Avenue, Frazer, Pennsylvania 19355-0915, phone 215-644-3580, or Compuserve 71270, 3306.

MiniCAD

Although *MiniCAD* is a product by Diehl Graphsoft of Columbia, Maryland, it is being represented by Gestalt Systems locally, and it was Gestalt employees Jim Gray and Blair McQuillen who demonstrated the program and answered questions.

The *HyperCard* demo of *MiniCAD* animated the program's 3-D features using a house and showed how builders and architects can give buyers a walk around their new home before ground is even broken. *MiniCAD* does rotation in 2-D and 3-D; supports up to 40 layers of drawing with up to two colors per layer; does auto-dimensioning; rotates in degrees, minutes and seconds; has three vanishing points for perspective drawing; has drivers for a wide variety of output devices; and handles paper in sizes from A to E. Gray admitted, "It's harder to learn than most Mac programs because there's so much more to learn."

MiniCAD is coming out next month in a new version that will offer a database module that can automatically calculate prices related to the elements of the drawing, such as plumbing. *MiniCAD Plus* will retail for $595 and the database module will be $395, with plotter drivers extra. Gestalt is also selling five interactive training stacks for $150.

Cynthia Yockey is a Macintosh consultant and desktop publishing trainer. She is also a writer and editor with experience in journalism, public relations and advertising.

Photo by Peter Combes

Marc Canter animates VideoWorks II

A Printer for the Rest... contd. from pg 56

announced" to be announced (like the new trend of political candidates proclaiming when they plan to declare to run!) at this January's MacExpo. The folks at GCC have not been sitting on their laurels. The promised price war has started, with a preemptive salvo by GCC. Ms. Liz Brooking of GCC's marketing department has informed me of an immediate price cut to $1995. This is getting very close to the $1400 Imagewriter LQ, which Apple still has yet to deliver due in part to concerns over the government's threatened ban of Toshiba products (the Imagewriters are made for Apple by Tokyo Electric Company, a Toshiba subsidiary).

The promised new Print Manager for the PLP jumps to version 2.0 with the pledge of greater speed and functionality. This will be released in January along with the "PLP Share" package which will allow the PLP to be connected to the Appletalk network. The small ROM cartridge socket hidden to the right of the housing finally gets the workout for which it was intended. For those who finally do wish to get on the Postscript bandwagon, a Postscript compatible version of the PLP will also be announced for release in February. This will require a board swap for current PLP owners, but an upgrade package is definitely in the works as part of GCC's printer strategy.

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MAC Q & A
by Jonathan E. Hardis

Q: When will Switcher be updated for the new Mac models and System software releases?

A: Never. Switcher is a discontinued product. It has been replaced by MultiFinder, which comes included with the latest System Software release. This package includes System 4.2, Finder 6.0, MultiFinder 1.0, and other software on a total of four double-sided disks. Use of this software is only recommended on machines of the Mac Plus level or above, with at least 1 Meg of memory. Also included in the package is Apple File Exchange, which can be used to read Apple II disks on a Mac and to convert documents from one application type to another (such as IBM's DCA format to and from MacWrite format).

This release of System software can be bought at a dealer shrinkwrapped with a manual for under $50, list, (under $40, discounted). Alternatively, you can get copies of the disks without a manual from WAP at $5 per disk, $20 the set. BBS systems with Electronic Licenses from Apple, such as CompuServe and GEnie, are also a source of the software. Finally, if you bring your original System disk back to your dealer, he has been asked by Apple to allow you to make free copies. However, to be sure that you are getting all of the many files that have changed, it might be best to get the disks pre-packaged.

By the way, under MultiFinder, the way you change the sizes of the Application's partition is to use the Get Info command in Finder, and the way you control the LaserWriter spooler is with Chooser.

Q: I've heard rumors of HyperCard version 1.1. Any word on it?

A: It will be out in early 1988, and it will consists mostly of bug fixes and the addition of internationalization features. It *may* be treated as a system software update and be made available through User Groups (such as WAP) and Electronic Licensees, as well as through dealers.

Q: What does the future hold for new Macintosh hardware?

A: Both ***MacWeek*** and ***InfoWorld*** report that three new laser printers will be released in January. A low end model that doesn't contain PostScript will compete with GCC's Personal LaserPrinter. A high end model will come with a hard disk in it. (This will allow the printer to accept additional work even if it's busy printing something else.) The new printers will likely use the newer type of Canon print engine. The one used in the original LaserWriters is no longer made.

If past history is any guide, Apple drops machine models two years after introduction. The Mac Plus (and the Mac Plus upgrade kit) turns two years old in January. I expect Apple to drop the Mac Plus by March, with the SE becoming (for the time being) the low-end Mac model. I also expect a high-end SE to be introduced, perhaps with a 68020 and a 68881 (a faster processer and a math chip) in it, and almost certainly with more memory.

If you have been holding off buying the Mac Plus upgrade kit, that is, an upgrade that would give you 1 Meg of memory (easily changed to 2.5 Meg and 4 Meg) and a SCSI port (for fast hard disks), I suggest that you watch for signs of Apple stopping the assembly line for the Mac Plus. Both outright announcements and close-out sales on the Plus would suggest that the upgrade product might be soon discontinued.

Q: Are rumors of an upcoming Color SE true?

A: As I hear it, the plans were shelved when a good enough picture tube could not be had at a good enough price. Note, by the way, that Color Quickdraw (in the Mac II ROM) is written in 68020 code, and so a 68020 processor and a different ROM would be prerequisites for a color upgrade.

Q: How do I put more memory in a Mac Plus, Mac SE, or Mac II?

A: All these Macs use commodity memory parts, called SIMMs. Currently, Apple ships their computers with four 256K (kilobyte) SIMMs, making a total of a Megabyte. 120 ns (nanosecond), 1M (megabyte) SIMMs can be bought from Apple dealers in packages of two for $500 (list price, closer to $400 when discounted). Mail order houses also sell them. The last price I heard from The Chip Merchant, (619) 268-4774, was $219 each. The NEC part number for these SIMMs is MC-41256A8B-12.

Two of these parts, replacing two of the four original SIMMs in a Mac Plus or Mac SE, bring total memory to 2.5 Meg. (That's 2 Meg from the new parts, and .5 Meg from the original ones.) Four of these parts, replacing all four of the original SIMMs in a Mac Plus or Mac SE give 4 Meg of memory. In a Mac II, four of these parts, plus the four original SIMMs, bring memory to a total of 5 Meg. (That's the original 1 Meg plus 4 new Meg.) Eight of these parts, replacing the four original parts, give 8 Meg of memory.

Be aware that if you install these parts yourself, you may have to make cuts on the motherboard. Be sure that the memory vendor can supply complete instructions for your model of Mac. No matter who installs the SIMMs, be sure that the power supply is readjusted to *exactly* 5 volts.

Q: Help! I've added extra memory to my Mac Plus. Now, I can't get Excel to work with Switcher (or MultiFinder).

A: Make sure that Excel is the first program installed. Like most Microsoft programs, it won't work at addresses above (roughly) 1 Meg.

Q: What's new with Red Ryder?

A: FreeSoft has relocated to Beaver Falls, PA, at (412) 846-2700. Red Ryder 10.3 is now an $80 (list price) commercial product. Previously registered owners may upgrade for $20. New customers should check with their favorite store—MacCorner, for example, sells it for about $68.

contd.

Q: What about the competing communication programs?

A: MicroPhone 2.0 is said to be in the works. Until it arrives, be careful about running version 1.1 under MultiFinder. If the capture buffer exceeds the size of the partition you've allocated, it will overwrite programs in other partitions.

Hayes has just released a new version of Smartcom II, with many new features. The upgrade costs $25, which is waived if you bought the program within the past 90 days. Call Hayes Customer Service for details. This is still my favorite program of the three, and sells for $89 mail order.

Q: I have a MacBottom Hard Disk, and I recently bought Suitcase to allow for many desk accessories easily. Why doesn't print spooling start up automatically if the Spooler DA is in a Suitcase file?

A: MacBottom's "SpoolInit" comes alphabetically before the "Suitcase" INIT, which means that SpoolInit runs first. Suitcase hasn't yet found the Spooler DA and installed it. Rename "SpoolInit" to "zSpoolInit" to make it run last. Also, until you get Version 1.2 of the Spooler, don't run it from Suitcase's Cmd-K window. (Thanks to Lofty Becker for these answers.)

Q: With Suitcase, holding down the Option key before pulling down the Apple menu means one thing (get the short menu) and under MultiFinder it means another (put the DA in the application layer). Is there a conflict?

A: No conflict. Suitcase looks at the position of the Option key when you first click in the menu bar (anywhere in the menu bar). MultiFinder looks at the position of the Option key when the particular DA is actually being selected (that is, when you release the mouse button).

Q: When using Suitcase with System 4.2 and MultiFinder on a Mac II, several DAs are dimmed. Is there a patch?

A: Yes. In the INIT 128 resource of Suitcase, change 225F 205F 2050 to 6000 0086 2050.

Q: Help! When using Suitcase and MultiFinder with PageMaker (versions 2.0 and 2.0a), I can't get to items in the Apple menu beyond the 31st, and I can't switch between applications any more.

A: Steve Brecher suggests the following patch to PageMaker. Change 0102 011F to 0102 01FF.

Q: Using Thunder 1.1 with Word 3.01, the old, badly spelled word is not completely replaced when I hit Command-1. Is there a solution?

A: Using Thunder's options dialog, reconfigure Thunder so that it is entered by Command-[or Command-], rather than Command-space. Word treats Command-space as a character and adds it to the file, upsetting the method by which the bad word is replaced.

Q: When printing on legal size paper with the LaserWriter, the top of the page image is "clipped off", and the bottom of the paper is blank. What's wrong?

A: In the Page Setup Dialog (from MS Word, hold down Shift when calling for Page Setup), push the Options button and then check "Larger Print Area".

Q: What hard disk do you recommend?

A: This question comes up all the time. It's also impossible to answer, because new disks appear quicker than they can be field-proven (at least a year of normal and widespread usage). Keep in mind, though, that the newer SCSI hard disks (including internal models for the SE and Mac II, as well as the external models) originate from only a few Original Equipment Manufacturers (OEMs). The branded products you buy will inherit their reliability and performance from the OEM. The wholesaler will add varying amounts of value in such forms as the required software (a "disk driver"), optional software (file backup and data recovery utilities), and a customer service department to deal with problems.

Which drives and OEM mechanisms are considered best seem to be fads that change monthly. The last fad centered on the Quantum Q280 (80 MB) drive mechanism, with the "Version B" ROMs. Apple, CMS Enhancements, and Jasmine (among others) have products based on this mechanism. The next fad seems to be brewing over the CDC (Control Data Corp) Wren III, 90 MB half-height drive, used by Jasmine, among others. (CDC's announcement of the Wren V series, which will put 190 MB in a half-height drive in early 1988, has gotten press lately.) I have used none of these products, and I make no endorsements.

Q: What's the best way to learn to program HyperCard?

A: While Danny Goodman's "The Complete HyperCard Handbook" has a good primer, ADPA sells the definitive reference, Apple's "HyperCard Technical Reference Package." A disk with interface files is included.

Q: What happened to Dreams of the Phoenix, a company that sold good and cheap software?

A: It appears that DotP is out of business. Their phone has been disconnected, and some software authors have complained about having not received royalty payments for some time. Their popular Quick and Dirty Utilities disks have some contributions that don't run on 68020 machines, such as the Mac II. Some of these may reappear in revised form as products of other companies, and some may reappear in revised form in the public domain.

Q: What "RAM Disks" work on the Mac II?

A: I don't know, but they really aren't needed any more. A RAM Disk was used on older models when hard disks weren't attached. They blocked off a section of RAM and made it appear to the operating system as another floppy disk would. Nowadays, between fast hard disks (which are virtually required equipment), built-in disk caching (which is another mechanism for keeping the disk image in surplus RAM), and MultiFinder (which keeps many applications and their documents alive in active RAM), RAM disks add litttle.

Q: Why won't the Pyro! screen blanker work on the Home Card of HyperCard?

A: The on-screen clock is the "activity" that Pyro! sees. If you remove the On Idle handler from the card script, it will fire.

contd.

Q: PowerStation has problems running under MultiFinder. Any fixes?

A: Yes. Here are the patches to PowerStation 1.1, courtesy of Steve Brecher:

Problem: PowerStation's Finder button can cause a crash. Fixed by patches #1, #2, and #3.

Problem: The Restart and Shut Down commands from PowerStation's Special menu return to Finder (if Finder is running) or merely quit and then reopen PowerStation (if Finder is not running). Workaround: quit to Finder (assumes patches #1, #2, and #3 applied) and use Finder's Restart or Shut Down. If Finder is not running, hold Option while clicking the Finder button to get back to Finder, then go back to PowerStation and click the Finder button again (without Option) to quit PowerStation.

Problem: Open an application from PowerStation. After the "interval of idleness" specified in PowerStation's Preferences dialog, return to PowerStation by quitting the application or by switching to PowerStation. PowerStation's boxes/buttons are invisible. Fixed by patches #4, #4a, #5, #5a.

Patch #1: Location: file sector 20 (14 hex), offset 26 (01A hex) bytes within sector; 281A hex bytes from start of file.

original: 41FA 0046 2078
patch to: 2038 095C 6F0E

original: 0A80 303C 010D A047 21F8 0958 033C 2078
patch to: 2040 A01F 2078 0A80 303C 010D A047 21F8

original: 095C A01F 4E75 4EBA FFE6 6704 2EB8
patch to: 0958 033C 4E75 4EBA FFE2 6704 2F38

Patch #2: Location: file sector 30 (1E hex), offset 242 (0F2 hex) bytes within sector; 3CF2 hex bytes from start of file.

original: 4EBA EB2A
patch to: 4EBA EB26

Patch #3: Location: file sector 31 (1F hex), offset 426 (1AA hex) bytes within sector; 3FAA hex bytes from start of file.

original: 4EBA E872
patch to: 4EBA E86E

Patch #4: Location: file sector 61 (3D hex), offset 216 (0D8 hex) bytes within sector; 7AD8 hex bytes from start of file.

original: 4E56 0000 207C 0000
patch to: 6606 4A2D FCF0 660E

original: 016A 202D F7FC D090 206E 0008 2140 FFF8
patch to: 202D F7FC D0B8 016A 2D40 FFF8 4E75 5897

original: 4E5E
patch to: 4E75

Patch #4a: Location: file sector 61 (3D hex), offset 270 (10E hex) bytes within sector; 7B0E hex bytes from start of file.

original: 2F0E
patch to: 4E71

original: 4EBA FFC6
patch to: 4EBA FFCE

Patch #5: Location: file sector 61 (3D hex), offset 458 (1CA hex) bytes within sector; 7BCA hex bytes from start of file.

original: 4A6D FAC4 670A
patch to: 4A47 6710 4A6D

original: 2F0E
patch to: FAC4

Patch #5a: Location: file sector 62 (3E hex), offset 084 (054 hex) bytes within sector; 7C54 hex bytes from start of file.

original: 2F0E 4EBA FE80
patch to: 4E71 4EBA FE88

Q: Where do we stand on upcoming, new Word Processing programs?

A: As of this writing, neither Word Perfect nor FullWrite Professional, the two most publicized products in development, have shipped. However, there are less publicized products in development, too. Randy Wigginton, who wrote MacWrite, has been working with Ashton-Tate on an integrated word processing, page layout, and drawing program code named Glass. This and other new programs may be announced at MacExpo in January. Ann Arbor Software (FullWrite Professional) has been encouraging us to delay purchase of word processing software. That may turn to their disadvantage.

Q: Why did my Guided Tour disk for the Mac II stop working?

A: It only works when the screen is in 2-color mode.

Q: Do the DataFrame utility programs, such as the spooler, work under MultiFinder?

A: Here is the list of the current versions of the *DataFrame* Utilities and their compatibility with System 4.2/Finder 6.0, MultiFinder 1.0 and the Macintosh II, as provided by Fabian Ramirez of SuperMac Technical Support:

	Version	4.2/6.0	MultiFinder	Mac II
DiskFit	1.3df	yes	yes	yes
SuperLaserSpool	1.11df	yes	NO	NO
SuperSpool	4.0df	yes	NO	NO
Sentinel	1.0df	yes	NO	yes
Manager	3.23	yes	yes	yes

For those products with "NO", enhancements are currently under development, but he is not aware of any scheduled releases. If for any reason you do not have these versions, please contact your local dealer to see if they have it. If they don't, call the SuperMac BBS at 415-962-1618. After a validation period of 1-3 days, you'll be able to download all of the latest versions of the *DataFrame* Utilities and inquire about about SuperMac Products.

As for the *Commercial* versions, all upgrades are handled through SuperMac Software. Beginning January 1, 1988, there will be a new upgrade policy for the *Commercial* products. So stay tuned for future announcements.

Q: How can I prevent a HyperCard stack from ever being opened?

A: Glad you asked! Apple reports this fatal bug. If you:

contd.

Create a new stack
Assign a password via the Protect Stack Item
Quit Hypercard
Launch Hypercard again
Set Private Access via the Protect Stack Item
Quit Hypercard
The stack can not be opened under any conditions. DO NOT set "Private Access" when no password has been assigned.

Q: I have the Control Panel "CDEV" called Kolor, and it doesn't seems to work right. The colors that comes out don't look exactly like the colors I select. Why?

A: Kolor, and other things that use the "Color Picker" dialog, give you complete freedom to specify any of the 16 million colors that the Mac II screen is capable of showing. However, since the Mac II video card can only show 256 different colors at a time, when you leave Kolor, your selections are changed to the closest of the 256 colors that the applications have told the Color Manager that they want to have available.

Q: I have an FKEY that turns off the instruction cache of the 68020. But then I can't use the AppleTalk network any more. Why?

A: When the Mac is booted, a timing test is done to synchronize the machine to the speed of AppleTalk. Anything you do to change the speed of the processor after the machine is booted will kill it.

For the novice: An FKEY is a small program that runs when you push a digit key while holding down the Shift and Command keys. Command-Shift 1 through 4 are the common ones. The 68020 processor usually remembers (that is, caches) program code on the chip, which lets it run much faster. This feature can be turned off by software to allow the 68020 to run self-modifying programs (which, in general, is not a good idea).

Q: In Word 3.01, how can the keypad be used for numeric entry?

A: Push the Clear key. This toggles the keypad between numeric use and control use. An "N" appears in the upper right of the Menu Bar for "numeric".

Quickies: Think Technologies has upgraded Lightspeed Pascal and C for the new machines and system software. Programs to patch the old versions are publically available on the national BBS services, and can be ordered through Think Customer Support ... There is a bug in the Radius Accelerator ROM (version 1.8 and earlier) concerning the 4-voice sound driver. It shows up in HyperCard's phone dialing. Call Larry at Radius Technical Support, (408) 434-1010, for an INIT file that can cure the problem ... MacPaint 2.0, which contrary to published rumors is *not* a color program, has been sent to the disk duplicator. It will be at dealers soon ... A new version of FullPaint (1.0 SE) is available to registered owners. It fixes SE and Mac II compatibility problems ... ResPeak 2.03 has been released to the public domain. If you've already paid the $10 shareware fee, an additional $15 will get you Version 2.1, which has many bug fixes and improvements.

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MacNovice Column

by Ralph J. Begleiter

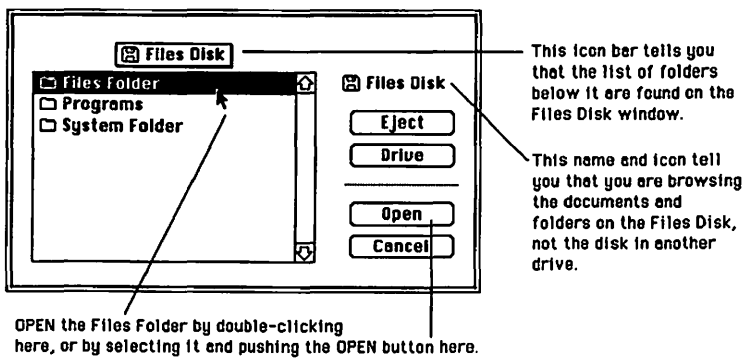
Macintosh Filing Maze (Part 2): The MiniFinder Window

Despite all the effort to make the Macintosh filing system intuitive and easy to use, there are many MacNovices who still get lost in the maze of files and folders which inundate their 800K disks or hard disk drives.

It's especially easy to "lose" a file once you're away from the desktop and working within an application such as a word processor or spreadsheet. That is, when you choose OPEN from the FILE menu within one of these applications.

Suddenly, the friendly, familiar desktop on which you can usually find your files is no longer any help. You're presented with a "minifinder" window that looks like this:

The Minifinder Window

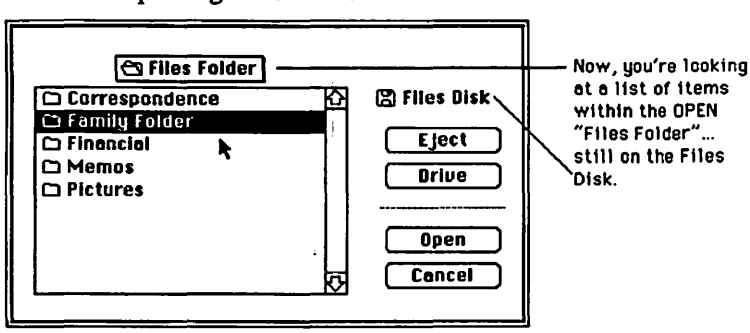


And here's where all the "nesting" of documents and files you did following the last MacNovice column will pay off.

First, familiarize yourself with how the minifinder window works. For purposes of understanding the maze to find your documents, focus your attention on the icon bar just above the minifinder list itself. Notice the icon (and name) at the top, which represent the *disk* of which the minifinder is showing you the contents.

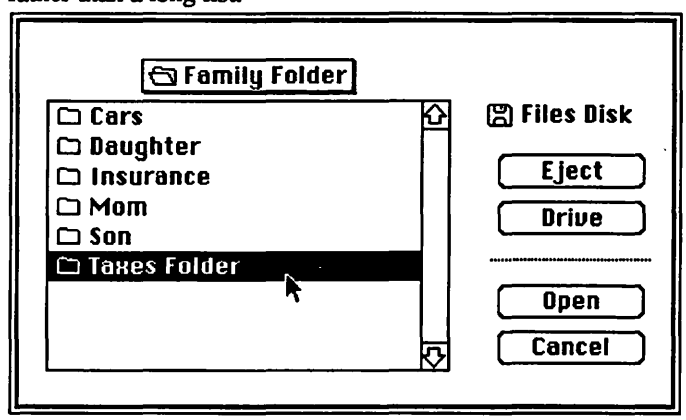
You'll see a list of folders below the icon. They're the same ones you created on your desktop when you arranged all your files into nested folders.

OPEN one of those folders, the Files folder, for instance (either by double-clicking on it, or by clicking once on its name and then pushing the OPEN button in the minifinder window.

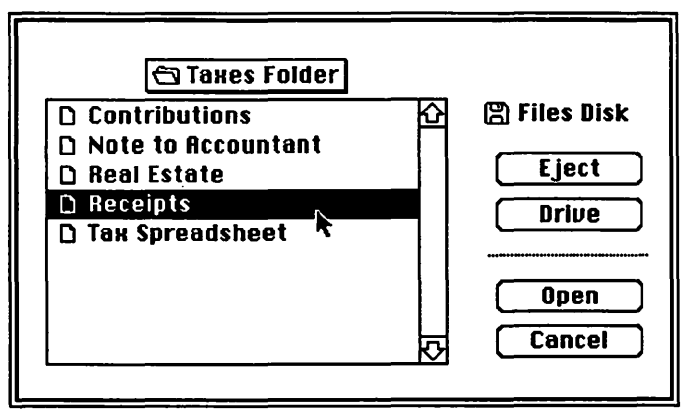


Now, you'll see the contents of *that* folder (the Files folder) in the minifinder window. Perhaps there are some documents, but, following the nest we created in the last MacNovice column, more likely you'll see yet another list of folders... this time, only the folders which you nested within the Files folder.

OPEN another folder, let's say the Family folder, which you nested within the Files Folder. Again, you'll see a list of the folders you nested in the Family folder. But, again, you won't be bothered by having to look through a lot of irrelevant folders... only the ones which pertain to "Family." Also, you'll notice that the Macintosh is able to present you with your choices pretty quickly. That's because it has only a few items to keep track of, rather than a long list.



Now, choose one of the folders listed within the Family folder. Try the Taxes Folder. When you open this last nested folder, you'll come to a list of documents which pertain to your taxes. You're being spared the need to dredge through other documents unrelated to the task at hand. You may now open any of the documents you're working on, directly from within the Taxes Folder.

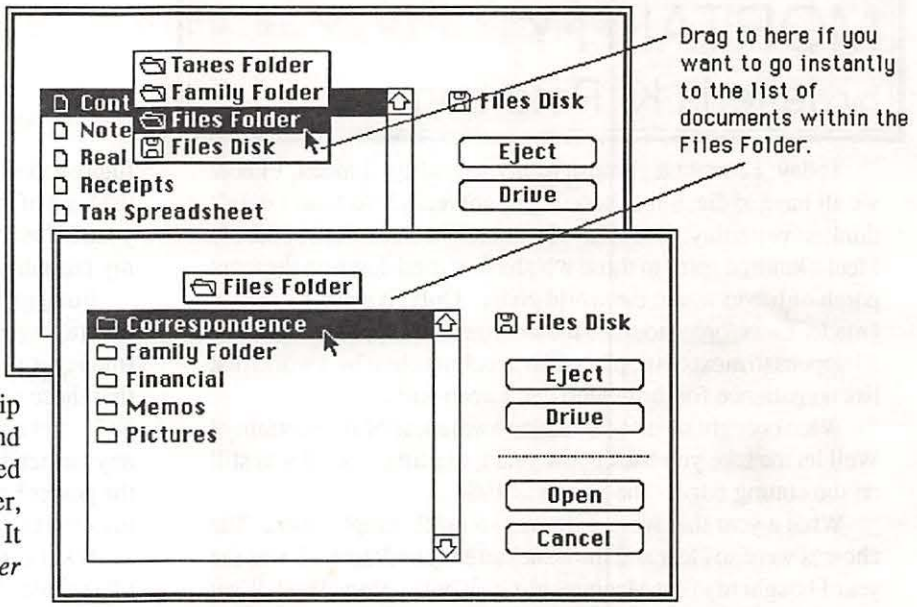


As long as you're working on your taxes, by the way, whenever you choose OPEN from the application you're using, you'll always be presented with that short list of relevant files. You won't have to repeat the process of searching through the nested folders. *That's* the beauty of the minifinder system. It helps you keep relevant documents together and quickly accessible when you're working on a project.

contd.

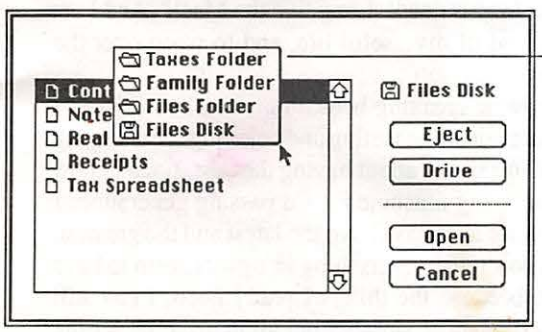
This little fact should help you understand why *it's a good idea to keep related files together in folders, regardless of which application was used to create them.* Don't keep all your MacWrite files in one folder. Group them by project instead. Then you'll have all the appropriate documents right at hand when you're working on that project, and you won't have to search through a MacWrite folder when you're looking for a letter written in connection with your taxes.

When you're creating a *new* document in an application, and you're ready to SAVE it, don't rush to push the SAVE button. Before you do, flip through the folders in the minifinder window to find the one in which you want to place your newly-created document. Once you've found the appropriate folder, OPEN that folder first, *then* SAVE the document. It will then be saved *directly into the appropriate folder* along with other, related, documents.



Suppose you've finished the "taxes" project you were working on, and you want to move on to your next project. Here's when it pays to understand the minifinder system and all the nesting of documents you've done.

CLICK your mouse on the icon bar above the minifinder list of documents in the Taxes folder. Instantly, a "tree" of folders appears below that icon bar. It traces for you, in visual form, the string of folders through which you searched to reach the Taxes folder. Notice that Taxes is below Family, which is below Files, which is below the Files Disk icon.



By dragging your mouse down through that "tree" of folders, and stopping at the folder you want to look into for your next project, the Macintosh will take you directly to that folder, without having to do the search all over again. Let's say you want to work on a letter to your father. DRAG down until you reach the Files Folder name. Release the mouse. Instantly, you see the list of folders contained within Files. One of them is Correspondence. OPEN it to find your last letter, along with other related correspondence. No need to travel all the way back to the desktop, or even to the list of all folders on the entire disk.

It's important to familiarize yourself with how the minifinder window works, and how the icons of folders and files are displayed within the icon bar above the list. Play around with the minifinder window a bit to develop a sense of how to maneuver through the maze of documents. You'll soon discover why the Macintosh prefers short lists of files and folders within many other folders... rather than long lists of items in just a few folders. Mac can find them faster, and *you* don't have to search through unrelated documents to find what you're looking for.

Next in this series of primers on the Macintosh Finder maze, we'll see how to use the Finder itself to help stay organized. You'll see how the Finder can limit the difficulties of finding needles-in-haystacks aboard your Macintosh disks.

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MORTALITY
by Jefferis K. Peterson

Today, I caught a glimpse of my mortality. I mean, I know we all have to die, but so soon? I'm not ready! At least I didn't think so yesterday. But today, I was caught short. And suddenly I feel a kindred spirit to those who have settled down on the front porch of life to watch the world go by. Only, it wasn't a choice I made. I was forced to sit on the sidelines—I suppose that is how it happens to most of us; placed on a rocking chair by a world that has no patience for those who can't keep pace.

What brought me to this sudden awareness of my mortality? Well let me take you back a few years, to a time when I was still on the cutting edge. The year was 1984...

What a year that was! Life was so much simpler then. The choices were so clear and the issues so easy to define. It was the year I bought my first Macintosh! Gosh, what glory days! What a thrill to be alive! A 128K, the wind at my back and limitless horizons ahead; the world seemed full of endless opportunities. I had all that I required: a write and a paint program bundled together with the first purchase, and a printer. That was it. I had it all; there wasn't anything else to be had of any consequence. No more memory; no more power. Even the Big Machines of another company did not have as advanced an interface for the common man as did the Mac.

I felt justifiably proud. I was on the cutting edge of technology. And I smiled as only The Cognoscente can whenever I listened to the Simple boast about the wonders of the Apple][machines...

But how quickly times change! Before I knew what happened, it was all over: I was unseated from my vantage point as the harbinger of a new generation. And by the time I finally figured out what was happening, it was too late. Eight months after I bought my Mac, a Fat Mac was introduced. At that time, I hardly noticed the difference. It was still the same family; a bigger cousin of the new technology. But hardly different in power or ability. And then, little by little, out came more and more programs that would not quite work on the old 128. But that was alright; I was surviving. I had the essentials for my business, and I didn't need most of those programs. But then, I was done in. I was taken by surprise. It was subtle, very subtle; and I credit Apple for their craftiness. Ingenious, really! They tempted me with a poisoned apple, and I bit. When they updated my original write program so that it would hold more than eight pages, it no longer quite worked on the 128. Oh yes, it *functioned*, but hardly! Every move of the mouse was greeted with a dialog box or an out of memory notice! I was betrayed by the very technology that brought me progress!

For months after that, I limped along; trying my best to keep up; postponing my planned purchases till prices came down and I didn't feel so cheated by the Apple monopoly on memory and second disk drives. And just when I thought the day of price friendliness had arrived, I was surprised again. Now, not simply 512, but 1 Meg and new ROMS were required, and everyone who was anyone (The New Cognoscente!) was saying, "There is no other way to go but new ROMS, or you will be shut out of all future software and hardware releases." Woe, woe is me! From the head of the pack to sucking dust in just one and one half short years! How quickly I have aged! How soon I am face to face with my mortality!

But that, my friends, was not the final indignity! After years of scraping together the money to upgrade to a reasonable system (money it is that moves the world you know, and how true it is that those who don't have it get left behind), I finally went to 512E and a third party second disk drive. I wisely figured that any further memory boards could be added on later to give me all the power I could need. But then, today I realized, in spite of all my efforts, I have passed over the bar.

What is my lament? I am heir of an outdated technology—all in three short years! I am put out to pasture before my time! In the prime of life, I am told I am no longer useful. I am destined for the junk heap of history. My Mac is excluded from the world of the young and the beautiful not simply by power alone, but by the demands of new system software. No matter how I upgrade, I am in an evolutionary cul-de-sac. No color for my model; and the new ROMS can never be added to my dying breed. Even the famed Mac+ is due to fade away and be no more. My technology is dead; I am living in the end of an era, from which there is no upgrade.

As they say for kings, so now the world of the powerful and the elite say, "The Mac is dead! Long live the Mac!" And I am left to mourn the end of my useful life, and to weep over the passing of my day in the sun...

There is a rhythmic creaking beneath my seat, now. And I spend my days more leisurely; resting and enjoying the changing seasons. I find I don't worry about having the best, since I know I can't have it. Since my machine is of a passing generation, I don't feel the pressure to always have the latest and the greatest. And now, since I don't want everything in sight, I seem to have plenty of money, because the things I really need, I can still afford. Life does pass more slowly; but all in all, I prefer the peace of this way of life to the confusion and tension I felt when I was in the race to stay ahead.

And there is a wisdom I now have which I did not have when I was *"in the know."* It is a wisdom that only comes with age. As I watch the rest of the world struggle and claw each other in their frenzied race to the top, I smile. For I know, that sooner than these Yuppies realize, they too will be left behind. They can't keep up forever. One day, they will be passed by, and will have to be content with less and not with more. And when they are pushed off to the side by a younger and more aggressive generation, I will gladly offer them a seat so that we may share the silence of a deeper wisdom than money and power alone can give.

(Jeff Peterson is full time pastor and a part time theologian for a small presbyterian church in Grove City, PA. He is 33 years old and has had a few white hairs since he was 14. And, oh yes, the best part of living in Grove City is there is no traffic ever, and you don't have to pay for parking!)

COMPUTER RENTAL
by Hunter Alexander

When Indian Prime Minister Rajiv Gandhi visited Washington in October, he rented a Macintosh II computer from Capital Computer Rental, Merrified, VA 698-5500.

Dan Morganstern says that Mr. Gandhi picked up the computer on Wednesday October 21 with 40 megabytes of memory on the hard disk drive, a megabyte of random access memory and a 13-inch color monitor. After the Prime Minister used the Mac for preparing a briefing or other things, he returned it on Friday. Morganstern checked and found that everything had been erased from memory. The Indian did not make the mistake of Col. Oliver North by leaving secret data on his computer system.

Prime Minister Gandhi, a pilot, reportedly keeps up on many technologies. Dr. S. Jaishankar, first secretary (political) Indian Embassy, confimed that someone on Mr. Gandhi's staff rented a Mac but insisted that the Prime Minister was too busy to use it when in Washington. Dr. Jaishankar did not know where the machine was rented and denied that Mr. Gandhi made a presentation of computer graphics to Mr. Reagan or anyone else in Washington.

Dan Morganstern promises free installation, on-site maintenance and delivery. "Call us for the best price in the capital area," his ad of 3/12/86 in the *Washington Post* says. He will rent to individuals with a Visa or major credit card. Printers and monitors are rented separately. Morganstern answers his own phone. He doesn't have any typical customer. They range from students writing their PhD. dissertations to the government to IBM. The latter gives priority to its customers. Sometimes IBM offices need a machine.

Morganstern outgrew his first office in Reston and moved next door to the post office at Merrifield. Most renters hire out by the month, although it is cheaper to let for six months. The October stock market crash hurt business for awhile but now he thinks it makes people reluctant to tie up their cash in a purchase and they prefer to rent by the month. The 1986 tax reform will help him in the long run, he thinks. The tax statute has left many past benefits of leasing still intact as well as adding new ones.

American Computer Rental, Inc., 525-0111, rents Apple computers but doesn't waste much space on this brand.

National Computer Rental, Annandale, VA 750-3882, rents Apple Macintosh, //e and //c—daily, weekly, and monthly, or yearly with purchase option.

Rent-A-PC claims to be the East Coast's number 1 rental firm offering Apple //e and Macintosh as well as other brands. They list phone numbers in Maryland 1-800-852-2258, Virginia 703-533-0855, Washington DC 202-775-0666, Boston 617-648-7777, Philadelphia 215-592-7771 and New York 212-608-6555 (ad in *Capital Computer Digest* June 1987). So you can plan a trip to Boston and rent a Mac when you get there. A Mac Plus with one megabyte is $395 a month or $335 per month for 6 months. This price is for businesses. There is an additional $35 each way in Viriginia for delivery and pickup. A $250 deposit is required. Rent-A-PC will ask for your Visa card number and also your bank account number and check your credit before it will deliver the Mac, according to Luann Calvarera, in the New York office. She says that the company has a Falls Church office, but I was not able to reach them at the number listed above. These prices were quoted to me at 11:50 AM on November 24. They may have changed.

MacTography, 301-424-3942, 702 Twinbrook Parkway, Rockville MD 20851, rents a Macintosh workstation for $10 an hour according to an ad in the *Washington Apple Pi Journal* of October 1987, pg 59.

Check the Computers—Renting and Leasing listings in the yellow pages. I visited three computer stores. One would lease for 36 months. One doesn't know where to rent a computer and one referred me to a computer broker. Most computer stores would rather talk about bankruptcy or armed robbery than leasing or renting. Salesmen live off commissions and leases generate lost commissions, if any.

Reference: *New York Times*, October 21 pg A3 has a story and photograph about the meeting of the Indian Prime Minister and President Reagan.

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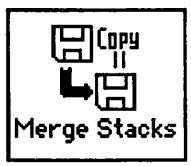
A Long Word Wiser

by

John A. Love, III

OR, OH OH ...

Boy, did I boo-boo last month. You see, thanks to Marty Milrod, I received about 15 800K floppies' worth of HyperCard Stacks. With the assistance of Brook Grayson of HyperCard SIG fame, I then proceeded to edit and filter, with the intermediate end product being three(3) very full 800K floppies of Stacks. Well, folks, confession time is at hand...one of the stacks, "Clipart/large.2" somehow or another has a bug in that HyperCard does NOT allow Stack compression. I will accept total responsibility. OKAY, Love, how do I fix your mess !! Very simple, says I, "Create the following Button with the script to match":




```
-- Script for Button = "Merge Stacks":
on mouseUp

  Answer "First, select the source Stack..." ¬
  with "Cancel" or "Select"
  if it is "Cancel" then exit mouseUp
  get fileName("STAK") -- it.
  if it is empty then exit mouseUp
  put it into sourceStack

  Answer "Then, select the destination ¬
  Stack..." with "Cancel" or "Select"
  if it is "Cancel" then exit mouseUp
  put fileName("STAK") into destStack
  if destStack is empty then exit mouseUp

  -- "Samo-samo":
  if sourceStack = destStack then exit mouseUp

  -- do it !!
  set lockMessages to true
  set lockScreen to true
  set the cursor to 4 -- Tick-tock !!

  go to stack sourceStack
  put the number of cards into nbrSource
  repeat for nbrSource
    doMenu "Copy Card"
    go to last card in stack destStack
    doMenu "Paste Card"
    go to stack sourceStack -- end up here !!
  end repeat

  set lockMessages to false
  set lockScreen to false
  choose browse tool

end mouseUp
```

Now what, Love !! Well———

- Use "ResEdit" to place the XFCN "fileName" in your "Home" Stack. Retrieve this XFCN from my Resources Stack provided on another of my compiled W.A.P. HyperStack disks.
- Create a new Stack; this will be your destination Stack as called for by the above Script.
- Place the above Button with matching Script whereever you wish (**BE** careful).
- Click on this Button with the Browse Tool and obey the Prompts presented to you.
- When you're finished, the newly-filled destination Stack will have all the cards in "Clip art large.2". Only, this time, the new Stack can be compressed, un-like the source Stack "Clip art large.2".
- Once you've convinced yourself that I speak with straight tongue, feel free to delete the bunged-up source "Clip art large.2".
- Finally, re-name your new destination Stack to "Clipart-large.2".

There, are you satisfied now !!

HYPERCARD SIG NEWS

by Robert C. Platt

Due to the Garage Sale, the HyperCard SIG will not meet in December. The next meeting will be held as part of the January WAP general meeting.

The SIG continues to grow at an impressive rate. Sixty-three members attended the November meeting, and many more turned out for the special November 7 session with Bill Atkinson. (A membership stack is being prepared.)

Our stack librarians, led by Brook Grayson, are preparing the first two of many stackware disks for the WAP library, which should be available by the time this goes to press. Please submit your stacks at the WAP Office or at our meeting.

The WAP Office has Danny Goodman's *The Complete HyperCard*, which is available for $17.95 plus tax ($18.85). Call before stopping by to make sure there is a copy left.

The November meeting featured Marc Canter, President of MacroMind Software. Marc came from a VideoText background and led a philosophical discussion touching upon the role of hypertext, presentation graphics, and computer assisted instruction. Marc used a Mac II and Color Monitor to demonstrate that VideoWorks II color animations can run as XCMDs under HyperCard.

HYPERCARD 1.0.1 ANOMALIES

by Rick Chapman

Apple recently released a list of "anomalies" that occur within HyperCard. This article is a condensation of that Apple technical note (which was written by Chris Knepper) with some of my own comments thrown in. Some of the so-called anomalies in this list can destroy your entire stack, so you should read this list if you use HyperCard. Hopefully an updated version of HyperCard will be available soon after you read this to correct some of these problems.

• Visual effects do not work on a Mac II unless the monitor is set from within the control panel to display just 2 gray levels.

• Running HyperCard under MultiFinder 1.0

Large amounts of disk space are required to print from HyperCard under MultiFinder 1.0 with Background printing turned on. If you're running out of disk space, try turning the Background printing off from the Chooser desk accessory.

Quitting an application that was launched from HyperCard under MultiFinder will not return you to HyperCard. This will be fixed in the next update.

The values of global variables are not saved automatically when HyperCard quits to launch another application. If you need to save globals, put them into a hidden card field or write them to disk.

Sometimes HyperCard has difficulty in finding a document that is in a different folder then the application. Although Apple says that this only happens under MultiFinder, I have experienced the same problem running under the Finder. This too should fixed in the next update.

HyperCard's title bar is sometimes incorrectly highlighted when moving it to the background. My guess is that only those that own large screen monitors will be bothered by this.

• HyperCard's word wrap algorithm does not correctly handle some punctuation symbols (e.g. the quote character).

• The `on idle` message continues to be sent by HyperCard even while you are editing text. This can cause problems if you have an `on idle` handler that moves the cursor. For example the message handler:

```
on idle
  put the time into bkgnd field "Time"
end idle
```

can interrupt your editing by moving the cursor from the active field to the background field "Time".

• HyperTalk's `find` command works best when at least 3 characters are specified and the stack has been recently compacted. The more sets of three characters that are specified, the faster the find is. (Evidently HyperCard encodes text into trigrams, each representing three characters.)

• The `dial` command ignores both the "#" and "*" characters. These can be sent by using the `with modem` option, e.g. `dial "#" with modem "ATDT"`.

• One obvious way of selecting text from within HyperTalk does not work. You cannot select text from within a HyperTalk script by performing a simple drag operation. To select text either use a double click (for one word), a shift click (for a range) or a shift drag (also for a range). For example, the last method could be used to select the first line of a field by performing:

```
on mouseUp
  get the rect of card field "myField"
  put item 2 of it into item 4 of it
  drag from item 1 to 2 of it to item 3
       to 4 of it with shiftKey
  put the selection into card field
       "dragShiftSelection"
end mouseUp
```

• The `closeField` message is supposed to be sent whenever you exit from a field that you have changed. Sometimes it does not get sent when you exit from within a field by clicking on a button. While Apple suggested a solution to this problem, it does not solve the problem under all circumstances. It appears that the only way to work around this problem is to add the following code to the button script:

```
on mouseUp
  set lockScreen to true
  go to next card
  go to previous card
  set lockScreen to false
  -- rest of your script
end mouseUp
```

This should work since, according to Apple, the `closeField` message does get sent when the button moves you to another card.

• The `exit to HyperCard` command does not close open files. You must close them yourself before using this command.

• Do not put more than 126 fields onto a card or a background. Compacting a stack with such a card or background will corrupt the entire stack. This will be fixed in a future version.

• The `mouseUp` and `mouseDown` messages are not sent to a scrollable field when the mouse is within the field's scroll bars.

• The system variable it is not a global variable. It is always local to the handler in which it is used.

• A bug in the Private Access feature (accessed from the protect Stack... menu item) can lock you out of a stack permanently. Do not set the password first before setting private access. Always set private access first, before setting the password. This too will be fixed in the version.

• The `find in card field` command does not always work correctly. Apple gives the example that a `find "Jim" in card field "Name"` will not work with a stack containing a card with "Jim Friedlander," in the field "Name".

MACINTOSH BITS AND BYTES

by Lynn R. Trusal

Macintosh Facts and Rumors

FreeSoft Co, and Scott Watson have moved from St. Louis, MO to Beaver Falls, PA (412) 846-2700 and announced the long rumored fact that Red Ryder 10.0 will no longer be a shareware product. It is now only available by mail order from FreeSoft for the sum of $80. Current registered users of earlier versions can upgrade for $20 by sending the original disk with the exact name it was originally registered under to FreeSoft Co., at 150 Hickory Drive, Beaver Falls, PA 15010. Mark the envelope in the lower-left corner "10.0 Update Request." (Source—*Mac Week,* Sept. 1, 1987). I did receive the Red Ryder 10.0 update and it came with a well laid out 148-page manual and a 400K disk containing RR 10.0, a utility to remap the new Apple keyboards (SE and Mac II) for VT 100 emulation and Mock Writer from CE Software newly called RedWriter. Some initial criticism of the manual is that it does not give enough examples for some of the procedures. I have made limited use of the new version so I can not attest to its improvements. I did find it interesting that there was no mention of the long rumored "Nautilus graphic drivers" that Scott has mentioned in the past.

HyperCard may actually be included in ROM in future Macintoshes. That would go along way to establishing it as a standard but might make customizing it a harder task. Usually only hard and well established system routines are committed to ROM. HyperCard might have to undergo more metamorphosis before it is ready for ROM incorporation. Bill Atkinson commented at the special November WAP meeting that eventually some parts of HyperCard may end up in ROM.

Apple Computer has now invested in four companies through its Strategic Investment Group (Bits and Bytes, August 1987). These include Touch Communications (open systems interconnect [OSI] software), Sybase Inc. (databases for micro to mainframes linkup), Forethought Inc. (Presentation graphics), and Chromaline Technologies Inc. (film recorders). Apple apparently invests from $100,000 to $2,000,000 per company and has set aside up to $20,000,000 for such investments.

Macintosh Today finally came out with their second issue on Sept. 14, 1987. The first issue was Aug. 11, 1987 and it was supposed to be a bimonthly publication, so I guess they are having trouble getting their act together or there isn't enough new Mac information to write about. The third issue was dated Sept. 28, 1987 so we can assume that they are now on a bimonthly track. Macintosh Today is more polished, professionally laid out and contains more information than *MacWeek,* but it is not a weekly publication. It will be awhile before we know if the marketplace can support two timely Macintosh publications on the order of *PC Week.* Regardless of how often they come out or how well they're put together, they both beat *InfoWorld* hands down for Macintosh information. Shame on you InfoWorld!!!

In the best tradition of Andy Rooney, of *60 Minutes*, "Did you ever wonder," if Macintosh software and hardware "naming protocol" will set the English language back one-hundred years? After all shouldn't MacInServe, LaserWriter, PostScript and PageMaker, among others, either be two words or use lower case for the second and third words that are run together?

Have you noticed the recent steep increase in Mac software prices? Quark XPress at $695, 4th Dimension at $695 and the new higher Reflex at $279 are just three examples. You can blame the Macintosh II and the development of more powerful programs which have a limited market and are more corporate in nature. VersaCad which is not available for the Macintosh until later this year will list for just under $2,000 but it is a professional CAD/CAM software application with a limited market and with which engineering companies can save thousand of dollars for clients. Part of the blame goes to the consumers who have repeatedly shied away from good, cheap programs. A cheap price is usually interpreted as not offering much and liquor store owners often find that more expensive booze sells better than cheaper brands. People often equate price with quality!

Apparently Lotus didn't get sufficiently burned with Jazz to stay out of the Macintosh market. A recent article in *Investors Daily* stated that Lotus will be developing a Mac version of its MS-DOS Lotus 1-2-3 spreadsheet. Details of the introduction won't be public until the second half of 1988. Lotus is apparently fighting back at Microsoft who recently introduced Excel to the MS-DOS world. Analysts don't expect it to displace Lotus 1-2-3 but they do see Microsoft earning $20,000,000 in annual revenues. Not bad for second place. It will be interesting to see how well PC Excel does in the Lotus 1-2-3 backyard.

Although Steve Jobs and Next, Inc. are still some time away from announcing their new computer, details are beginning to come out. The machine is rumored to be based on the Motorola 68030 CPU, have up to four 32-bit expansion slots, four or more high capacity 3.5" floppy disk drives, a modem or network adapter, the ability to support color or monochrome displays of 15 or 17" and use a derivative of the Unix System V operating system. A Macintosh like graphics interface would help overcome the less user-friendly UNIX operating system. The price might be in the $3,000 to $5,000 range. Most analysts don't agree that Job's intended market is only for university academic research. That market is not large enough to sustain growth of a new company like NEXT, Inc.

The SCSI port has gotten some good press lately in both *Digital Review* and *PC Week.* It seems it is fast becoming the desired means to connect peripherals to micros. It was noted that if the new IBM System 2 computers had a SCSI port it would dramatically increase the number of peripherals that could be connected to the low end of the System 2 line that have fewer ports. Remember one SCSI port can serve as a connector for 7 peripherals.

It is interesting to note that a committee of the IEEE (Institute of Electrical and Electronic Engineers) recently recommended adoption of the Nubus slot found in the Macintosh II as the standard for all 32-bit microcomputers. Several subcommittee members felt the Nubus design was superior to the Micro Channel design found in the new IBM System 2 computers. Apple promised the IEEE that they would release the technical specification for the bus to further hardware development. Unfortunately, the Micro Channel will still be considered the

contd.

standard because IBM used it and many hardware and software vendors will thus support it.

Missing from the IBM ads for the IBM System 2 is Alan Alda from the MASH crew. It seems Alan had a 10 million dollar deal with Atari for 5 years beginning in 1983. Atari only ran the adds several months but Alda's contract was still binding. That is about to expire and IBM is interesting in Alda joining the rest of the MASH cast. When the new IBM ads began in April of this year, 23.7% of consumers named IBM when asked to identify a computer company. By August of 1987, this had fallen to 18.8% while Apple' recognition rose from 21.1% to 29.1%. Maybe they need "Hawkeye" to rescue the drop in IBM recognition among consumers.

Microsoft Word 3.01

Microsoft recently mailed Word 3.01 to all registered users of Word 3.0. My copy arrived on August 4 and was sent free of charge. It was the only fair thing to do since version 3.0 had the greatest number of bugs I've ever encountered in a new software application. Even Raid™ couldn't get rid of all the bugs in 3.0. One disconcerting fact is that the new version doesn't apparently recognize the "word settings" contained in the icon by the same name set up in version 3.0. If you've made extensive customizing it will take some time to redo the settings if you can remember what they were.

In addition to bug fixes, Microsoft also stated the following about the new version.

1. Word 3.01 now prints faster on the LaserWriter.
2. When using the "page setup's" next file option, the documents are opened and closed as needed instead of all being opened at the beginning.
3. When using the print command (LaserWriter only), reduce/enlarge scales only the text and not the margins. You must increase the paper size in page setup and set the reduction percentage in "Print" to fit more text on the page.
4. When you choose page preview, you cannot change page breaks or margins unless reduce/enlarge is set to 100%. However, page preview does show the effects of the reduction or enlargement.
5. When you choose Quit, Word will prompt you to save changes for each document.
6. Word lets you use all fonts in the System except those names starting with a "." or a percent sign. The font menu only has room for 31 fonts and sizes.
7. When you choose "find, spelling or hyphenate" Word scans the entire document only once.
8. When spell checking, if you click "no change" when Word presents a word, Word will ignore that word for the rest of the session. However, Word will continue to display these words as it scans the document.
9. The "underline" character format will not underline tabs or nonbreaking spaces.

I did notice that many of the bugs which bugged me are gone, but Word still asks if you want to repaginate the document after printing and before quitting even if you haven't made any changes since the last save. It used to ask if you wanted to "save" the document but this has been replaced by "repaginate." Why is it necessary to repaginate before closing, Microsoft? I still see an occasional "Word Temp" file left in the System folder that should have been deleted. Is this a remaining bug that Microsoft didn't fix? Better call Orkin™ !!!

Use of Multiple LaserWriters over AppleTalk

It is possible to use multiple LaserWriters over the same AppleTalk network. They may be hooked into the network at any location of the network. Once the new LaserWriter is physically installed it may be given a distinct name on the network by using the "namer" utility found on the LaserWriter install disk. Once one or more LaserWriters are named, they will appear as separate names under the "Chooser" option. Any network user may sent their print job to any desired LaserWriter by clicking on the appropriate name found in the "chooser."

Cary Lu, What are You Saying Now?

In a recent issue of *High Technology* magazine Cary Lu was quoted as saying, "Over the next two years Mac users will be spared the chaos that will plague the MS-DOS-OS/2 world. For one thing, slow PC-software development and hardware confusion are likely to allow the Macintosh to maintain its nearly two-year lead in applications software over the IBM PC. For another, the central processors that drive the Macs—the Motorola 68000 and 68020—can run the same software, unlike the diverse chips in IBM's new machines." Cary concludes by saying, "Both companies are targeting their new high-end machines squarely at business users. But it will take several confusing years for IBM software to mature. To see where microcomputing is going in the mean time, get a MacII." Based on a combination of both hardware and software, it is easily the best-designed microcomputer yet." (Source *High Technology* magazine)

Just What Computers Does Apple Use Anyway?

Anyone can guess that Apple II's and Macintoshes are probably the number one computers in Apple's Cupertino, CA headquarters. It might be surprising to learn that administrators use IBM 4300 mainframes, sales and marketing personnel work with IBM System/38 minicomputers and the engineers can access the Cray supercomputer. In addition, DEC, Tandem and AT&T computers are also used. Do you think IBM has any Macintoshes on corporate desks? I doubt it but I'm sure you can find a lot in the engineering skunk works! (Source—*PC Week)*

AppleTalk Remote Access Made Easier

Solana Electronics (San Diego) has recently introduced a multiplexer that permits any microcomputer to link into an AppleTalk network. This $495 "R-Server" comes with a Macintosh communications package that allows users to select an AppleTalk network destination and communicate up to 19.2 K baud per second. It connects to a host AppleTalk network and is installed as a network mode. One part of the R-Server connects to a modem and the other to AppleTalk. Once connected, IBM PCs and other off site computers can access any network resource. Once a connection to an AppleTalk connected Macintosh is established, the R-Server sends traffic over the network. Apple is rumored to also be developing products that will carry the Apple logo and permit better communication and connectivity between AppleTalk, DECnet and Ethernet products. (Source—*PC Week)*

contd.

Apple's 3rd, 4th Quarter and Year Results

Apple's 3rd quarter profits were better than expected. Earnings increased 60% while net income was up 66% and net sales up 42%. Estimated earnings per share have been increased from $1.45 to $1.50 per share. Earnings projections for 1988 have also been increased from $2.15 to $2.45 per share. Apple has recently (August) sold for $59 per share which would be $118 per share before the recent 2 for 1 stock split. Remember when Apple was selling for $12 a share. Apple was hit hard by "Black Monday" and was selling in the low 30's again. Unless consumers stop spending and start a recession, the long term prospects still seem very good for Apple.

The fourth quarter was more of the same with earnings up 115%, and net income up 118%. For fiscal year 1987, Apple posted a 37.5% earnings gain, with net income up 41% and sales increases of 40%. This translates into sales of $2.66 billion from $1.90 billion in FY 86. Analysts are predicting the first quarter of FY 88 may break the billion dollar mark with strong Christmas sales, and FY 88 might yield total sales of $3.5 billion.

Dayna Communication's New Product

Dayna Communication (Salt Lake City, Utah, 801-531-0600) has introduced a new file transfer capability for the Macintosh. The new product is called DaynaFile and consists of both 5.25" and 3.5" disk drives that connect to the SCSI port of the Apple Macintosh and permit file transfer from MS-DOS formatted disks to the Macintosh. The 3.5" drive permits IBM System 2 formatted disks to transfer data to the Macintosh. It does not require a chassis card to be inserted into an SE or Mac II slot since it connects to the SCSI port. It also supports IBM PC XT and AT drives. As such, it appears to offer capabilities not available with the Apple card which permits some of the Dyna's files capabilities. The drives contain a controller that can sense if data is written in Macintosh or MS-DOS format for proper read/write operations. There is no Intel CPU that permits users to actually use MS-DOS software but Macintosh applications that can translate or work directly with MS-DOS formatted data will make data transfer very easy. These would include, Excel, Word, PageMaker, etc. DaynaFile also comes with Macintosh software that presents DOS data in a form consistent with the Macintosh user interface so that DOS data files will resemble Macintosh folders. It is unclear if DaynaFile comes with software that will permit text file transfer of DOS data for incorporation into Macintosh applications that do not directly support such transfers. I saw this product demonstrated at the Macintosh World Expo and it appeared to work very well. (Source—Dayna Communication literature and *PC Week)*

Pagemaker 3.0 Version Released

No sooner was 2.0a released than version 3.0 was announced. It incorporates all the features of the new 3.0 version for the IBM PC. Changes include automatic text flow through an entire document, user-defined style sheets, support for spot color, automatic text wrap around graphics, image controls for scanned photographs and bit-map illustrations and 20 complete page designs (templates) for business materials. Other features include, extra pages created for text overflow, color ruler and column guides, automatic page turns during text flow, support for the latest Apple user interface, on-screen pallets for color selection and style sheet formatting. This version also supports a number of the new large screen monitors, scanners and laser printers on the market today.

Use of Video Tapes to Sell Macintosh Programs

Adobe was the first company I am aware of that included a VHS video tape to illustrate what "Adobe Illustrator" could do. Now Odesta is making available to "registered users" a 60 minute VHS, BETA or PAL video tape detailing the many changes in version 2.0 of Double Helix. I mentioned in a previous column that DuPont loans a 6 minute VHS tape to potential customers who want to learn more about their new fiber-optic AppleTalk network.

I would like to publicly suggest that all major companies who major market Macintosh programs produce and market a video tape of their product illustrating just what it can do. Naturally, such tapes would probably only present the programs in their best light so the viewer would have to read between the lines. I realize this idea is probably not cost effective for Macintosh programs costing less than $200. It should be available for purchase (not loan to decrease overhead) through mail order and retail outlets for a reasonable break-even price of around $20. I think this would be feasible for Microsoft, Adobe, Odesta, Omnis, Acius, Lotus, Ashton-Tate, etc. It would stimulate additional sales of high priced Macintosh applications that are becoming more common place with the introduction of the Macintosh II. Other companies could make tapes comparing major programs in the same market such as databases to give the potential buyer a side by side comparison of competing products. This was done without video tape at the Mac World Expo by a consultant who demonstrated Omnis 3 Plus, Double Helix and Fourth Dimension in the space of 45 minutes. He showed how a common database application (sales invoice) would be done in each program. It was most informative and well done. I hope I have stimulated the "mental entrepreneurial processes" of some readers who are looking for a new Macintosh marketing idea.

I was recently send a free video tape by DeLorme Mapping Inc. of Freeport, Maine. They market big ticket ($20,000 to $200,000) mapping systems based on MS-DOS and Sony CD-ROM technology. I found the short video tape to be well put together, which went a long way to demonstrate the companies product which could not be done justice by written literature alone. Such tapes will be the wave of the future!

Lynn R. Trusal may be reached at 301-845-2651 to answer questions about material that appears in the Bits and Bytes Column.

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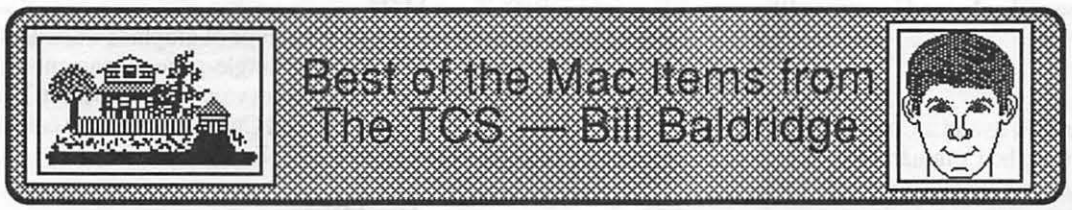

C Programming

STEVE SCHNEIDER on 11/02
Hello, I am new to this board, new to this system and new to telecommunications! I am also learning to program in C with Lightspeed C. I have a very simple (I hope) question. I put together a little program to print "Hello World". In doing so, I had to include the Stdio into my project folder. I believe that this was responsible for making the project take up 47K worth of memory. Additionally, I couldn't really tell what was actually vital to the program from out of the Stdio file. Can someone out there tell me how to include only the minimum necessary portions of Stdio? This would really help me out a lot! Thanks in advance.

LOUIS M. PECORA on 11/10
When you build an application, the Linker will remove only what it needs from the project and your application will not be that large, unless it uses all the routines from the stdio library. I agree with Richard Martin—don't try to write your own stdio routines. You could also pick out the stdio routines from the source file stdio.c, but you better know what you're doing. I wouldn't mess with it. I would recommend using LSC with Switcher as it says in the manual. THINK tech has really done a good job of implementing this. Memory allocation is already done for you. Very nice. And fast. P.S. Don't forget to include the MacTraps library in your project. Stdio needs it! Also don't forget the stdio header stdio.h. No header for MacTraps.

Data Bases

DANIEL YAKOUBIAN on 10/21
I am now usig MS File as a souped up Rolodex to record and access my contacts on various large legal/academic research projects. I use a form that looks like an address card with additional fields for keywords and one for open text. This way I can call up all contacts by project, subject matter, state and other characteristics. MS File does a fine job and it is such a small program that it fits in my 1 Meg of memory without squeezing out too many other programs when I operate under Switcher—(not enough money or memory to go to MultiFinder or Hypercard yet). MS File seems to limit me to two views of my data—my custom form and the default display. I would like to quickly switch views of my data so that I can cut and paste addresses directly to word processing documents, mailing lists, and other documents. I also would like to view a form that includes all of my keyword fields so that I can generate lists of contacts according to various criteria. An unlimited text field is also important so I can maintain a record of calls and services performed for my contacts. Is there a fast, small, cheap alternative to MS File anyone can recommend?

BILL BALDRIDGE on 11/12
I would suggest you take a look at Record Holder Plus. It is very flexible as to formats and has the ability to build templates. I've had text fields with over 20K (it automatically makes scrollable windows). On top of it all, it's CHEAP!

LEE DUER on 11/27
A friend of mine has a business and wants to use his 512K Mac to do mailing lists etc. He has a 20meg Apple HD, MacWrite and Jazz (yuk). I have convinced him to upgrade to a Plus but I really don't know what he should do about a good program to use to set up a mailing list. Ideally he wants to sort by name, zip, occupation, city, and probably other categories. Aside from printing letters to those categories, he also wants to do mailing labels. How about some suggestions?

HOLGER SOMMER on 11/27
I use MS-Word and MS-File with the word print merge option to do exactly what you described in your message.

BILL BALDRIDGE on 11/28
I'd recommend Record Holder for him. It's very flexible and very Mac-ish, and it's only about $60 via mailorder. It can do all the things you requested. The only drawback might be it can't do mail merge, so if that's a necessity, he'll have to look elsewhere (MS-Works?).

DANNY GROVEMAN on 11/28
All the foregoing are good suggestions, and there are probably dozens of good packages that he could do the same thing with. If he is looking for a good database that is flexible and easy to learn and use, I have not yet seen one that beats Filemaker Plus. If he is just doing mail lists and intends to do no other type application with database, then a dedicated mail program would be cheaper and would do the job fine. But as for an all purpose semi-relational database, Filemaker Plus is great. You can do mail merge in combination with MS Word.

Desk Accessories

MARK ROVNER on 11/07
I'll buy a large Heinekin for anyone who can suggest a way I can patch miniWriter so that the smart quotes feature is off. I use MW a lot with Hypercard (which means no menubar) and with MicroPhone (those smart quotes upload as U's). It would save a lot of hassles if MW would default to no smart quotes. Takers anyone?

DAVID GURSKY on 11/08
I have the answer for your miniWriter question. Using ResEdit, open the mWRT resource in your System Folder (or rather, a copy of your System Folder). There ought to be only one entry in there, with an ID of around -16000. As long as there's only one, don't worry and just open it. In any event, the resource is about 16 (decimal) bytes long. Change byte 5 (I assume the leftmost byte is 0) so that the low order bit is off. So if byte 5 is 3D (hex), change it to 3C (hex). Make this the new System File and voila! Alternately, you could open a copy of the suitcase file with miniWriter in it, and perform the same surgery I just outlined, and then use Font/DA mover to put the modified version into your System File. Now where's my beer?

MARK ROVNER on 11/12
JEEZ...IT WORKED!! THANKS! And to tell you the truth, you had me way beyond my hacking "envelope." I still take pride in being able to move snd resources between stacks. Maybe some

contd.

day I'll even know what I did. Anyway thanks, and I promise I'll catch up with you for that beer.

BILL BALDRIDGE on 11/24
It should also be possible to use ResEdit to add a Command key option to the Smart Quotes menu (maybe Command+"). Also, I've yet to see a "smart quotes" that can tell when to use the foot & inches marks (e.g., 5'11") and not quotation marks.

Desktop Publishing

DAN HUGHES on 11/12
Just got my new Ready, Set, Go! v. 4. Boy, this one's really got all the bells and whistles—reads Write Now files directly and let's you edit facing pages. Letraset didn't send the System Disk with the upgrade, so I called and asked about that, and they said they don't send it with the upgrade. But I asked about the neat little RSG icons for files and the tech support guy said, "Just rebuild the Desktop with Option-Command held down while booting the old disk". For the life of me I can't see why this would give me the RSG4 icon for files, and sure enough, it didn't. So much for tech support at RSG, but what can one expect for $10.

JONATHAN PAFF on 11/23
I got to see a preview of Pagemaker 3.0 tonite, courtesy of Aldus. It looks like it will be a genuine winner. It supports color on the Mac II in a variety of ways, permits one to define one's own colors, has style sheets, provides amazing support for text flow, and about 30 other features. It comes with a program called Freehand (nee Kaleidescope) which is an Adobe Illustrator type drawing program. It will also accept text from Write Now and Word Perfect (assuming it ever sees the light of day) as well as MSoft Word. I should have a beta copy by the first week in December and will try to provide more info then. Upgrades will cost $75 for registered 2.0 users, I believe, and those who purchase Pagemaker 2.0 from between the time of announcement (Nov 2?) and DEC. 31st will be able to upgrade for only $15. This will represent a significant savings since the price for the product is to go up by $100.

Graphics & Design Software

RICK STICKLE on 11/19
I hate to be the one with the bad news but, If you are using SuperPaint and the new Multifinder DO NOT go to full page! Trying to get to a full page will freeze your MAC every time. Speaking of SuperPaint, there are two upgrades announced—the first makes SPaint Multifinder friendly, the second incorporates the inprovements that Bill mentioned here a couple of months ago. Now I wonder, do they expect us to pay for BOTH upgrades?

MICHAEL MCCLANE on 11/23
After owning an Apple][for several years, I've finally gotten a Mac SE. I don't know much about graphics programs for the Mac (have played with MacPaint, though). Recommendations on what to look for as a plus or minus.

DAVID GURSKY on 11/23
For general purpose painting, check out one of the following three packages: FullPaint, Canvas, and SuperPaint. All three offer unique features and the latter two combine MacDraw in for good measure. Canvas includes a desk accessory version with most of the main program's functionality. All this power does not come cheap. FullPaint is only $60, but SuperPaint is $80, and Canvas is about $120.

BILL BALDRIDGE on 11/24
Depends on what your needs are. What type of graphics work do you anticipate doing? For general single-page documents, SuperPaint is a good choice (if you can get version 2.0, go for it!). For LARGE documents I'd recommend Canvas, which can edit bit-mapped or object files up to 9'x9'! Enjoy.

Hard Disks

JESSICA WEISSMAN on 11/04
I'm currently trying to decide between a MegaDrive type drive (probably not the Jasmine, but the basic idea is all the same) and a 30-meg hard drive. I don't mind the idea of a 10-meg world per se, since at any time I am EITHER writing OR painting OR programming OR communicating and do little switching between them. What bothers me is the need to duplicate 1.5 Megs of system software and disk accessories on each megafloppy. What do other megafloppy users do? Do any of you keep the system on a teeny 800K internal floppy, for example?

BILL BALDRIDGE on 11/04
I have a 5 Meg Bernoulli box, and have a custom system on each. But I use it similarly to the way you indicate—i.e., a Telecom/Editor cartridge, a HyperCard cartridge, a Paint/Scanner cartridge, etc. What I do, as a back-up, is save the system file on a separate floppy. If I were using one of these in a business, I'd insist on a dual drive (10/10 or 20/20) to ease the back-up. BTW, this is one of the reasons I like the removable media over fixed—you don't have to worry about having every possible font/DA.

DAVID GURSKY on 11/04
Instead of the Jasmine Megadrive/PL Infinity II (which is based on a Kodak drive) or the Bering/Mountain View (which is based on a Bernoulli drive), I would strongly urge you to look at the Peripheral Land Infinity (not the Infinity II from above). The Infinity uses conventional 5.25" disks, which are substantially cheaper then the Kodak or Bernoulli disks. It also has the ability to read disks from IBM PCs and compatibles (who knows why you would WANT to do such a thing, but.... <Grin>).

HyperCard

BILL BALDRIDGE on 11/12
Eric Rall passed along a little gem. If you open the Help Stack, call up the message box (Command+M), type 'go to card 311' and <RETURN>, you will be at a card demonstrating how to interpret/intercept calls to the menu bar. Select any item from the menu bar (like 'About HyperCard'), and see what happens.

DANIEL C. ADKINS on 11/23
I am having trouble returning to Hypercard after I have opened an application from Hypercard while using MultiFinder. I have a Mac+ with 2.5 Megs anduse hard disk partition and DiskTOP. There seems to be no problem with this when using the Finder part of Multifinder. Has anyone else had this problem? Hypercard is on the same volume and stack as the rest of the stacks.

BILL BALDRIDGE on 11/24
If you check the Read Me file that comes with Finder 6.0, you'll note that it states HyperCard will not return from an application while running under MultiFinder (as you have noted). So I guess if you want to use HyperCard with MultiFinder, you'll either need a Mac II or a large screen display.

FRED PUHAN on 11/25
Every time I go to the HELP stack and press the "Exit" button,

contd

I get a dialog box asking, "Where is card 5341 of stack xxx?", where xxx is the volume ID of the drive. Both Clinton and Family Computers, when presented with my question, have just responded with, "Well, it's a bug." I'm new to HyperCard, but it seems to me that a patch could be written into the "Exit" button to return the user back to the "previous" card. Are there different versions of HyperCard out already?

RICK STICKLE on 11/26
Your problem is probally a corrupted address in the button—have someone check the address and then modify your button script. The reason I say this is because I have found out if you move things often enough the buttons start to get confused, the stack I'm building gets carried between my Plus at home and the SE at work and the home card button can't find the stack (same name, etc.) about half the time.

BILL BALDRIDGE on 11/28
From the October "Mad Mac News" - Power User Tips...
• Create a button on your Home card with a script that says, 'go to stack "the stack you want".' When you click on it, not finding a stack by that name it will put up SFGetfile asking, "Where is the stack you want?"
• To zoom directly to the script of an object, hold down the Shift key while double clicking on the object, or while choosing Object "Info...".
• Do not name a button or a field with a name that begins with a numeric character. This causes problems in that if you ask for a button "1812" HyperCard looks for the button whose number, not name, is 1812.
• In the button or field tools, holding the shift key down when dragging constrains the movement horizontally or vertically, making it easy to drag in a straight line.
• With any tool, Option-Drag in Fatbits allows you to scroll the screen.
• To "pre-warm" the cards in a stack so that "show all cards" will really cook through the stack, put an "on openStack" script that locks the screen, shows all cards, and then unlocks the screen. This quickly and invisibly caches all the cards, so that "show card" scripts will work at optimum speed.
• If you are running on a Mac II and want to see Visual Effects, be sure to set the monitor to 2 bit mode.

Other Hardware

BOB HEIGHTCHEW, ON 04/15
I'm trying to steer my business partner toward the purchase of a Mac, but he says the mouse is not a comfortable mode for him. What options are available for an indoctrinated num-locker (read numb) to go Mac with minimum mousing?

BILL BALDRIDGE on 11/11
There are currently three options that I'm aware of: 1) TurboMouse from Kensington—a trac ball, which sits next to the keyboard [someone else has started making one too, but I'm too lazy right now to go look in MacUser to find out, sorry...]; 2) Digitizing tablet—several offerings in this area, but expensive (Summagraphics, Kurta, & another [look it up]); 3) There was a weird offering from a manufacturer whose name I've forgotten, where you wear this silly looking contraption on your head, and point the mouse with head movements. A mini keypad is attached to the keyboard below the space bar to operate the button. I haven't yet seen a touch screen Mac, but I imagine some mad kludger is out there ginning one up.

DEACON MACCUBBIN on 11/10
A Mac touch screen was demoed at the Boston MacWorld. It was a very smooth implementation, too. You could "pick up" the pointer with your finger and move it around on the screen, tapping twice to open a file or once to select a file. I don't recall the name of the manufacturer (a shame, since I want to order one).

BILL BALDRIDGE on 11/18
This might be a good solution for those who need the ability to xfer files easily/quickly from Mac->PC. It's called MatchMaker, and is a 3.5" 800K drive controller for the PC. You plug this card into the half-card slot in a PC and connect "any Apple Macintosh external drive" to it. It supposedly will read, write, and format any Mac format disk. Cost is $149 from Central Computer Products of Filmore, CA (805-524-4189. They supposedly have a toll free number, but I apparently cut it off when I trimmed the ad). 1 year warranty.

MICHAEL LOCKWOOD on 11/22
I have a Mac Plus with one Meg and am considering more memory. The Plus has four slots for either 256K or 1meg SIMMs. 4 - 256K SIMMs = 1meg (standard configuration) 2 - 1meg SIMMs = 2 Meg 2 - 1meg & 2 256K SIMMs = 2.5 Meg, and 4 - 1meg SIMMs = 4meg of ram. I am wondering two things. First of all, why would one upgrade to 2 Meg and not 2.5? If you buy two 1 Meg SIMMs, you still have two slots left for two 256K SIMMs you had before. Secondly, do 1 Meg SIMMs sold for the MacII work in a Mac+? I am wondering why MacCorner is advertising 2 Meg upgrades for the MacII for $189 and 2 Meg for the Mac+ for $349. It can't be that installation is easier on a MacII because the ad says "installation additional." (See p43, WAP Journal, Nov 87).

JERRY WALZ on 11/22
Michael, the difference in prices for 2 Meg upgrade for the II and the Plus is as follows, I think. The 2 Meg upgrade for the Mac II adds 4 256K SIMMs in the empty slots on the II, resulting in a total of 2 Megs. That is not a very good idea as any further expansion results in throwing away the installed 256K SIMMs. For the Plus on the other hand, the 2Meg upgrade adds 1 Meg SIMMs. I'm not sure from your price if that is for a regular 2-1Meg CMOS SIMMs as it sounds low. Best price I've seen around town is $437 at Computer Age with resulting RAM of 2.5 Megs.

MICHAEL LOCKWOOD on 11/23
Thanks for the info. It seems the best thing to do would be to get two 1 Meg SIMMs. That way one would have 2.5 Meg, and if one buys a MacII, you could use the SIMMs in the MacII and put the original 256K SIMMs in the Mac+, if desired.

JERRY WALZ on 11/23
Just make sure that the 1 Meg SIMMs that you get are 120 nanosecond chips. That's what is needed for the II.

Misc. Programming

JEFFREY HARPSTER on 11/23
I am a student a Catholic U. working on a research project, and I am using a Mac SE to collect data. The timing of the subjects is extremely important and must be in the millisecond range. I have some public domain assembly code that uses the Synertek 6522 Versatile Interface Adapter (VIA) chip. The bottom line is that this code written a couple years ago for a Mac 512 does not run on my SE. I am not sure if the problem is with me or the SE. Is anyone familar with this code (written by Robert Westall at

contd

Drexel U), or any other code that does accurate timing from the Mac? How do you time events on the Mac? Thanks for any help.

RICH NORLING on 11/26
I checked my various technical manuals and came up with the following more detailed information. The real time clock chip did change with the Mac Plus, but that should not be the source of your difficulties, since that does not affect the VIA chip. Inside Macintosh Vol. 3 describes the VIA chip as a Synertek 6522 VIA just as you do. The Macintosh Family Hardware Reference manual (available from APDA, I'm using an early version dated March 1987) describes the chip in the Mac Plus as a Rockwell 6522 VIA. I don't know whether Rockwell bought Synertek or whether this indicates a different supplier for Apple's chips. That same manual says that starting with the SE the VIA chip is a custom chip designed by Apple. According to the manual the custom chip follows the same programming model as the 6522; however, your experience may indicate that some differences crept in. The custom things Apple added to the VIA chip are mostly related to running the Apple Desktop Bus. Timer 1 is still used for sound, Timer 2 for disk accesses. It is still supposed to be safe to use Timer 1 for your own purposes as long as you are not producing sound on the machine. Hope this helps.

Mac 'System'

THOMAS M WITTE on 11/03
Our office is slowly becoming a Mac work place. We have one SE and three +'s connected via Appletalk to a laser printer. Three of the Mac's have hard disk. Two have modems. What programs are available that will allow the non hard disk Mac's access to a hard drive? Will any allow sharing of modems? What do you lose in uses (speed?). I understand that TOPS and MACSERVE can do some of this—does anyone have experience with these?

DAVID GURSKY on 11/03
TOPS, AppleShare (AppleServe?) and MacServe will all allow Macs on an Appletalk LAN to share files on disks connected to Macs on the LAN. They vary in functionality. MacServe and AppleShare require dedicated servers. TOPS will support IBM PCs and compatibles, and Sun workstations, and does not require a dedicated server, but there is a noticable performance degradation beyond ten nodes, or so. Now as to modems, you have two choices. The first is a software package called ComServe from InfoSphere. It allows a modem on a Mac to be accessed by any other Mac on the LAN. Another solution is a box from Shiva Corp. called the Net Serial X232. It allows a non-Appletalk device to become a full networking partner on an Appletalk network, including modems. The Net Serial (and its sister device, the Net Modem V1200) also have a really neat feature. If you call to an Appletalk LAN equipped with either NetSerial or NetModem with your plain old Mac and plain old modem, you become a full networking partner on the LAN! It's supposed to work very well (albeit slowly).

JERRY WALZ on 11/03
We have five SE's, three Plus' and one Mac II all running on TOPS with great success. TOPS allows any Mac to access any hard drive on any other Mac. The hard drive station simply has to "publish" whatever folders are to be made available to the net. This can be from one folder up to the entire drive. We also have the Abaton MultiTalk which functions as a node on the AppleTalk net, and allows any three serial devices to be shared. We use it with three modems attached so all lawyers can access various legal research online databases without requiring a modem at each Mac. I've found both TOPS and the MultiTalk to be excellent systems. I'm at Commerce, if you want to talk more. We also have a PS/2 Model 30 on our TOPS network, too.

ERIC RALL on 11/07
The latest release of systemware has an interesting bug. Superpaint will not save a new document if you are operating on a Hard Drive and have no floppies in the 3.5 inch drives. BUT if you put a 3.5 inch disk in, no problem! Even though you are still saving to the Hard Drive and the 3.5 inch is not accessed The scary part is the dialog box that tells you your disk (in my case an 80 Meg HD) is probably damaged! In fact there is no damage, just a system bug. If you run into this on any other programs, try inserting a floppy.

BILL QUALLS on 11/22
I picked up Software Update V. 5.0 the other day (Family Computer in Springfield—$50 and no discount for WAP members). It comes with 3 manuals: Software Update User's Guide, Macintosh Utilities User's Guide, and Multifinder User's Guide. I like this new way of packaging software updates; the manuals are informative. (For example, I never new what Easy Access was for until I read about it in the Update Guide.) No problems running MultiFinder yet, either (crossed fingers). I only(?) have 1 Meg in my Plus, but I think it's worth having MultiFinder just to be able to print in the background and to switch to the Finder whenever I need to without having to run buggy ol' Switcher.

BILL BALDRIDGE on 11/24
I agree with your evaluation of Finder 6.0, it seems pretty tight. NOW—if people will only read the Read Me file so they will know what it can't do. I think there are going to be a lot of people scratching their heads, unless they break down and buy the package from Apple. There just isn't enough info provided in the software release itself.

BILL BALDRIDGE on 11/28
It is possible to boot into MultiFinder from the desktop, just like it was to switch System/Finders under previous systems—just hold down the Option+ Command keys and double-click on the Multifinder icon. Unfortunately, you cannot do the reverse to exit MF—to get back to the Finder you'll have to do a restart.

Pascal Programming

STEVE SCHNEIDER on 11/03
Hello, to all! This is my first time on this net. I am just now learning Pascal. I have Borland's fine Turbo. I want to generate random numbers. I am using the Function "Random mod X" function where X gives you the max +/- value of the returned random number in integers. Every time I re-run the program I get the same set of random numbers. Therefore, I have decided that I must seed the function myself with a random number. Therefore I have two questions: 1) How do I seed ? 2) How do I call the Mac's clock? (This would give me a nice random number.)

RICH NORLING on 11/07
I use MPW Pascal rather than Turbo, so some details may differ. The best way to get a seed is to call the function TickCount, which is a longint that the Mac operating system increases every 1/60th of a second. If Turbo is a normal Pascal, all you have to do to call TickCount is "li := TickCount;". Your description of Turbo's Random function sounds like they are not using Apple's SANE random number generator, so I don't know how you can seed it.

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FERNANDO SALAZAR on 11/27
Anyone know of a convenient way to create a region from a bitmap? For example, to test for mouse-clicks within an icon, I check if the click is within the icon's rectangle, then if the corresponding bit in the icon mask is set. If I could get a mask-shaped region instead, I could just use PtInRgn—and there would be other benefits, like dragging gray outlines in the shape of an object, instead of a rectangle. I could do something like go to the first set bit in the top row of the bitmap, then do LineTos working my way around the edges. But it would be tough to allow for non-contiguous chunks in the bitmap. Any ideas, anyone?

RICH NORLING on 11/28
Fernando, the way you are checking to see if a click is within an icon may take a little bit more code, but I'll bet it's a LOT faster than using PtInRgn. Regions are nice when you have no alternative, but it takes a lot of arithmetic to support them, making even the ROM routines run very slowly. As an alternative to regions, I use polygons whenever that is possible. Polygons are also fairly easy to drag around using FramePoly. Good luck.

Software Misc.

JERRY WALZ on 11/19
I've been using CE's QuicKeys for about a week now with my extended keyboard on my Mac II at the office. It is a very very good tool. So good in fact that I just broke down and ordered a DataDesk 100 for my Plus at home so I can have the same features both places. In case you are not familar with QK, its a cdev that allows almost anything to be done from the keyboard. Now those 15 function keys across the top of the extended board can do real things. Just about everything that can be done with a mouse and menus can be done from the keyboard. In Word and want to go to MORE (even without Multifinder)?, simply hit Option-Shift-M or whatever you care to assign and Word quits properly and MORE opens. I use Suitcase and my MockWrite and MacDialer are way down on the Apple menu. No problem, press a couple of keys and the DA is open. Time to close a window—presss the delete key and the mouse clicks the window (or DA or application) closed. Need the date in various formats?—I hit Option-shift T and it's there. CE is going commercial with its prices however. $99 retail, $69 from MacConnection but it is worth it in my opinion. Try it out with the free demo that is on the Clone Board. Fully functional except it requires a reassignment of keys everytime after a restart. Even then you can get a good feel for it in a days worth of use.

Telecommunications

RICK STICKLE on 11/03
Our office purchased Smartcom II software (latest version) because of our lousy phone system (Rolm, IBM's revenge) and inexperienced people, since Smartcom has a good direct connect mode. The bad news is that Smartcom can't find a printer on an Appletalk system! A call to Hayes confirmed this and they don't care and have no real plans to fix the problem. The only way to print from the screen is via clipboard or save to disk.

BOB COSGROVE on 11/07
My friend at C&P checked with a supervisor, and he said the Call Waiting fix in this area is "tentatively scheduled for the first quarter in 1988."

Word Processors

BOB HEIGHTCHEW on 11/06
I have a 128 upgraded to 512 with a 400K external. How successfully will Microsoft Works run on this configuration?

HOLGER SOMMER on 11/06
Bob, It will work—at least the version I used in the past on my 512-normal worked. I don't know of the newer versions.

JACK MORTIMER on 11/20
My boss has a Mac SE and is using Microsoft Works. He just asked me for a recommndation of a good spelling checker. (With a lowering of my head here) I am not a Mac person so I could not give him a good quick answer. I told him that I would go to the best source of opinions that I knew of for help. Well, here I am. What are the top flight spelling checkers that will check Works documents? I would like a large number of words, speed, alternatives, look-up on request and NO spell as you go-beep if you make a misteak(sic). Thanks for your inputs on this.

DAVID GURSKY on 11/20
WorksPlusSpell is an excellent spelling checker, designed to work exclusively wih MS Works.

BILL QUALLS on 11/22
Software Update V. 5.0 has a new (at least I think it's new) utility that will be of interest to anyone who needs to transfer word processing files between Mac OS and MS-DOS and/or ProDOS. The utility is called Apple File Exchange. Using a WP on a non-Mac computer, you can create a text or DCA file, transfer it to the Mac, and convert it MacWrite format. The program uses script files, called translator files, to do the conversions. A company called Dataviz, Inc. makes translator files for Wordstar to MacWrite and Multimate to MacWrite conversions, and other vendors are expected to develop addtional translator files in the future. I'll have more to say about this program after I've had a chance to use it.

MacII/SE

JONATHAN PAFF on 11/05
As long as the 1 Meg SIMMs are 120 nanosecond chips, they will be useable in a MacII (if they are from Apple, they are 120's). But, there is NO 3 Meg upgrade path for the MacII. By virtue of the architecture of the machine, the permissible increments in memory are: 1 Meg (one bank of 256's), 2 Megs (2 banks of 256's), 5 Megs (one bank of 256 and one bank of 1 Meg SIMMs), and eight Megs (two banks of 1 Meg SIMMs). Each bank must contain the SAME type of SIMMs—they cannot be mixed. The draft version of Inside Mac Vol 5 was fuzzy on this point (although the Apple service Bulletins are quite emphatic), so I tried it myself. The best you will get if you mix the banks is an unreliable two Meg machine consisting of two 256's and two 1 Meg SIMMs. The MacII will look to the lowest common denominator and think the bank consists of all 256K SIMMs.

RICK STICKLE on 11/06
I just found out about the mixing of the SIMMs, and the bank reads the lowest value so you need a full bank (4) for Mac II.

DONOVAN BEAUCHAMP on 11/08
To sell the Plus while the possibility exists and get the SE or not. What are some of the pros and cons. Does all Plus software run on the SE? Are the new ROM routines worth the change. Performance differences? What about the new expansion slot and are RAM upgrades possible without going inside the machine (i.e. the slot). I want the inside scoop, not the rap in Macworld.

ERIC RALL on 11/08
The SE is slightly faster than the Plus. Both machines may be

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upgraded to 4 Megs by replacing 256K SIMMs with 1 Meg SIMMs. The SIMMs must be replaced in pairs so you get 1 Meg —> 2.5 Megs —> 4.0 Megs. On the SE you still have an open slot after the memory upgrade. The SE has a significantly better power supply, 100 watts vs 65 watts. The SE also comes with a fan. Mine is LOUD. Although I have no statistics to back it up, the fans seem to be more of a problem to the two 3.5 inch configurd SE's than the internal HD versions. All RAM upgrades mean opening the machines. Not all software is compatible, but the problem doesn't seem to be a major one. Most manufacturers have already come out with mods. I have found much more conflicts with the system/finder combinations of 4.0/5.4, 4.1/5.5, and 4.2/6.0 than I have come across with the plus vs the SE. Good to see you made it here. Welcome to Washington Apple Pi and the Telecommunications System.

RICK CHAPMAN on 11/13
I thought I'd let everyone know that I just finished compiling and annotating the first six Mac II public domain disks that will be distributed by the WAP. Looks like there is lots of good stuff for you Mac II owners. The first disks should be available by the December meeting.

WAYNE WALKER on 11/16
I remember when the SE first came out that I read in several magazines how to start the slide show that was saved into the ROMs, but I didn't bother to memorize the hex address since I didn't have an SE then (natch, I only get something after something better comes out). Anyway, what is that number? Does anyone remember?

BAILEY WALKER on 11/20
To see the SE ROM slide show: Hit the Interrupt button. Then type "G 41D89A" (no quotes) and hit the return key. You have to reset to exit the slide show. Enjoy.

The Mac Fed SIG

LOUIS M. PECORA on 11/02
The following was recently suggested to me on how to order the Macintosh Programmer's Workshop (MPW), compilers, and other items from APDA through the government: (1) Become a member of APDA (approx. $20, I think, cheap!), Call them for a membership form (206-251-9798). (2) Be sure to tell your purchasing department to put your membership number on the order. You don't need your name, just the number will satisfy APDA. I don't know if this will work, but I will try it once I get my membership, which, I hope, will be soon.

DAN YURMAN on 11/19
Received absolutely first rate publication, "APPLE DESKTOP COMMUNICATIONS SOLUTIONS REFERENCE GUIDE," published by Apple Computer, Inc. It has chapters which explain the basics of the "Apple Communications Framework," together with chapters on MS-DOS, IBM Host, Digital Equipment Corp., UNIX, Northern Telecom, WANG, PRIME, Tandem, and Hewlett-Packard. Easy to read, a joy to look at (good example of desktop publishing applied to computer science), and undoubtedly available from Apple Federal. BTW, hats off to Henry Clifton for his support of US EPA Personal Computer Site Coordinators Conference at RTP, NC, this past week. If you're having any thoughts about supporting Apple Macs, the guys at Apple Federal do in fact stand on their own two feet and are not just salesmen like some companies which shall go nameless here.

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MAC DISKETERIA NOTES

by Martin Milrod & David Weikert

New Disketeria Pricing

Hoopla! Fireworks!! Ta-Da!!! The price of Mac disks has been reduced by $1.00. All Mac disks now cost $5.00 each or $4.00 each for purchases of five or more at the office or the general meeting. Disks purchased by mail will continue to include a $1.00 per disk postage and handling charge up to a maximum of $5.00. We will be trying to issue seven or more disks a month now instead of five so you may take advantage of the reduced pricing to buy an extra two disks for about the same out-of-pocket cost as for five previously.

FKeys Series Now Available

This month marks the issue of the FKey series, thanks to John Gertsch who tested and annotated them. All of the FKeys scattered throughout the current library and many new acquisitions have been grouped into one series of two 400K disks. They are arranged alphabetically within the series. Like the DA series, the FKey series is distinguished by the attractive red, white and blue label that you may have seen used for the Apple II GS disks. The FKey disks will be accompanied by a mini-catalog in an easily readable format containing the program notes and catalog listing.

StackWare Added to Library

Brook Grayson, librarian of the HyperCard Sig, has released the first two disks of StackWare to the Disketeria. These disks are the result of the efforts of John Love who tested, assembled and annotated the material. The first disk includes those utilities that John has selected as most useful for development and modification of StackWare. The utilities also include John's "Stack Resources" Stack that allows the Script programmer real-time access to the syntax inherent to WCMD, XCMD, SXCN and SND Resources. John and Brook have a lot more material that they are reviewing, so look for many more disks in the coming months. We have been a little slow in getting started with StackWare but this may be a mixed blessing as it gives us the opportunity to be selective and to bring you the best of the StackWare that is available. StackWare is being issued in the 800K disk format.

The First Mac II Disks

Rick Chapman, who responded to our request for help in the Mac II, has completed six Mac II specific disks for the Disketeria. These disks will not take the place of the regular Macintosh library, but will supplement that library with programs specifically designed to run on the Mac II. Mac II owners should continue to keep up with the contents of the regular Mac library. Rick notes that, although these programs are Mac II specific, some might run on a Mac SE or Plus with an accelerator card. There is still a wealth of Mac II material being reviewed and you can expect to see more from Rick in the future. The Mac II disk series is also being issued in the 800K format with the red, white and blue labels.

Help Requested, Help Received

Eric Rall, one of the Telecommunications system crew, has volunteered to test, assemble and annotate the Telecommunications disk series. William Jones, one of the stalwarts of our Disketeria, has recovered from his efforts of producing the DA series and has accepted the challenge of testing and annotating the System Utilities. Bob Tobias has volunteered to test and annotate the Programmer/Hacker Utilities. Thanks Eric, Bill and Bob. Look for these series to be issued within the next few months.

Help Still Needed

We still need volunteer help in testing, assembling and annotating the Fonts and Miscellaneous Utilities disk series. If you can write, have a fair knowledge of the Mac and can spare 10 to 30 hours a month, contact Dave Weikert at (301) 948-9646 (metro area) or the telephone number in the mast head (suburban Maryland). After we get these series started, the rest of the programs in the Disketeria will be examined for reorganization into series such as Education, Fun & Games, Graphics, Inits, Paint, Sound, etc.

Wanted—Mac Developer with System Knowledge

We need help from a Macintosh Developer with knowledge of the Mac and Mac II boot process. We have been using an invisible INIT on all of our Disketeria disks. If the disk is used to boot a regular Macintosh, the INIT displays a dialog box with the address and telephone number of the Washington Apple Pi and a statement that you should boot from a system disk; it then ejects the disk. This INIT does not work on the Mac II and we need help in disassembling and modifying the code to make it work. A copy of the INIT has been placed in a folder on the first Mac II disk along with this message. If you can help, please contact Rick Chapman at (301) 989-9708.

About Shareware Fees

To celebrate the new year, please pick up your checkbooks and send the requested shareware fees to the authors for programs that you have added to your software library. We all need to encourage the authors to continue to use this distribution channel. Shareware gives us the opportunity to use a program for a while (usually 30 days) before deciding whether it is useful or not. However, the shareware concept depends upon the honesty of each of us for success. If we don't support the shareware concept with the requested fees, the authors will find different distribution channels. This has already happened for programs written by CE Software (Calendar Maker, DiskTop, etc.) and The Freesoft Company (Red Ryder 10). Note that there were substantial cost increases as these programs went into commercial distribution channels due to the need for advertising, distribution and other fees.

And Now, Here are the Disks...

To see you through the holidays, we are issuing 16 disks including three Utilities, one Fun and Games, one Paintings, one Sounds, two StackWare, two FKeys series and six Mac II series. This month's submissions are brought to you by Rick Chapman, Brook Grayson, John Love, Mary Hockmeyer, William Jones, Bob Soule, Dave Weikert and the efforts of all the duplicators listed under the masthead.

Because of the compressed time this month for accepting articles for the Journal, Program Notes for Disks 135 were not

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received in time for publication; they will be published in next month's Journal. However, the file titles in this disk are listed for your information. The folder information, where appropriate, precedes the listing of program contents. Folder information is parenthesized, programs and files are printed in bold with shareware information printed in bold italic print.

Mac Disk 130: Utilities XXII Spy Stuff

Here's something different for your software library a set of utilities for erasing and encrypting files or whole disks, great for keeping your sensitive information from prying eyes. (If only Ollie had used a Mac at the NSC!) Other handy utilities on this disk will track revisions in your data files, create a startup message for your Mac, or convert your telephone number into letters.

TellerPhone 1.0 Convert your telephone number into the equivalent letters on the touchpad. Type in your number, and the program will show you all the possible combinations. (Did you know that the Pi TCS number is Yum Tuk? The zeros don't count.)

(**ByteBucketStuff** *f*) **Byte•Bucket** Provides a way to track changes in data files. It checks for incremental changes not only in text files, but also in graphics, data base, and desktop publishing files. It can also extract files based on either a specific revision or date. Couldn't get it to work with MacWrite files, only text files. It also seemed quite sluggish. **The B•B Manual** is the documentation in a seven-page MacWrite file; **B•B Release Notes** is a page of additional notes on using the program. **B•B Manual (TXT)** is the text-file version of the documentation and **B•B Release Notes (TXT)** is the text-file version of the program notes. ***Shareware—$35.***

(**Complete Delete** *f*) **Complete Delete** Did you know that when you throw a file into the Trash Can it isn't really removed from the disk and can often be recovered with an "undelete utility"? (Just ask Ollie.) Complete Delete gets rid of those sensitive files *permanently*, zeroing out both the data and resource forks and then deleting the file. (Note the shredder icon!) **complete-delete.txt** is a short MacWrite file describing the program's function.

(**DES** *f*) **DES 2.0** Encrypt those sensitive files into seemingly random bytes, safe from prying eyes. Decrypt them with the proper password. (By the way, DES stands for the Data Encryption Standard of the National Bureau of Standards.) **DES Documentation** is a short MacWrite file describing the program's functions and improvements over Ver. 1.0. ***Shareware—$15.***

(**Enigma 1.1** *f*) **Enigma 1.1** Another utility that encrypts and decrypts files—including not only documents, but applications, DAs, and fonts as well. Look under the About Enigma menu for two screens of help. **Read First!-Enigma 1.1** is a short MacWrite file describing the program's functions. ***Shareware—$10.***

(**Eraser** *f*) **Eraser** As the name implies, this utility will completely erase a whole disk, leaving a blank formatted disk (with name and serial number, if you wish) in its place. **Eraser ∂** No documentation is provided, but you don't really need any.

(**LockemUp 1.1** *f*) **Lock 'em up** Keep unauthorized people from even *using* your Mac with this one. Your Mac will be locked until you enter the correct password. The program also saves a file of invalid password attempts, showing the date, time, and password of any invalid attempts. **Read First!-Lock 'em up 1.1** describes the program's capabilities. Read this file before trying to use the application. ***Shareware—$10.***

(**Reminder™ 1.0** *f*) **Reminder™ 1.0** Displays a message when you start your Mac. The program is invisible except when there is a message to be displayed. You can enter your own messages by following the instructions in the **READ ME** file or the on-screen help. ***Shareware—$5.***

Mac Disk 131: Sounds V
Pee Wee and more

Cough This cough needs to be played back at one of the lower sample rates available in SoundPlay.DA or Super Play 4.0 for best effect.

(**PeeWeeStuff** *f*) John J. Anderson contributes the following sounds of Pee Wee Herman himself for all (any?) of his fans. **I know you are** "I know you are but what am I?" One of the great questions of our time. **make me** "Why don't you make me?" **meant to do that** "I meant to do that." John suggests that this will make a great beepsound. **pee wee laugh** Hah... **peewee startup** "Good morning, I'm here."

(**RimShot** *f*) **RimShot** Two toms and a symbol do not a rim shot make. The **generic notice** says "If you liked this sound, and are feeling exceptionally charitable, send a buck."

Secret Word No, this is not Groucho with "Say the secret word..." but is the chaotic result of one of the contestants on the program saying it.

SoundPlay A small sized player for digitized sounds.

(**Uh, Clem** *f*) **Uh, Clem** The Trivial Pursuit question is to identify the person who was the source of this sound (which means I couldn't figure it out). **Uh, Clem II** The same thing with a slightly more tinny tone.

Mac Disk 132:Utilities XXIII-PowerStation

Five handy utilities are offered on this disk, including an evaluation version of the PowerStation™ mini-finder and an updated version of the Cat•Mac file-catalog program. There's also a program for calculating amortization tables, a Rolodesk application, and utility that alters the standard elevator scroll bar.

InstallMemoryBar A very simple program that replaces the normal scroll bar with one that "remembers" the elevator position you specify by clicking the mouse in the elevator box while the Option key is down. (The remembered position is shown with a grey elevator outline in the scroll bar.) Check the brief instructions in the "About Memory Bar..." under the Apple menu and in the "Memory Scroll Info" under the File menu.

Rolodesk A card-file style Rolodesk program. Includes utilities for converting between Rolodesk files and Quickfile and MacWrite files. Information is located in the "About Rolodesk" under the Apple menu and in the "Rolodesk Help" under the Utilities menu.

(**Cat•Mac™** *f*) **Cat•Mac** A neat utility for creating listings of the files on your floppy disks or your hard disk, updated from the version on Mac Disk #57.1. The listing shows type of file, file name, volume name, modification date and time, and size. The program allows sorting by the various categories, as well as rearrangement of the columns of information displayed. You can save the listings as a text file (with data separated by spaces, tabs, or comas) so that the catalog information can be exported to your favorite data base or word processing program. The "Level 1"

contd.

version of the program provided here is limited to 1,000 files. Level 2 allows 10,000+ files and includes other features not found in Level 1. The $10 "TeaseWare" registration fee gives you a credit toward purchase of the Level 2 program. **Cat•Mac-L1Info** This folder contains **Cat•Log™**, a listing of all files on the Cat•Mac volume, and a **Scrapbook File** accessible within the Cat•Mac application that contains information on some "Hidden Cat•Mac Power Tools" and on registration (including a mailing label, so you'll have no excuses for not paying your fees). ***"TeaseWare"— $10.***

(Amortize 2.3 *f*) Create schedules of amortization for your loans with this simple utility. Tell the program the amount of the loan, the number of payment periods, and the interest rate, and it will display a table with columns showing the amounts of your payments, divided into interest and principal. It also shows the remaining balance at each period and the total interest payments over the life of the loan. Could be handy for checking up on your bank's end-of-year statement for tax purposes. The program can also be used to calculate retirement income from investments. **Amortize 2.3 Doc** is a four-page MacWrite document that explains the functions of Amortize 2.3. ***Shareware—$15.***

(PowerStation™/E *f*) **PowerStation™/E** An evaluation version of the new Finder substitute from Software Supply. A "mini-finder" in the tradition of SuperFinder and Oasis, the program provides quick and easy access to regularly used applications, documents, and DAs, permitting you to quit one application and launch another without having to wait for the Finder to reconstruct the Desktop or having to deal with an array of folders. This is accomplished by assigning on-screen buttons to applications, or even data files. There are 27 buttons on a standard Mac screen (or "page"), and the program allows up to 16 pages (only two for this evaluation version). Installation is accomplished easily by dragging the PowerStation™ icon to the System folder and then assigning applications to unused buttons. The program incorporates a user-configurable screen saver (functional in this evaluation version only within PowerStation™), as well as several keyboard shortcuts. **Open PowerStation™** can be kept on the Desktop so you don't have to open the System folder to launch PowerStation™. (Or you can set PowerStation as your startup application.) **PowerStation™ Orientation** is a seven-page MacWrite Document that explains the functions of PowerStation™. For more information, see Marty Milrod's article in the November 1987 edition of the Journal.

Mac Disk 133: Utilities XXIV

(Big Window *f*) **Big Window** Called Window Changer in the application, it expands the "Save as" and "Open" file dialog boxes used by some programs.so that near maximum length names may be used. Use it only on the programs listed in the **Big Window Documentation.**

(ChooseCDEV™ *f*) **ChooseCDEV™** The control panel orders the CDEV files in alphabetical order except for the General screen, which is first. This little application lets the icons be placed in any order desired by the user, so that it isn't necessary to scroll to find those frequently used. See **About Choose CDEV™** for all the documentation needed.

(DA Utility *f*) **DA Utility** A small program designed to help manipulate desk accessories. DAs may be renumbered and renamed, useful for instance for an application's private desk accessories as the **DA Utility Docs** explain.

(SafeLaunch Utilities v1.1 *f*) **LaunchMaker 1.1.** An FKEY that, when invoked, displays a list of applications from which an application can be selected in the usual Macintosh fashion. When the "Make FKEY" button is pressed, an FKEY will be created and placed in the same folder as the chosen application. The FKey may then be installed in the System File with the appropriate utility. ***Shareware—$5.*** **FastLaunch1.1** This file, when placed in the System folder, speeds up the document or application launch process and contains much of the common code that would otherwise be required of each of the FKeys. **I'd Read This If I Were You** Excessively cutely titled documentation of the above. [Note SafeLaunch, the DA, mentioned in the documentation, is on WAP disks 126 and 2.08.]

(FolderShare™ *f*) **FolderShare** This program is only useful to an AppleShare™ network (will not work with Tops™ or MacServe™) and requires System 4.1 or later. Unlike AppleShare, in which only the creator is permitted access to newly created folders, FolderShare lets the creator decide what access privileges for new folders will be assigned to new folders automatically.

(Font Squeezer™ *f*) **Font Squeezer** Reduces the amount of disk space used to hold fonts in the system and font files created by Font/Desk Accessory Mover. One piece is installed into the system file and automatically unsqueezes fonts as they are used. The other piece is a utility program that allows fonts to be selected and squeezed to save disk space. The unsqueezer and two squeezed fonts are distributed as a sampler. **Font Squeezer Documentation** is an advertisement for the preceding. ***Demoware—$15 for the squeezer part.***

(FontDisplay Ltd. *f*) **FontDisplay** Displays the entire character set of any Mac font using a 16 x 16 character grid as they are in Inside Macintosh or in a keyboard layout. In addition, a window is available to display any text you wish in the selected font in any style. FontDisplay is being distributed on a demo basis without printing or setting change capabilities. The **Font Display 5.0 Docs** tells you all you need to know. ***Demoware—$20 ($25 non-US) for a fully configured copy.***

(In the Info+ 2.0.1 *f*) **Info+** Puts a new item in the menu bar which displays the time and date, lets the Mac's volume be controlled, has an event timer, and views disk space and free memory. ***Shareware—$10.*** **IWPrint** Prints typed in text or text files on an Imagewriter II using the printer's built-in fonts. **Layout 1.3** Allows customization of the layout of icons on the desktop, adjustment of label fonts and font sizes, and changes the information seen when viewed by name, size, or date.

Mac Disk 134: Fun & Games XXV

Blackjack 2.0 A nice BlackJack simulation with good graphics. Look for the rules under the File menu.

Cairo ShootOut! (Version 1.2) Here's the popular shoot-em-up arcade game where you blast away at familiar icons. Look for Help under the Options menu.

Hearts 0.8 A computerized version of the game card. Instructions under the Help menu.

Yahtzee! (Version 1.0) A computerized version of the popular dice game. Look for instructions under the Yahtzee! menu, but you may need to know the basic game to figure it out.***Shareware—$5.***

contd.

Lets Get Tanked! (Version 1.0) Here's a Mac version of tank-battle game that was popular in the arcade game craze a few years ago. Call it sour grapes if you want, but the Mac's tank shoots faster, further, and more rapidly. Fortunately, the Mac's tank is not as smart as you are, so you can devise strategies to get the better of your opponent if you work at it.

Euchre (Version 1.0) A card game played with four players on two teams, using 24 cards. (The Mac will play the hands of the other three players for you.) The play of the game includes simple bidding and the competition for tricks, similar to Hearts. Instructions are under the Help menu. ***Shareware—$10, or $5 plus two suggestions for improvement***

(Blackjack 3.1 *f*) **Blackjack 3.1** Another computerized version of the card game. This one gives you lots of flexibility on the rules and other factors, such as number of players, number of desks, and betting conventions. The point count system is based on Edward O. Thorp's book "Beat the Dealer." Tune up on this one before heading to Atlantic City! **BJ3.0 Doc** is a four-page MacWrite document that describes the options available within Blackjack 3.1.

(MacYahtzee *f*) **MacYahtzee** Another version of Yahtzee for the Mac. You may need to know the basic idea of the game to play this one. **MacYahtzee Doc.** is the three-page Word document that explains the functions of MacYahtzee.

Mac Disk 135: Paintings VII : More People

(Hadley's Women *f*) **Ann, Fence, Joan, LisaMarie, NewBalance, Rebeca, Ronda** and **Weights.**

(James Bond *f*) **007** and **Thunderball.**

MacTidings™ Sampler. ViewPaint 1.5

HyperCard StackWare

Mac Disk 136: StackWare - Utilities

HyperMacintalk This stack is designed to allow you to access the MacinTalk speech driver directly from HyperCard using HyperTalk script. You must have the MacinTalk system file resident in your system folder. MacinTalk is available on Mac Disk 112 or from your Apple dealer at no cost if you bring in a floppy for the file to be copied to.

HyperSleep The stack includes the HyperTalk script and instructions for installation for a timeout screen saver. It can be installed with the home card or in any other stack.

Importer 1.1 This utility imports ASCII, tab delimited text files into new HyperCard stacks. A fix for tab problems in an older version is included. The utility automatically reads the selected text file and creates a stripped down stack to hold the data. It allows you to name the fields and do some layout. ***Shareware—$10.***

Script Report Totally invaluable for inquiring minds. It allows you to pick a stack and then gives you the various HyperTalk scripts that make the thing go. I did discover one problem. The cancel button does not work - you get the scripts ready or not. ***Shareware—$10. (or whatever).***

Visual Effects Buttons for 12 visual and sound effects are provided along buttons to easily see the appropriate scripts. Included are the basics such as *Iris Close, Dissolve* and *Boing.*

(Applications *f*) **MenuKey 2.2** Automatically places a Desk Accessory of the same name in your resident System file. It acts as a toggle, double click on the icon once and it installs. The next time you double click it will be removed. The DA allows instantaneous changing of your CMD-key equivalents for the various Menu Items while you are still in an application (HyperCard for example). Certainly beats going to "ResEdit" and trying to remember what the various Menu Items are, much less those CMD keys that have already been used. "MenuKey" safeguards against such inadvertent duplication.

Stackware Detective Produces hex listings of your favorite XCMD or XFCN resources for those "development-types" among you Washington Apple Pi members. ***Shareware—$10.***

(Reference *f*) **Command Reference** A MacWrite document. It lists all the most frequently used commands in HyperCard and HyperTalk. **HyperCard Shortcuts** A Microsoft Word document consisting of two pages of CMD-key equivalents to traveling around HyperCard with ease. These pages are meant to be copied back to back so that one piece of paper results for your maximum convenience. **HyperTalk Reference** A reference guide for script writing. **Menus for HyperCard** You can add, delete and manipulate your own menus with this utility stack. It looks like it's not for the faint of heart (lots of "be carefuls").

(Resource *f*) **Resource Copier 1.2** A nifty, but limited version of "ResEdit" in stack form, whose sole function in life is to copy both XCMD and XFCN Resources back-and-forth between stacks. The associated detailed HyperTalk script presents an extremely valuable tutorial in manipulation of various HyperCard objects. It presently will not replace "ResEdit", but John Love states he is working on that deficiency, just for hex, of course. **Stack Resources** By John Love. Speaking of John Love, he has provided this stack that allow the Script program developer real-time access to the syntax inherent to WCMD, XCMD, XFCN & SND Resources.

(Sound *f*) Want to know about HyperTalk's "play command"—these two stacks will help you go for it. **Sound Convert 1.0; Sounds.**

Mac Disk 137: StackWare - Clip Art

This disk contains two interconnected stacks of MacPaint documents. It is an expansion (a total of 307 cards in both stacks) of the Clip Art stack provided with the HyperCard software. The graphical link buttons are missing from the new artwork.

Clip Art.1. Clip Art.2 The full title is Clip Art Collection 1.6.

FKeys Disks

Mac Disk 4.1 : FKeys 1

ATalk Key This FKey brings up a dialog box that enables or disables switching of printers. This was not tested due to lack of an AppleTalk network. (FKey #9).

BigCursor Toggles the cursor between standard size and twice standard size. (FKey #8).

(Clipper Key 1.6 *f*) **Clipper Key 1.6** This FKey has one purpose in life — to make things easier for telecommunicators using desk accessory word processors. It processes text pasted into the clipboard by Desk Accessory word processors, inserting carriage returns at word breaks nearest to a user selected line length. It also translates characters that most bulletin board service will not accept to acceptable ones. Not tested. Read **Clipper Key Doc** for details on other features. (FKey #6).

(Clippy *f*) **Clippy** An FKey to allow you to paste ⌘ ✓ ◆ into a document. When the FKey is run, it puts the above symbols

contd.

into the clipboard. Paste them in. If you get boxes instead of the symbols in the document, select the boxes and choose Chicago as the font. **Clippy Documentation** contains assembler code, but no clear instructions on use. (FKey #5).

(**CrashSaver Key** *f*) **CrashSaver Key** Attempts to trap the bombs and return to the desk top. From Macazine. **Crash Saver Documentation** is minimal and is an advertisement for Macazine. This was not tested because Mac software never bombs <grin>. (FKey #7).

(**DA Key 2.15** *f*) **DA Key 2.15** This FKey allows you to temporarily install a Desk Accessory under the Apple menu without installing it into the System file. Will not work without an Apple menu. For details, read **DA Key 2.1.Doc**. (FKey #9). ***Shareware—$15.***

(**Date Key 2.05** *f*) **Date Key 2.05** This folder has two files of documentation **Date Key 2.0 Docs** and **Date Key Documentation**. This FKey will put the current date or time where the insertion point is. You have your choice of formats (FKey #6). ***Shareware—$5.***

DisplayRes2.1.Fkey An FKey to show all resources in all open resource files. The author says that this FKey is still under active development. (FKey #6). ***Shareware—$3.***

(**Directory 1.10SW** *f*) **Directory 1.10SW** An FKey which allows you to view the contents of your disks and perform basic operation on your disks such as renaming and deleting. This is a very extensive program. **Directory Documentation** is 11 pages. **Directory 1.10 Last Min. Info** is last minute news. The folder also contains **Directory ƒåµñch, Directory Σxternål, PNTG Hook**, and **TEXT Hook**. (FKey #7). ***Shareware—$15.***

(**DirCreator** *f*) **DirCreator** and **DirDelete** Two FKeys which allow you to create and delete folders. See **DirFKEYs Doc** for all the details. (FKey #7).

(**Disk-File Utility 1.0.Fkey** *f*) **Disk-File Utility 1.0.Fkey** Documentation for this is in **Read first!.(MacWrite)**. An FKey which performs the following file manipulation Setting of File attributes, Renaming files, Deleting files, Copy 400K disks, Initialize 400K disks, and doing a Volume Info. 800K copying is promised real soon. (FKey #8). ***Shareware—$3.***

FadeKey Dissolves the screen to black until a key is pressed, then the screen is returned to normal. A cute effect for those of you who like to blank the screen by hand. (FKey #0).

(**FastClock** *f*) **FastClock** An FKey to show the time. May be useful to those of you who don't have the Alarm Clock under the Apple. **FastClock Documentation** is the documentation. (FKey #7).

FKEY Runner demo A Desk Accessory for use with FKeys. This is a demonstration version of the FKEY Runner program published by Dreams of the Phoenix, Inc. and distributed on Quick & Dirty Utilities Volume 2.

(**fkey3** *f*) **fkey3** From **FKey#3 Documentation** This is a spiffed-up version of Apple's standard FKey #3. That one, like this one, makes a MacPaint file out of the current screen. This one has 2 extras 1) It centers the image on the page and rounds the corners nicely. 2) It marks the resultant files A thru Z. (FKey #3).

(**FKEY Manager** *f*) **FKEY Manager** An elaborate answer on how to manage FKeys. You can define a "hot" area on the screen, which, when the pointer passes over, a Pop-up menu appears showing all installed FKeys, and from which you can choose one to run. It also allows the keypad (for those of you who have one) to be used as a single keystroke method of invoking FKeys. Also does the standard housekeeping for FKeys save, load, delete, rename, renumber, temporary installation, and get information. Many other features not mentioned here. Overall, the program is very nice and complete, but it seemed a little buggy, I got some non-repeatable errors. There are also two other files in the folder which are necessary for FKey Manger to run **KeyPad** and **Pop-Keys**. You can find out about them and more in the **FKEY Manager Manual. FKeys** Allows Function Keys to be selected from a menu. A great idea, but it doesn't seem to be fully functional from the desktop. It works best when invoked from within applications. Will not show FKeys installed by Suitcase unless the DA is closed and reopened.

Mac Disk 4.2: FKeys 2

(**FKey Installer** *f*) **FKey Installer** Released by Dreams of the Phoenix, Inc. for non commercial distribution. Performs routine FKey maintenance Load, Save, Rename, Renumber, Delete, and Get FKey information. It was released to encourage further development of the function key concept. It should be able to install the function keys on this series of disks into your system file. All this and more is explained in **FKey Installer Manual** and **FKey Installer Notes**.

(**FONT-FKEY-DA Sampler** *f*) **FONT-FKEY-DA Sampler** Allows you to sample Fonts, FKeys, and Desk Accessories without having to install them into your system file. If you send the author something which pleases him, he might send you the source code. Clues as to what he might want are in **Sampler Instructions**.

FormFeed Key I Ejects a page from an Imagewriter. (FKey #5).

(**IconMover** *f*) **IconMover** The author claims that this utility makes it easier for HyperCard users to import icons into HyperCard. Not being a HyperCard user, I don't know if it does what it is supposed to do. The author's phone number is in **IconMover Doc**. (FKey #9). ***Shareware—$3.***

Install Date Key 1.0 Installs Date Key version 1.1 into your system file. Date Key types the current date at the insertion point. (FKey #5). ***Shareware—$2.***

Install Folder FKey An application which installs an FKey which allows you to create folders. (FKey #9). **Install DA Key** Installs an FKey which allows you to run a DA from a suitcase file. Only one DA should be in the suitcase file. (FKey #6). ***Shareware—$5.***

(**LaserKeyInstaller** *f*) **LaserKeyInstaller** Allows you to make screen dumps on the LaserWriter. Not tested due to lack of LaserWriter. It is also not installable by Suitcase. (For those of you who forgot or did not get the first disk in this series, Suitcase is by Software Supply. It is highly recommended.) A very nice write up for LaserKeyInstaller is included in **LaserKey.Wrt.** ***Shareware—$15.***

(**Locare 1.8 SW** *f*) **Locare 1.8 SW** An FKey to do file finds. It returns more information than the standard Apple Find File. What else it can do is in **Locare 1.8 SW Doc** (FKey #8) ***Shareware—$10; $15 if you don't send in your own disk.***

(**MenuMaster 1.0** *f*) **MenuMaster 1.0** An FKey to edit your menus. It allows you to change the wording of almost any menu. It also allows you to assign command key equivalents to menu items. Limitations are discussed in **MenuMaster docs**. (FKey

contd.

#7) *Shareware—$5.*

Orator Installer One of the more unique ideas in date and time acquisition. This application will install an FKey which, when invoked, will say the date and/or time (your choice). It requires MacinTalk to run. The application contains the documentation and other options for use. It bombs on my system when I try to print the registration form. It offers your choice of FKey slots for installation. *Shareware—$5.*

PanicKey 1.16 This one is just for fun. (FKey #5) *Shareware—$3.*

PatchOpenResFileKey Hopefully, the name of this one is self explanatory for those of you who might want to patch an open resource file, because we sure don't know what it all means. (FKey #9)

(**PrinterBurp Key I** *f*) **PrinterBurp Key I** PrinterBurpKey1 sends a reverse form feed to the ImageWriter. Maybe useful for printing things in color in multiple passes. These statements and not much more is in **PrinterBurpFkeyDocs.** (FKey #5).

(**SafeLaunch 2.2** *f*) **SafeLaunch 2.2** This FKey allows you to launch other applications without returning to the finder. It does a variety of other useful tasks, which are explained in **SafeLaunch2.0 Docs. I'd Read This If I Were You!** has the changes made for the 2.2 update. (FKey #6). *Shareware—$5.*

(**Screen Clip** *f*) **Screen Clip** Puts the contents of a rectangle that you choose into the clipboard. (FKey #6). **Window Clip** This FKey will put the contents of the current window or screen into the clipboard. (FKey #5).

(**ShutDOWN FKey!** *f*) **ShutDOWN FKey!** For those of you in a hurry, this FKey will do a shutdown from within an application. A warning that you need System 4.1 or later is in **ShutDown Docs.** (FKey #7).

Sleep A screen blanker FKey. (FKey#8).

UnPack.FKEY and **Unpack.DA** A DA and an FKey to do the same thing unpack files. Both are included so that you can invoke this function the way you would like to use it. (FKey #8).

Version Reader 2.2.Fkey This FKey reads the signature resource of a file. Write the auther if you like it. (FKey #5).

WBEHIND This FKey rotates windows to the front. From MacWrite, it brought my footer window to the front. (FKey #6).

(**Window Fkeys** *f*) **Window Fkeys** Allows you to rotate through all your open windows from the keyboard. Dire warnings about alerts and modal dialog windows are in **Window Fkey.doc.** Source code is in **Window Fkey.Asm** and **Window Fkey.Pas.** (FKey #9).

(**Window Manager FKeys** *f*) **FKEY-Close Window** Will close any window with a close box. (FKey #5).

FKEY-Send Window To Rear Sends the front most window to the back. (FKey #4).

FKEY-Toggle Window Size This FKey will activate the zoom box of any window which has a zoom box. (FKey #6). The documentation for all of these is in **Window Mgr FKEY's Notes.**]

Mac II Disks (800K format)

Mac II Disk 20.01: Graphics I

This disk is devoted to Mac II graphics (with a little astronomy thrown in). You should realize that full color graphics displays take up a tremendous amount of memory. All of these programs have been tested on a Mac II with 2 megabytes, but they may have problems if you are using MultiFinder to simultaneously run other programs.

StarMapper Mac II A star mapping program with a total library of over 1500 stars. You enter the coordinates of the sky that you want to view, your view angle, and the maximum star brightness into a text window. The stars are then displayed on the screen. The interface is not very Mac-like but the program will be of interest to astronomy buffs. MultiFinder compatible.

(**Giffer** *f*) **Giffer 0.96b** Giffer is a program which allows you to display and modify GIF, ThunderScan and Quantized Digiview image files on the Mac II. GIF is a general machine-independent graphics format that is popular on CompuServe. The program is easy to use and works well with MultiFinder. Editing features include contrast and brightness changes, image scaling, and individual scan line shifting (a useful feature when cleaning up ThunderScan images. Be sure to set your system to display multiple bits (16 or 256 as appropriate) before using this program (use the monitor function in the control panel). Included in this folder are 6 sample GIF image files including **DebraJ.gif, Earth.gif, KimDoughnuts.gif, Mikki2.gif, Miller.gif** and **Sondra.gif.**

(**Display** *f*) This folder contains seven demonstration images, along with two programs to display those images. These computer generated images were created by a program called Solid Dimensions produced by Visul Information, Inc. The images are designed to show off the Mac II's graphics capabilities and to get you to buy the Solid Dimensions program. **Arches Image4, Balls, Color Demo Files, FineJet4, IceCream, Spheres5, Tubular** and **VII Tree Image** are the image files and they range from the abstract to the somewhat realistic. All of them are impressive. **Slideshow** A slide show of the 7 images in this folder. Requires the **Color Demo Files** along with the seven images found in this folder. Be sure to set your system to a 256 bit display before running this program (use the monitor function in the control panel). This program is not MultiFinder compatible! **Display** is one of the earliest image demonstration programs. Allows you to display any of the 7 images in this folder. This program does work under MultiFinder.

Mac II Disk 20.02: GrayView and DAs

This second disk of the Mac II series contains yet another image display program, called Grayview. This program converts Thunderscan files into its own format. Included are eight digitized images for your viewing pleasure. We also have thrown in some tasty desk accessories for your computing pleasure.

Color kaleidescope A simple kaleidoscope program that creates interesting color images on the Mac II.

Menu clock v.3.0 An INIT file that adds a clock display to the menu bar. It seems fine under both Finder and MultiFinder.

(**Grayview 1.16** *f*) **Grayview 1.16** Allows you to convert Thunderscan files to 32 level gray shade images which can then be displayed on the Mac II screen. These files can also be converted into standard Mac II startup screens (just place the resultant file in your system folder). Documentation is included in the **About Grayview** and **More GV 1.16 Info** files. According to the author this is the last non-commercial version of this program. Grayview is MultiFinder compatible. **Grayview Convert** Early Grayview documents are not 100% compatible with the most recent version of the program. This program updates old

contd.

file so that they can be read by Grayview 1.16. All of the Grayview files included on this disk have already been updated. The program is documented in the **About Converter...** file. **Kim Doughnuts, USC Girl, Juggler, Sailboard, StartupScreen1, Cube, and Glass (II)** are the sample Grayview images.

(Desk Accessory *f*) Stars II A Mac II version of the popular screen blanker. The major problem is that it is not MultiFinder compatible. **BigZoomIdle** A manual screen blanker that works fine on the Mac II and is MultiFinder compatible. **Klutz** Version 0.3 of a desk accessory for modifying the Mac II's color lookup table (CLUT). Most of the video cards for the Mac II are capable of displaying 256 colors (or shades of gray) out of a possible 17 zillion colors (well let's just say its a very large number). The CLUT determines the mapping between pixel values (which can range from 0 to 255) and the color that is actually displayed. Klutz allows you to modify the CLUT. It displays a 16x16 grid of colors, each representing an entry in the CLUT. Just double click on the individual cell you want to change and the standard color picker will appear. Klutz also allows you to load and save CLUT files. A sample continuous gray scale CLUT (**Gray CLUT**) is provided.

Mac II Disk 20.03: Miscellaneous

This third disk of the Mac II series contains an eclectic mix of utilities, applications, sounds and graphics.

(Color Interface *f*) Kolor Kolor is a program that allows you to change the default colors associated with buttons, check boxes, scroll bars, windows, menus, and text hi-lighting. Kolor works in conjunction with the Control Panel, adding its own icon to the Control Panel list. To use Kolor, just drag it into the System Folder, and then access the Control Panel. Refer to the file **Kolor Instructions** for more information.

Mac II Color A set of four resources that can be used to control the color of your windows, controls, dialogs and menus. These resources must be installed into your system using ResEdit. This program also includes ResEdit templates for the new Mac II resources. If you are not comfortable using ResEdit, I recommend the simpler Kolor program.

Colorize By Neal Trautman. Another Mac II colorizing program which will colorize individual applications. ***Shareware—$5.***

(Sounds *f*) Animal and **Mineral** Thirty sound resources are included in these two files. These sounds can be used to replace the standard beep sound on a Mac II or they can be used by HyperCard in conjunction with the play command. In either case, just use ResEdit to copy the 'snd' resource into either the System file or HyperCard. The sounds are divided into the two files Animal and Mineral (we really need some vegetable sounds to complete our collection). The included sounds are:

Baby Lamb	Boing	Bowl	Car
Chord	Clang	Click	Clock
Dave	Elephant	Fast hey!	Flute
Gunshot	Harpsichord	Hey!	Hi There
Honk	Lamb	MeepMeep	Monkey
Ray	Sax	Sax Low	Sea Lion
Shatter	Silence	Spam	Spin Cylinder
Twilight Zone	Uuh.		

(Mac II Icons *f*) Easy Access • Macintosh™ II, General • Macintosh™ II, Keyboard • Macintosh™ II, Mouse • Macintosh™ II, System • Macintosh™ II A set of five customized icons for the Mac II. These icons can be installed into your System file to give it that special look. The icons are documented in the **Read Me (Teach Text)** file. ***Shareware—$1.***

(MacIIBugs *f*) MacIIBug1MB, MacIIBug2MB, MacIIBug5MB, MacIIBug8MB Four different versions of MacsBug for the Mac II. MacsBug is the standard Macintosh debugger. These files come with no documentation and are really only useful to programmers.

(MacinTalkII *f*) MacinTalk II The system file that allows the Mac II to talk. This routine can be connected to HyperCard (given the proper 'glue' routines) or can be used in conjunction with other talking programs.

(Pascal *f*) This folder contains files which demonstrate using MacinTalk from MPW Pascal.

(Sound->Beep *f*) SoundOff][™ An INIT file for your Mac II that will play sound resources when the system starts up. The resources in the Sound *f* on this disk are compatible with this program. Brief documentation is provided in the **Sound Docs** file. ***Shareware—$5.*** **Sound->Beep™** Converts old SoundCap files into sound resources. (SoundCap files are created using a SoundCap digitizer.) Brief documentation is provided in the **Sound Docs** file. ***Shareware—$10.*** **Sound Docs** Brief documentation for the Sound->Beep™ and SoundOff][™ programs.

(Mandelbrot *f*) Mandel881, MandelSANE These programs calculate the Mandelbrot set and display it in color on the Mac II screen. The Mandelbrot set is a fractal derived from an iterative application of a simple mathematical rule. Even without understanding the math, the results are spectacular. The first version uses the Mac II's numeric coprocessor (a Motorola 68881) directly while the second version accesses the coprocessor through SANE (Standard Apple Numerics Environment). The two together can be used to produce timing comparisons of the two approaches. Not MultiFinder compatible.

(Ergo *f*) Ergo II A rather strange program that illustrates something or another about area-preserving, iterative maps. This appears to be an exercise for upper-level physics students, and includes course notes describing the program and its background (the **Ergo.doc** file). The documentation appears to require a Princeton font to read the equations. We have included this font within the document, so just use the Font/DA Mover to copy these fonts from the document into your system. Although we do not understand the physics, it does create some pretty patterns on the screen.

Mac II Disk 20.04: Graphics II

This fourth disk of the Mac II series contains yet more graphics. We have included some nice special effects programs, a very good Mandelbrot generator, a PICT display program and a very nice color start up screen.

StartupScreen A full color Apple logo startup screen. Just place this file in your System Folder and restart.

(PictDisplay *f*) PictDisplay for Mac II Displays both PICT data files and PICT resource files (which are used as startup screens). PICT data files are generated by such programs as Cricket Draw and GraphicsWorks. It also converts PICT data files into startup screens. **Color MacPaint Girl** A sample color PICT file of a famous Japanese lady. **Kim.PICT** A black and white PICT file of young lady named Kim.

(Special Effects *f*) There are five programs in this folder that all create interesting geometric patterns on the Mac II screen. You really need a color monitor to appreciate the myriad of

contd.

patterns that are generated. The programs are **Mesmer, Kaleidescope, Color Optical, Color Mac Star** and **Spirograph Mac II.**

(Mandelbrot II Color Only *f*) MandelColor A color Mandelbrot set rendering program. It works only on the Macintosh II, and you need a color display (preferably with 8 bits of color resolution.) You'll also need at least 2 MB of memory if you want to generate full screen displays on a SuperMac or other large display. If you have the required setup though, this is the best Mandelbrot program that we've seen. Be sure to set the monitor to 8 bits before running the program. The program is well documented in the **About MandelColor** file. **1-Basic Mandelbrot Set, 2-Mandelbrot Closeup, 3-The Bay of Mandelbrot,** and **4-Fiords (the crinkly bits)** are four sample images computed by MandelColor. ***The author requests a $10 donation to the Vision Fund for the use of this program.***

Mac II Disk 20.05A: Ray Trace Programs

This is a two disk set containing a complete image generation program for the Mac II. This program uses a technique called ray tracing to create some amazingly life-like pictures. To run the program, you must first create a data file describing the scene you want to create. A calculation program is then run to create a temporary image file of the scene. Finally a second program is run that converts this temporary file into a standard Grayview file and displays it onto the screen. These disks are a must for anyone interested in computer generated art.

The program comes complete with source code and documentation. This disk contains the executable programs and all of the documentation. Several example images are also included. The second disk contains all of the source code for the programs. The program is implemented in LightSpeed C, but could easily be modified to work with another C compiler. You do not need the second disk in order to run the programs.

Ray The main ray tracing program which converts scene description files into temporary image files. The generation of a complex image may take several hours, but this is only due to the tremendous number of calculations that need to be performed. ***Shareware—$10.***

Ray2 Converts temporary image files into Grayview documents and displays them on the screen.

(Documentation *f*) Ray.doc The main documentation for Ray. **Readme** Additional documentation for Ray. **About the MacII Version** A description of both running Ray and Ray2 on the Mac II. **Copying Policy** Description of the policy regarding the copying and distribution of these programs.

(Examples *f*) glass.dat, brick.dat, and **island.dat** are three example scene description files.**glass.tmp** is an example temporary image file created from glass.dat. **Glass** and **Brick** are two sample Grayview images created from the above data files.

Mac II Disk 20.05B: Ray Trace Source

Rayp, ray.h, ray.c, cal.c, hit.c, rnd.c, ext.c, int.c, tex.c, fil.c, mth.c, val.c These appear to be the files required to compile Ray in LightSpeed C.

Ray2p, Ray2.c, Ray2.R, Ray2p,rsrc, Environs.h, Environs.Lib These appear to be the files required to compile Ray2 in LightSpeed C.

ray2.c (Amiga), display.c (Amiga) These are the source files for the original Amiga version of Ray2. They are included here in order to document the original author's system. This program was rewritten by Bill Bond for the Mac II.

GS DISKETERIA NEWS
by David Todd

Yes, Granny, there is a new GS disk this month.

/WAP2008 Odd Bits I is still being prepared as this month's deadline arrives. It should contain some sounds, pictures, a slide show that works with the new roms, Finder icons, updates of DA's, and perhaps a game or two. Exact details will be in the next Journal.

By next month we should have several disks of GS fonts available.

WAP TUTORIALS
by Robert C. Platt

Introductory Apple II and Mac tutorials are offered each month. Remember that the Introductory Apple II tutorials have been improved. In January and March, the tutorials will emphasize the //e and //c. In February, topics such as the Finder will be covered for IIgs owners. Call the Office to reserve a place.

The following special tutorial has been scheduled. The fee is $15 ($20 for non-members.)

"Music on Your Macintosh" — *Judy Moore*

Saturday, Feb. 13, 1988, 10 a.m. - noon.

Work with Professional Composer, DeLuxe Music Construction Set, Music Type and Performer. Bring your own software and Mac. Judy Moore, a high school teacher and member of Music SIG, is repeating this popular tutorial.

CORRECTION

The Altair 8800 microcomputer was designed by Ed Roberts and Bill Yates of MITS. The December WAP Journal incorrectly credited Steve Jobs.

Editorial contd. from pg 3

the refill was startling. Till this test, our approach was conservative—we used only Apple supplied cartridges. It looks as if we may change our practice.

We also call your attention to the ***1987 Wap Journal Index*** which is published in this issue by subject matter. It comes to us via many hours of volunteer effort by Harvey Kaye, working in AppleWorks. Thanks, Harvey. This is indeed a useful service to the Pi.

Now, if we can only get a steady stream of artwork from our talented artist members.

WASHINGTON APPLE PI DISKETERIA MAIL ORDER FORM

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 (IIgs & Mac): - Members $ 5.00 each; Non-members $ 8.00 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.
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( ) 43 IAC 29 Utilities H
( ) 44 Utilities I
( ) 45 Diversi-Copy
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( ) 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/Statistics
( ) 71 Music
( ) 72 Keyboard Games
( ) 73 Text Adventure Games
( ) 74 Paddle Games
( ) 75 Color Graphics for Fun
( ) 76 Education
( ) 77 Utilities
( ) 90 Spreadsheet C Genl. Bus.
( ) 91 Spreadsheet D Investment
( ) 92 Spreadsheet E Bus. Recd.
( ) 93 VisiPlot & VisiTrend
( ) 95 Spreadsheet F-Coin Coll.
( ) 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 Tutrl.)
( ) 110 Personal/Education
( ) 111 Games C
( ) 112 Utilities C
( ) 113 Business B
( ) 115 IAC 12/13 Misc.
( ) 117 Picture Packer
( ) 118 Utilities D
( ) 119 IAC 15 Misc.
( ) 120 IAC 16 Misc.
( ) 122 IAC 17 Misc.
( ) 123 French Vocabulary
( ) 124 Utilities E
( ) 125 IAC 18 Misc.
( ) 126 Sights and Sounds
( ) 127 Math/Science
( ) 128 Games D
( ) 130 Diversi-DOS (rev.)
( ) 131 Personal/Educ. 2
( ) 132 IAC 19 - Utilities F
( ) 133 IAC 20 - Pascal & DOS3.3
( ) 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.
( ) 145-147)3 disks)Ap.Logo Util.
( ) 150 EDSIG1 (Elem. Math)
( ) 152 IAC 31 Miscellaneous
( ) 153 Investments A

DOS 3.3 contd.

( ) 154 Investments B
( ) 155 IAC 33 Miscellaneous
( ) 156 IAC 35 Applesoft-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 (Utilities)
( ) 171 Cat-Graphix
( ) 172 Print Shop Graphics
( ) 173 Riley's Pers. Instrum.
( ) 174 Imageworks
( ) 175 No Name Yet
( ) 500 Master Catalog Listing
( ) 501 Util.-Beginner's Choice
( ) 502 Util.-Intermediate User
( ) 503 DComm
( ) 504 Database - LOGIC
( ) 505 Reading Fun
( ) 506 Astronomy Programs
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( ) * 183 Cave of the Mind
( ) * 184 Zyphur Riverventure
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( ) * 187 Devil's Tomb
( ) * 188 Caves of Treas.Isl.
( ) * 189 Furioso
( ) * 190 The Magic Kingdom
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( ) * 193 Abductor's Quarters
( ) * 194 Quest for Trezore
( ) * 195 Underground City
( ) * 196 Merlin's Castle
( ) * 197 Horgrath Castle
( ) * 198 Deathtrap
( ) * 199 The Black Death

Note: Eamon disks 200-229 are also available. See previous month's order form.

ProDOS Volumes

( ) 802 Utilities (A)
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( ) 804 Shareware
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( ) 807 Imageworks
( ) 808 Comm-Term
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( ) 810 Haunted House
( ) 811 Adventures Disk
( ) 812 Toddlers and Kids
( ) 813 TAWUG-1
( ) 814 TAWUG-2
( ) 815 TAWUG-3
( ) 816 TAWUG-4
( ) 817 Telecom
( ) 818 1987 AW Tax Template, (Shareware)

Pascal Volumes (See also 133)

( ) 300 PIG0:ATTCH 1.1/BIOS
( ) 301 PIG1: ( ) 302 PIG2:
( ) 303 PIG3: ( ) 304 PIG4:
( ) 305 PIG5: ( ) 306 PIG6:
( ) 307 PIG7: ( ) 308 PIG8:
( ) 309 PIG9 ( ) 310 PIG10:
( ) 311 PIG11: ( ) 312 PIG12:
( ) 313 PIG13: ( ) 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
( ) 416 Kermit Source Code
( ) 417 Kermit Documentation
( ) 418 Kermit Running Code
( ) 419 Util.-Z83,REZ,VDE
( ) 420 Small "C" Compiler

Apple /// Volumes

( ) 1001 Games Volumes 1 & 2
( ) 1002 Basic Utility Vol. 1
( ) 1003 Basic Utility Vol. 2
( ) 1004 Sys. Utils & Data
( ) 1005 New Member Disk
( ) 1006 Word Proc. & WPL
( ) 1007 Games for Kids
( ) 1008 The Best of MAUG
( ) 1009 The Best of the Source
( ) 1010 The Best of TAU
( ) 1011 D3. Backup
( ) 1012 Sketchpad&Slideshow

Apple IIGS Volumes @ $5

( ) 2001 Utilities & Pictures A
( ) 2002 Demo Disk A
( ) 2003 Freeterm
( ) 2004 Slide Show I
( ) 2005 Demo Source Code 1
( ) 2006 Demo Source Code 2
( ) 2007 M18 Courses
( ) IIgs Systems Disk

Macintosh Disks @$5

( ) 17.3a Red Ryder 9.2
( ) 17.2b Red Ryder Doc.
( ) 31.1 Dun.Doom/Eliza Talks
( ) 32 Fun & Games II
( ) 35 Fun & Games III
( ) 36 Utilities III
( ) 38 Graphic Tools
( ) 39 XLisp and Mini-ADA
( ) 40 Mac Videos
( ) 41 Cap'n Magneto
( ) 42 Studio Session (512K)
( ) 44 Boston II Fonts
( ) 45 Games IV
( ) 46 Games V
( ) 47 Fonts IV
( ) 48.3 Fonts V

Macintosh @$5 contd.

( ) 49 Utilities IV
( ) 50 Paintings III
( ) 51.2 Telecom II (no sys)
( ) 52.1 Utilities V
( ) 53 Utilities VI
( ) 54 Games VI
( ) 55 Games VII
( ) 56 Games VIII
( ) 57.1 New Memb. Disk 86
( ) 59.1 CE Sampler II
( ) 68 Utilities VII
( ) 69 Utilities VIII
( ) 70 Utilities IX
( ) 71 Utilities X
( ) 72 Utilities XI Sys./Grph.
( ) 73 Word Processing
( ) 74 Fun & Games IX
( ) 75 Fun & Games X
( ) 76 Fun & Games XI
( ) 77 Fun & Games XII
( ) 78 Fun & Games XIII
( ) 79 Fun & Games XIV
( ) 80 Fun & Games XV
( ) 81 Utilities XII
( ) 82 Utilities XIII
( ) 83 Telecom III
( ) 84 Fun & Games XVI
( ) 85 Fun & Games XVII
( ) 86 Utilities XIV
( ) 87 Utilities XV
( ) 89 Fun & Games XVIII
( ) 90 Utilities XVI
( ) 91 Fun & Games XIX
( ) 92 Education II
( ) 93A & ( ) 93B Fonts VI
( ) 94 Paintings IV
( ) 95 Fun & Games XX
( ) 96 Fun & Games XXI
( ) 97 Fonts VII
( ) 99 Inits I
( ) 100 Fonts VIII
( ) 101 Fonts IX
( ) 102 Sounds I
( ) 103 Utilities XVII - W.P.
( ) 104 Fun & Games XXII
( ) 105 Fun & Games XXIII
( ) 106 Fun & Games XXIV
( ) 108 Fun & Games XXV
( ) 109 Sounds II
( ) 110 Fonts XI
( ) 111 Sounds III
( ) 112 Utilities XVII
( ) 113 Fonts XII
( ) 115 Telecom IV
( ) 116 DAs XII
( ) 117 Utilities XIX
( ) 118 Paintings V
( ) 119 Utilities XX
( ) 120 Inits II
( ) 121 Utilities XXI
( ) 123 Graphics II
( ) 124 Paintings VI
( ) 125 Sounds IV
( ) 127 Paintings VII
( ) 128 Fun & Games XXVI
( ) 129 Telecom V
( ) 130 Utilities XXII Spying
( ) 131 Sounds V Pee Wee+
( ) 132 Untilites XXIII
( ) 133 Utilities XXIV
( ) 134 Fun & Games XXV
( ) 135 Paintings VII

Note: Mac Disks are contd. on reverse side of this page.

*Vol. 181 required with these disks. **Date:** _____
Note: Allow 2-3 weeks for mailing. Total Order = ____ Disks; Postage $_____; Total Amount Enclosed $_____.

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ADDRESS: _____ Washington Apple Pi, Ltd. Telephone _____
Attn. Disketeria

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Macintosh Disks contd.

HyperCard StackWare:
( ) 136 StackWare - Utilities
( ) 137 StackWare - Clip Art

DAs Series: (entire set $35)
( ) 2.01 ( ) 2.02 ( ) 2.03
( ) 2.04 ( ) 2.05 ( ) 2.06
( ) 2.07 ( ) 2.08 ( ) 2.09
( ) 2.10

FKeys Series:
( ) 4.1 ( ) 4.2

Mac II (800K):
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WAP TUTORIAL REGISTRATION

Apple II: The following three WAP tutorials are being offered to **Apple II** 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. We are experimenting with alternating the sessions between Apple IIgs and other Apple II. (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. The fee for each **session** is **$10.00**. You are urged to bring an Apple, monitor and disk drive. (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.

( ) January 5 (//e and //c specific)	- **WELCOME TO THE WORLD OF APPLE**	( ) February 2 (IIgs specific)
( ) January 12 (//e and //c specific)	- **HOW TO USE YOUR APPLE SOFTWARE**	( ) February 9 (IIgs specific)
( ) January 19	- **POPULAR APPLICATIONS: APPLEWORKS**	( ) February 16 (IIgs specific)

Macintosh: Tutorials for the beginners are regularly given on the 2nd, 3rd and 4th Monday evenings of the month at the office, from 7:15 - 10 PM. The fee for each **session** is $10. You may sign up for 1, 2, or all 3 sessions. You are strongly urged to bring your Macintosh—WAP does not have equipment for you to use. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

( ) Monday, January 11 or ( ) February 8 - Introduction to Macintosh . Prerequisite: Guided Tour to Macintosh.
( ) Monday, January 18 or ( ) February 15 - Intermediate Mac Skills. Prerequisite: Familiarity with Desktop, disk copying, etc.
( ) Monday, January 25 or ( ) February 22 - Personalizing Your Mac for Productivity. Prerequisite: First two sessions or equivalent.

Non-Regular Tutorials: The following tutorials are being offered in the next two months. The fee for these tutorials is $15 ($20 for non-members). A more detailed description is given elsewhere in this publication or was given in a previous month.

( ) **WordPerfect 2.0 for the IIgs - Lee Raesly - Saturday, January 9, 9-12 am, Office.** Fee $15 ($20). Learn this popular word processing program. Bring your IIgs, WordPerfect and a blank disk.

( ) **Disk and File Recovery for the Apple II - Lee Raesly - Saturday, Jan. 30, 9-12 am, Office.** Fee $15 ($20). How to bring back files from the grave. Bring your Apple II and a sample of your disk graveyard.

( ) **Music on Your Macintosh - Judy Moore - Saturday, February 13, 10-12 am, Office.** Work with Professional Composer, DeLuxe Music Construction Set, Music Type and Performer. Bring your software and Mac.

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

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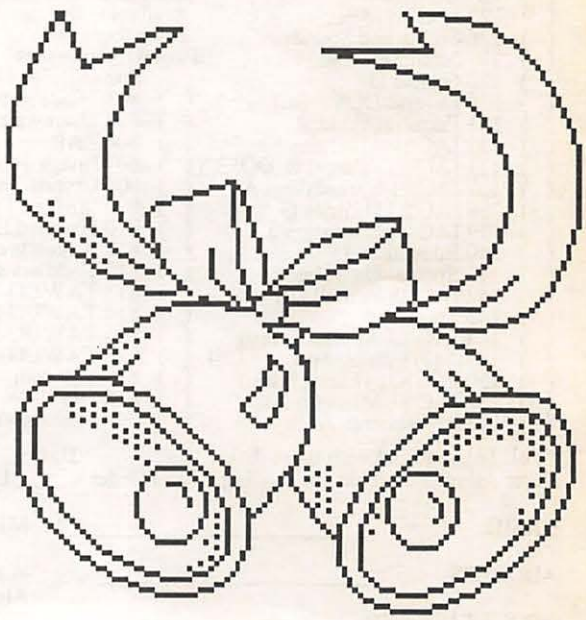
Note: ***Index to Authors*** **and** ***Index to Advertisers*** **appears on page 78 of this issue.**

Best Wishes for a Happy 1988



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