## Washington Apple Pi



Volume 11

July, 1989

Number 7

## **Features**



Contents—p. 3

MacCORNER'S GREAT ANNUAL

## WAREHOUSE **BLOW-OUT SALE!**

We are clearing out our ENTIRE WAREHOUSE inventory! ALL software and peripherals will be reduced 30 -99% off!

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DEMO SPECIALS! Over 1,000 new & demo products! MICROSOFT SUPERMAC CORNER STONE APPLE CRATE MacBOTTOM RADIUS LETRASET SOFTWARE

Software/Accesories	List	Super-SALE
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Disk Cleaning Kits	30	3
MouseMats	12	4
Desk Organizer (+)	79	4 5 7 8
DeskScene	40	5
HFS Locator	79	7
Hard disk Utils	99	9
GAMES starting at	below> \$	9
	195	10
MindWrite		
SmartScrap & Clipper	80	10
SONY DSDD (10)	60	15
MacDraw (d)	100	29
Omnis 3	495	59
Mac3D	295	67
PixelPaint	399	79
Photon (Scoop upgrade)	495	89
Readlt OCR	395	99
LaserPaint Color II	595	109
Quark Xpress	795	299
HardWare	List	Super-SALE

Here are some HOT examples:

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LaserWriter Trays	70	5
Quiet Cool SE (quiets fan)	59	10
A+ Optical Mouse (+)	99	19
Felix (+) (mouse)	150	39
Mac II/IIx/IIcx/SE30 2 meg Upgrade	599	149
20 Meg Tape Backup (as is)	995	199
Kroycolor	995	298
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CMS 80 (quantum)	1795	779
EMAC T-60 Tape backup	1399	793
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**June 3, 1989** 

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SALE

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## We're ComputerLand Mid-Atlantic!

#### A Message from Our President....

Art Lundquist, President Co-Owner/Founder ComputerLand Mid-Atlantic, Clinton Computer



#### Why does the bottom of this ad have two logos --Clinton Computer and ComputerLand Mid-Atlantic?

The answer is simple! To provide even better support, service and value for you our valued customer -- Clinton Computer has joined the ComputerLand network and has begun to operate some Metro area ComputerLand stores. During the next several months, we will purchase other locations and our existing Clinton Computer stores will change their names to ComputerLand Mid-Atlantic.

Over the next several years, Clinton Computer will expand to open and operate ComputerLand stores throughout the Mid-Atlantic area.

Some of you have heard about our purchase of some ComputerLand locations or have seen ComputerLand banners in our stores and have asked us what is going on.

Has Clinton Computer's ownership changed?

No. Clinton Computer joined the ComputerLand network, but is still owned and operated by its founders, Chuck Perilli and myself. We will continue to provide the best value, service and support to you.

Will we carry more products?

Yes. Our stores will offer Apple, IBM, COMPAQ and Hewlett-Packard, along with 87 other brands available through the ComputerLand network. Not all of our stores are authorized for all products yet, so please call.

Will our prices be lower?

Yes. ComputerLand's large purchasing power will give us the opportunity to be the most competitive chain in the Mid-Atlantic region.

Will our service still be the best? Yes. Even better! As part of ComputerLand, we will be offering a more comprehensive and economical service plan -with world-wide service capability.

What about training?

We will be offering even more courses and opening more training locations.

What about Government Sales?

ComputerLand intends to be one of the largest suppliers of all the major microcomputer products to the Federal Government.

Are all ComputerLand stores in the Washington area owned and operated by Clinton Computer?

No. Be sure to shop at those listed in this ad for the value, service and support that you have come to expect from Clinton Com-

If you have any other questions, please write to me:

> Office of the President Clinton Computer 7469 Old Alex. Ferry Road Clinton, MD 20735

I look forward to hearing from you.

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Come see the new, versatile and extraordinary Macintosh® IICX. With the Motorola 68030 microprocessor, it's every bit as powerful and fast as our top-of-the-line Macintosh IIX - in a smaller size!

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COMPUTERLAND MID-ATLANTIC offers Washington Apple Pi members a 25% DISCOUNT OFF THE LIST PRICE on all Apple-brand peripherals and Apple-Care. For upgrades, the 25% discount applies to the parts only, not to the labor cost. 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. Discount cannot be used in combination with other promotions. Products on allocation from Apple are excluded from this offer. COMPUTERLAND MID-ATLANTIC reserves the right to change this policy at any time.

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#### Table of Contents

WAP Data Bank		
Officers & Volunteers		2
Hot Line		8
Classifieds		67
Journal Business - Editorial		7
Club News		
WAP Membership Form		4
Disk Library		
Mac Disketeria	Martin Milrod	62
Apple /// Disketeria	David Ottalini	
Apple II Disketeria		66
Disketeria Order Form		67
Meeting Notes		
MS WorkSIG Report	Chris Bastian	5
Calendar & SIG News	Peter Cook	
Journal Meeting Notes		14
SIGs & Slices		
NAUG Seminar	Bob Oringel	43
Reviews	Ü	
Flexware-Serious Accounting for the Macintosh	Cindy Carter	20
Claris CAD	Frank Potter	
Mac Q&A	Milrod& Morgenstein	
L.A. Crackdown	JimWellman	
DungeonMaster	David Wood	35
Wizardry V - The Heart of the Malstrom	Kim Brennan	36
Memory Game	Phil Shapiro	38
Pirates!	Jim Wellman	39
Late Nite Patches for AppleWorks	Gary Hayman	40
The Graphics Exchange	Gary Hayman	44
A History of Robert Lissner's /// EZ Pieces Tutorials	David Ottalini	45
Tutorials	Lynn Trusal	68
Low Cost MicroComputer Mapping	Kim Cimmery	
Columns	Kill Charlety	······································
The Playroom	Steven Payne	50
Bits & Bytes	Lynn Trusal	50
Recent TCS Downloads	Paul Schlosser	54
Wired	Leon Raesly	
Best of the TCS - Apple II Miscellaneous	Paul Schlosser	57
Apple Appended New Misse Live	Von Channa-	40
Apple Announces New Micro Line	Ken Chapman	
Cartoon	Jim Donnelly	5

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□ Apple II e □	Mac 512 e	☐ Mac II cx	☐ Modem 2400
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☐ Apple II GS ☐	Mac SE		□ FAX modem
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□ Basis □	Other Mac		☐ Printer, laser
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#### MS WorkSIG Report by Chris Bastian

A growing WORKSIG met on May 17 to examine one of the program's new capabilities: Desktop Publishing. Previous Works versions (1.0 and 1.1) had only the capacity for single column word processing, importing of graphics, and line-drawing touchups. However, with Works 2.0 (and 2.0a), fairly professional looking documents can be prepared by using a range of new Works features, including linked text columns and built in Draw utilities.

The DTP demo focused on the preparation of Issue #1 of WORKSheet, a onepage newsletter designed to replace the regular SIG meeting announcement. In a blank WP document, two text blocks were created and linked. A text document (containing the WORKSIG report for the June Journal) was copied to the clipboard, and then pasted into the first text block. When the block was resized, the extra text filled the second block. For the Masthead, a 'pi' symbol  $(\pi)$  was created with the drawing tool, then grouped with two shaded background rectangles. A third text block was created to hold the title "WORKSheet." To display

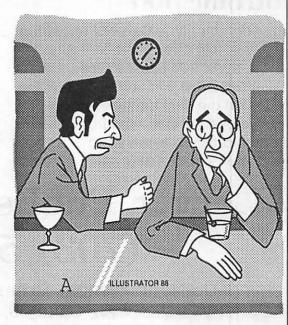
the ability of Works to integrate both standard text and graphics, the Volume/ Issue numbers and Date entry were added as standard WP text, and moved into position by adjusting the left margin setting.

The "Next Meeting" headline was created using another new Works feature, SPREAD TEXT each word ("Next" and "Meeting") was written, and then cut to the Clipboard. An angled line was then drawn, and assigned a 'blank' fill pattern. When the SPREAD TEXT option was selected from the menu, the text in the clipboard was entered as a graphics item along the length of the line, without the line itself being displayed. A new text block

was created for the meeting notice itself, with the words "San Francisco" jazzed up to show how characters within a text block could be individually edited.

After a final text block was added at the bottom left with a highlighting line drawn around it, the only task left was colorizing. Utilizing the new COLOR option in the FORMAT menu, the masthead was colored Yellow and Brown, the subtitle was painted red, and border drawn around the entire document was touched up in blue. The final displayed page was printed on an ImageWriter II printer with a color ribbon.

Following our June presentation of Heizer's "Best Answer" linear programming template, WORKSIG is scheduled to meet on July 19 and August 16. Given our small size, however, dates are fluid, so call me (301-530-1935) to arrange for your own personal subscription to WORKSheet, so you'll know about changes in advance.



"An inspection team from Armonk? Stand up to them, André! What are you—a man or a pointing device?"

## Are you serious about service?

If you rely on a "service bureau" for your desktop publishing output, you may miss the kind of personal attention and extra care you used to get from your typesetter. Now you can have the best of both worlds—typographic excellence and overnight turnaround on your traditional and your Linotronic jobs.

#### Fifteen Years of Success

Carver Photocomposition, Inc. has been successful in the typesetting business since 1973. Our success is based on a combination of typographic expertise, state-of-the-art technology, and extraordinary service. Besides being expert typesetters, we are experienced providers of telecommunications, disk conversion and desktop publishing support.

## PostScript on the Linotronic 300

Trading under the name **Carver Publishing Services**, we now offer PostScript runoff on our Linotronic 300 Laser Imagesetter. This is just the latest addition to our full line of services for the desktop typesetting user. We've been setting type from telecommunicated data and word processing disks since 1980.

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#### We Use Your System

Carver offers superior service to desktop publishing system users because we use Ventura Publisher, PageMaker and Quark for much of our own day-to-day production. The chances are that if you have a problem, we've already solved it for ourselves.

#### Radio-Dispatched Delivery Service

We have radio-dispatched pickup and delivery. We have fax machines and a computer bulletin board to speed service and save courier charges. We have years of experience translating word processing documents into typesetting. We are expert users of desktop systems. In short, we do it all.

## Carver Publishing Services (703) 528-0772

1025 North Fillmore Street, Arlington, Virginia 22201 #1 DuPont Circle, N.W., Suite 30, Floor 1B, Washington, D.C. 20036

Open 24 hours a day, Monday through Friday in Arlington.

Some of the changes in the way it looks are intentional and exploratory in nature: readers have asked for clearer ways to distinguish between articles on different computers. Others have indicated that the Journal seemed too dense—hard to work through.

In signficant part, however, the new look stems from the fact that we had to design it from the ground up—every page had to be designed anew, with no assistance from earlier editions, or from the previous Managing Editor. And we had to do it on very short notice.

That's okay, we hasten to add—we knew what we were getting into (sort of) and welcome the challenge. We do ask that you accept the warts that will surely appear with some tolerance, and that you let us know the ways in which you want to see the Journal evolve.

Nothing is locked in, and the next Editor will have his or her own opportunity to work on new ways to make the Journal more to everyone's liking. If there are aspects of this edition that you like, you are encouraged to pass them along. The same goes for things that you absolutely hate. One way or another, things will change, and with your participation, they will change for the better.

Franz Fanon once wrote—well, we have been told he wrote, but we can't check our sources right now—"What doesn't kill me, makes me stronger."

So it is with the Journal.

#### Editorial

#### **Help—Wanted and Available**

Time was, when life in a computer club was quiet and relatively uneventful. That has, however, not been the case recently at Washington Apple Pi. Alarums and excursions we have had, in bulk, and some of the consequences of all this commotion can be seen here.

The July issue of the Journal is being produced by a new editorial staff, with very little notice and with no help from previous issues. We started from scratch, and this shows, to some extent, in the changed format that you see. Presumably, at some point in the future when a new President has been elected, life has settled down to a less frantic pace and the tumult and the shouting have receded to distant memories, the Journal will settle down as well. It may very well present a new face at the same time, as we receive suggestions from members and readers on ways to make the Journal easier to read, more interesting and more responsive to their needs.

We hope to precipitate those kinds of reactions and assistance from all of you. The Journal is, after all, your publication; it exists, as does Washington Apple Pi itself, to make your relationship with your computer easier, more friendly, and—dare we say it—more fun. (It seems that we do dare say it.) One unexpected and wholly congenial benefit from all the current difficulties has been an outpouring of offers of help and assistance from members, all of which are very much appreciated.

We are thinking of sponsoring a competition to help us redesign the look (and feel?) of the Journal. It has been criticized in the past for being difficult to sort out the articles of interest to its readers and, to some of us at least, as being a little wooden. To the extent that those criticisms are valid, we endorse efforts to make it less so, and we will support those efforts as vigorously as we can.

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We actively solicit help from volunteers in the area who may be interested in sharpening their own skills in the desktop publishing arena. The basic programs that are used in preparing and presenting each month's Journal are Microsoft Word and Aldus PageMaker, using the Macintosh as the platform from which all these efforts spring. If you are willing to help us in our endeavors, call the Office and let us know. And if those calls get short-circuited (as can happen with disquieting frequency in the electronic era) get in touch with the Editor and let us know about yourself and your interests. Your can help yourself, the Pi—and you can even learn a lot in the process.

How many times in your life do you get this kind of opportunity, with almost no down side? We did say almost, you understand, because these things will take some time out of your schedule. But here again, the time limits are those that you can set yourself, and we think that it can be time well spent.

So come on in—the water's fine.

N

Have a computer problem? Several club members have volunteered to help other club members.

#### **Guidelines for Hotline Use**

- Hotline is for club members only.
- Remember these are volunteers: be courteous; ask for help, not for a job to be done for you.
- Respect all telephone restrictions where listed—no calls after
   10:00 PM except where indicated.
- Calls regarding commercial software packages should be limited to those you have purchased. Do not call about software for which you have no documentation.
- All telephone numbers are home numbers unless otherwise specified.
- When requests are made to return calls, long distance calls will be collect.

#### **Hotline Coordinator**

Larry Feldman

(202) 546-9556

#### Apple II

General	
Dave Harvey John Wiegley after2:	(703) 578-4621
Accounting Package	38
<b>BPI Programs</b>	
Jaxon Brown	(301) 350-3283
BPI & Howardsoft (	
Otis Greever	(615) 638-1525
Dollars & \$ense	
Barry Fox	(717) 652-2899
Home Accountant	
Leon Raesly	(301) 431-0853
APPLE SSC	
Bernie Benson	(301) 951-5294
Apple Works	
Ken DeVito	(703) 960-0787
Bob Martz	(301) 795-5689
Ray Settle Harry Erwin	(301) 647-9192 (703) 391-0295
Michael Osborn	(301) 894-8903
Gary Hayman	(301) 345-3230
Apple Works Data B	
Morgan Jopling	(301) 261-3886
Communications Pa	AND
ASCII Express	
Davis Harris	/700\ F70 4004

ProTerm	(700)	F70 4004
Alan Levy	(703)	578-4621
Talk is Cheap/Pt. to I Barry Fox		652-2899
DataBases	(,,,,	00L L000
dBase II	/702\	SEE COEE
John Staples		255-6955
dBase II&III, Data Per		421 00E2
Leon Raesly	(301)	431-0853
Profiler 3.0	/717\	CEO 0000
Barry Fox	(111)	652-2899
Dvorak Keyboard	(202)	262 2007
Ginny Spevak	(202)	362-3887
Hard Disk		
Barry Fox	(717)	652-2899
	(111)	002-2000
Tom Vier (BBS)	/2011	986-8085
	(301)	300-0000
Corvus Leon Raesly	(301)	431-0853
and the second s	(301)	431-0000
Sider Jaxon Brown	(201)	250 2202
Otis Greever	(615)	350-3283 638-1525
	(010)	000 1020
Languages		
Applesoft Louis Biggie	/2011	067-3077
PeterCombes	(301)	967-3977 251-6369
Leon Raesly	(301)	431-0853
John Love		569-2294
Integer Basic		
John Wiegley after 2:1	5(703)	437-1808
John Love	(703)	569-2294
Machine		
Ray Hobbs (BBS)	(301)	490-7484
John Love	(703)	569-2294
Pascal		
Michael Hartman	(301)	445-1583
C and TML Pascal	2000	
Harry Ewin	(703)	391-0295
Operating Systems		
Apple DOS	-/700	107 1000
John Wiegley after 2:1	5(703	1437-1808
CP/M	(004)	774 0040
ArtWilson	(301)	774-8043
ProDOS John Love	(700)	ECO 0004
John Wiegley after 2:1	5/703	569-2294
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Barry Fox	(717)	652-2899
RWTS, Disk structure		302 2000
John Wiegley after 2:1		437-1808
Print Shop	,,,,,,,	
Thomas O'Hagan	(301)	593-9683
Spreadsheets	, , , ,	
General		
Walt Francis	(202)	966-5742

MagicCalc/SuperCalc	2.0
Leon Raesly Terry Prudden	(301) 431-0853 (301) 933-3065
Telecommunications	(301) 333-3003
Allan Levy	(301) 340-7839
TimeOut Series	(004) 004 0000
Morgan Jopling	(301) 261-3886
Utilities:ProSel Barry Fox	(717) 652-2899
Word Processors	
General Walt Francis	(000) 000 F740
Walt Francis	(202) 966-5742
Apple Writer 11 Dianne Lorenz	(301) 530-7881
Leon Raesly	(301) 431-0853
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Leon Raesly	(301) 431-0853
Mouse Write	(717) 650 0006
Barry Fox	(717) 652-2899
Publishiti Gary Hayman	(301) 345-3230
ScreenWriter 11	(001) 040-0200
PeterCombes	(301) 251-6269
Gene Carter	(202) 363-2342
Word Handler	
Jon Vaupel	(301) 593-3316
Word Perfect	(201) FOE 2000
James Edwards Henry Donahoe	(301) 585-3002 (202) 298-9107
Word Star	(202) 200 0101
Art Wilson	(301) 774-8043
Michael Osborne	(301) 894-8903
General	(747) 050 0000
Barry Fox	(717) 652-2899
General/PaintWorks+ Paul Tarantino	(703) 455-7670
//e Upgrade	(100) 400-1010
Morgan Jopling	(301) 261-3886
APW	Session in the restrict of
Andy Gavin	(703) 734-3049
Jim Frison	(703) 525-9395
Deluxe Paint II	(700) 450 4074
Rich Sanders	(703) 450-4371
GS BA SIC Barry Fox	(717) 652-2899
Multiscribe GS	(111) 002-2000
Ray Settle	(301) 647-9192
Telecommunications	
Dale Smith	(301) 762-5158
Allan Levy	(301) 340-7839
TimeOut Series & Uti Chuck Ward bef. 9pm	
Barry Fox	(703) 830-3720 (717) 652-2899
VIP-Pro/Multibe	, 552 2555
Jim Frison	(703) 525-9395
816 Paint/Writ'rs Ch.	
Andy Gavin	(703) 734-3049

Dave Harvey

(703) 578-4621

E

W

(301) 779-8271

(202) 547-8272

Macintosh		
General Jeff Alpher to midnight Bob Wilbur	(703) 379-296	0
Donald Schmitt David Gursky  Art & Video	(717) 334-326 (703) 522-834	5
Nancy Seferian  Borland Products	(202) 333-581	
Doug Ferris dayonly Data Bases Fourth Dimension	(800) 826-476	8
Bob Pulgino FileMaker+	(301) 474-063	
Tom Parrish Helix Jim Barry to midnight	(301) 654-878 (703) 662-064	
David Gursky Harvey Levine MS-File	(703) 522-834 (301) 288-938	5
John Love John Spencer	(703) 569-229 (301) 730-108	4
Omnis 3 & 3+ Paul Tabler Jeff Alpher to midnight	(703) 278-865 (301) 630-203	7
OverVue J.T.Tom DeMay, Jr. Tom Parrish	(301) 461-179 (301) 654-878	8
Pro-Cite Elizabeth Mangan Desktop Publishing	(703)750-271	0
General Jay Rohr	(301) 655-087	5
PageMaker Eleanor Sontag ReadySetGo	(301) 251-069	5
Jim Graham Marty Milrod Graphics	(703) 370-573 (301) 464-598	
General Bill Baldridge	(301) 779-827	1
Jay Rohr David Gursky Adobe Illustrator	(301) 779-827 (301) 655-087 (703) 522-834	
Ling Wong Canvas David Gursky	(703) 378-510 (703) 522-834	
Bill Baldridge Tom Parrish	(301) 779-827 (301) 654-878	1
MacDraft Bob Wilbur MacDraw	(703) 379-296	0
Tom Berilla Tom Parrish John Spencer	(301) 434-325 (301) 654-878 (301) 730-108	644

HyperCard Holdger Sommer Rick Chapman	(301) 474-3467 (301) 989-9708
Inside Mac Jon Hardis John Love	(301) 330-1422 (703) 569-2294
Languages Pascal Michael Hartman	(301) 445-1583
Machine Ray Hobbs MS BASIC	(301) 490-7484
John Love MacMoney	(703) 569-2294
Chuck Sicard MacProject	(301) 963-2879
Jay Lucas Spreadsheets & Gra	(703) 751-3332 phics
General David Morganstein Bob Pulgino David Morganstein Mark Pankin Jim Graham Dick & Nancy Byrd	(301) 972-4263 (301) 474-0634 (301) 972-4263 (703) 524-0937 (703) 370-5737 (703) 978-3440
Bob Pulgino MultiPlan John Boblitz John Love	(301) 474-0634 (301) 356-9384 (703) 569-2294
Sidekick Ray Hobbs	(301) 490-7484
Telecommunications General Allan Levy David Gursky	(301) 340-7839 (703) 522-8345
MacTerminal David Gursky	(703) 522-8345
Versaterm David Gursky	(703) 522-8345
ThinkTank-More Jim Graham Tom Parrish	(703) 370-5737 (301) 654-8784
Word Processors Word Marty Milrod Harris Silverstone	(301) 464-5981 (301) 435-3582

Genei	ral
Franklin & Laser 12	
Bob Martz	(301) 795-5689
Games-Apple II	(700) 050 1000
Charles Don Hall	(703) 356-4229
John Wiegley after 2:	15(703) 437-1808
IBM	(004) 400 7404
Ray Hobbs	(301) 490-7484
Leon Raesly	(301) 431-0853
Math-OR Appins	(700) 504 0007
Mark Pankin	(703) 524-0937
Modems-General	(004)040 7000
Allan Levy	(301)340-7839
Hayes Smartmodem	
Bernie Benson	(301) 951-5294
<b>Practical Peripheral</b>	
Allan Levy	(301) 340-7839
Music Systems	
Ray Hobbs	(301) 490-7484
Printers-General	
Walt Francis	(202) 966-5742 (301) 431-0853
Leon Raesly	(301) 431-0853
MX-80	
Jeff Dillon	(301) 662-2070
Stat Packages	
David Morganstein	(301) 972-4263
Stock Market	
Robert Wood	(703) 893-9591
Volunteer on	the Hotline
Call us at	654-8060
	And Well, 685

WriteNow

Bill Baldridge WordPerfect-Mac

**Curt Harpold** 

#### Frederick Apple Core Help Line

Please limit calls to reasonable evening and weekend hours and never after 10 P M.

Oscar Fisher	(Frederick)	694-9237	Apple //
Dick Grosbier	(Frederick)	898-5461	Apple II, GS, &
Mac	MIN TO THE STATE OF THE STATE O		
Harold Polk	(Frederick)	662-6399	Apple //
Tony Svajlenka	(Frederick)	694-6209	Apple //
Doug Tallman	(Frederick)	663-3268	Mac
Scott Galbraith	(Monrovia)	865-3035	Apple // & GS
Stephen Hadley	(Mt. Airy)	831-5353	Mac
R. Carl Myers	(Smithsburg)	824-7122	Mac & GS

C	JULY
***	3 Monday
A	7.30 PM PI-SIG (Program Interface)office
	• Writers Deadline—August Issue
L	4 Tuesday
E	Holiday: office closed
*****	5 Wednesday
N	Ad Space Reservations deadline—August Issue
***	7:30 PM dPub SIGPEPCO
D	7:30 PM Mac Programmersoffice
	6 Thursday
A	7:00 PM Columbia SliceColumbia
R	7:30 PM GameSIGoffice
	8 Saturday
	9:30 AM Annapolis Slice Anne Arundel Co.
	9:30 AM Frederick SliceFrederick
Α	2:00 PM Music SIGCall
	10 Monday
N	→ Editorial Deadline—August Issue
D	11 Tuesday
-	7:15 PM Tutorial: Apple(Ile & Ilc)office
	12 Wednesday
	□ Ad Copy Deadline—August Issue
S	13 Thursday
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ı	7:30 PM Database SIG/4D Computer Factory
G	8:00 PM StockSIG office
	18 Tuesday
	7:15 PM Tut: How to Use Apple Software
	(Ile & Ilc) office
N	19 Wednesday
E	7:00 PM WorksSIGoffice
	7:30 PM AVSIGBCCHS
W	7:30 PM Excel SIGoffice
	7:30 PM Fed SIGCall
5	7:30 PM HyperTalk SubSIG Arlington
	20 Thursday
	8:00 PM PIG (Pascal Interest Group)office
	22 Saturday
	8:00 AM AppleWorks SIG (also at noon) USUHS
	9:00 AM WAP General MeetingUSUHS
	noon HyperCard SIGUSUHS
	noon Telecomm SIGUSUHS
	24 Monday
	7:00 PM Apple IIgs SIGBethesda
	25 Tuesday
	7:15 PM Popular Applications IIe/c SIG office
	26 Wednesday
	7:30 PM Apple III SIGoffice
	27 Thursday
	7:30 PM Business SIGoffice

#### **WAP General Meetings**

Monthly General Meetings are generally held on the 4th Saturday of the month at the Uniformed Services University for the Health Sciences Building B, affectionately known as USUHS. It is located at 4301 Jones Bridge Road on the campus of the National Naval Medical Center in Bethesda. Come as early as 8:30 a.m. to join, buy public domain disks, pick up your monthly WAP Journal. Attend the Q&A sessions to get your questions answered and hear the latest rumors. Listen to the main meeting topic at 9:30. We also have a special session to welcome new computer users and get them started. Group purchase items can be bought at the office after the meeting begins at noon.

June 24 Wootton High School Garage sale and a demo of Workbench for the Apple II. A Mac program and Q&A sessions. 2100 West Ritchie Parkway, Rockville, MD Directions from office: Take 270N to Rte 28 Exit (West) sign should say Darnestowne (do not take Business Dis- trict) go to traffic light and turn left onto Hurley Ave. Go all the way to the 1st stop sign and turn left onto West Ritchie Pkwy. Go past small shopping center on left, then school will be on the right.

#### **Meeting Notices**

Annapolis Slice 2nd Saturday; Anne Arundel Community College - Careers Bldg. Lecture hall, Arnold, MD, 9:30 AM.

Apple IIgs SIG the Monday after the regular WAP meeting; alternates between Dolly Madison Library in McLean and Thomas Pyle Intermediate School in Bethesda, 7:00 PM. (July meeting at Pyle, July 26)

**Apple III SIG** 4th Wednesday; WAP office, 7:30 PM. (No meeting in August)

**AVSIG** (arts and video) 3rd Wednesday; Bethesda-Chevy Chase HS 7:30 PM.

Columbia Slice - 1st Thursday; at the Howard County Board of Education bldg., Route 108, Columbia, MD, 7:00 PM. (Meets second Thursday in June.)

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#### **Meeting Notices**

Database SIG/4D 2nd Thursday; Computer Factory, Bethesda, 7:30 PM.

dPub SIG (desktop publishing) 1st Wednesday; PEPCO auditorium at 1900 Pennsylvania Ave., N.W., 7:30 PM.

Excel SIG 3d Wednesday; WAP office, 7:30 PM

Fed SIG (Federal) 3rd Wednesday; alternates between Falcon Training Center, 1745 Jefferson Davis Hwy Suite 502, Crystal City, and Apple Fed. Sys. Office, 1892 Preston White Dr., Reston, 7:30 PM.

Frederick Slice 2nd Saturday; at the library at 110 East Patnck St., Frederick, 9:30 AM.

GameSIG 1st Thursday; WAP office, 7:30 PM.

HyperCard SIG after the WAP general meeting Uniformed Services University of the Health Sciences, Bethesda, 12:00 noon.

HyperTalk SubSIG 3rd Wednesday; Fairlington Community Center, 3300 S. Stafford St., Arlington, 7:30 PM.

Mac Programmers 1st Wednesday; WAP office, 7:30 PM.

MusicSIG 2d Saturday; call Bill Bittle, 236-9898 for location and times.

NeXT SIG meets monthly. Call Hugh O'Neill, (202) 328-9510.

PIG (Pascal Interest Group) 3rd Thursday; WAP office,8:00 PM.

PI-SIG (Programmer's Interface) 1st Monday; WAP office, 7:30 PM.

StockSIG 2d Thursday; WAP office, 8:00 PM.

Telecomm SIG after the WAP general meeting; Uniformed Services University of the Health Sciences, Bethesda, 12:00 noon.

Tutorials are held in the WAP office and at the Fairlington United Methodist Church, Rt. 7 and 395, Alexandria. Call the office for the Iocation of any you wish to attend.

WorksSIG 3rd Wednesday; WAP office, 7:~ PM. For information on SIGs not listed on the calendar, please call the appropriate SIG chair.

#### August S S Μ TW TF 1 3 2 5 4 8 9 7 10 11 12 13 14 17 19 15 16 18 22 20 21 23 24 25 26 27 28 29 30 31

#### **AUGUST**

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10 Thursday	
8:00 PM	StockSIGoffice
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7:30 PM	Apple III SIGoffice
24Thursday	
7:30 PM	Business SIGoffice
26 Saturday	
•	AppleWorks SIG (also at noon)USUHS
9:00 AM	WAP General MeetingUSUHS
noon	HyperCard SIGUSUHS
noon	Telecomm SIGUSUHS
28 Monday	
7:00 PM	Apple IIgs SIGMcLean

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#### Board of Directors Meeting, June 14

Appointment of Permanent Secretary (until new elections)

Dale Smith was elected Secretary

Designation of Sergeant-at-Arms

Dick Byrd was appointed Sergeant-at-Arms

Removal of Robert Platt as President; Expulsion of Robert Platt from WAP.

Discussion and statements by Bob Platt, Cynthia Yockey, Nancy Pochepko, Greg Pochepko, Bob Shaffer, Priscilla Meyerson, Chris Bastian, and others were considered;

A resolution asking Bob to voluntarily resign as president and withdraw from the election - passed; Bob did not resign or withdraw.

A vote on removing Bob Platt as president, based on a finding that it was necessary for the good of the corporation - passed: 10 Yes; 2 No; 3 Abstained - (BOD only). All members: 24 Yes; 3 No; 7 Abstain.

The question of expulsion was discussed but the motion was withdrawn.

#### Raffle Proceeds

Ed Myerson suggested the Chair appoint a small committee to investigate. Robert Platt suggested himself and Steve Broughall on the issue. Lynn Trusal suggested adding Dave Lavery and Ed Myerson. Passed.

#### **Journal**

Ed Myerson said the Board should also deal with ratification of the election procedures, and needed to elect a presiding president.

Lynn Trusal said the Board needed to decide only on the Journal reprinting, which was needed by tomorrow.

Ed Myerson reintroduced a motion that all matters dealt with in the May 10 and May 31 meetings were to be re-ratified. Passed -2/3 majority.

Tom Warrick was elected President (to serve until the new President was in office).

#### Government Computer News

Bob Schaffer made a motion that Ray Hakim be appointed as the Club's sole press contact point and that he be solely responsible for preparing and reviewing a release regarding the current situation at WAP, and that he be directed not to answer any additional questions by outside press organizations on behalf of WAP. Motion passed.

#### **Iournal**

Lynn Trusal moved that the Club not reprint the June issue of the Journal, and that it send out the original issue by third class mail. Motion failed.

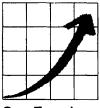
Ed Myerson moved to recess the meeting to Thursday, June 22. Adopted.

The meeting was recessed until June 22.

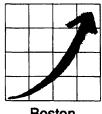


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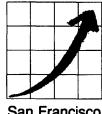


San Francisco Up 144%

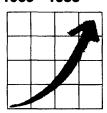


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- Build your knowledge . . . by enabling you to attend a helpful tutorial that meets your specific need, whether you use your Mac at the office, at school or at home. You'll learn from the experts.
- Develop your skills... by giving you plenty of opportunities to practice what you've learned, using one of the many Macintoshes that will be available to you. You'll get hands-on experience.
- Introduce you to the latest Macintosh products... MACWORLD Expo has traditionally been the platform for major new product announcements such as the SE/30 and HyperCard. You'll be at the forefront of new technology.
- Connect you with the best minds in the business... through user group exchanges, advanced user tips sessions, and discussions with the industry's veteran techies. You'll join a network of Macintosh pros.

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## WAP Editorial BoardMeeting

The meeting at the WAP offices was opened at 7:05 PM on June 6 by Nancy Seferian (Editor).

Nancy Seferian reported that the BOD had asked her to replace Tom Piwowar as Editor in Chief, who had been dismissed for publishing political material in the June issue. She was assigned the task of reprinting the June issue with the political material removed, and of supervising the publication of the July issue, and had invited Tim McGraw and Frank Potter to serve as co-managing Editors.

Tim McGraw said that the work required on the June issue was more a hassle then anything else; it involves removing the offending material, and including a letter from the Secretary explaining the reason for the deletion and the ability of members to obtain a copy of the original version. Nancy Seferian said that McArdle (printers) could not locate the paste-up boards, and she would try to contact them again.

Tim McGraw said the real issue to discuss was the assembly of the July Journal. The deadline for materials to be received from Editors was the 12th, and the material would go to the printer on the 19th. Lee Raesly said a great deal of "static material" such as the masthead, hotline list, calendar, etc. could be retrieved or recreated from previous issues. Sam Knutson said that Jim Little had access to a scanner and OCR software.

Tim McGraw asked what material was ready for publication. Lee Raesly, Peter Cook and Marty Milrod reported on material they had received. Chris Bastian said he had a letter to the editor about MacWorld that had not been printed in the past issue.

Bob Platt said the group should focus on who the Editor was. He said doing things like holding the meeting and forcing volunteers to choose which Editor to support was helping to tear the Club apart. He suggested the meeting be delayed a week and that Nancy Seferian and Tom Piwowar meet to work out their differences. After some time had passed, Nancy Seferian asked Bob to conclude his remarks. Bob said he wanted members of the Committee to discuss the issue. Chris Bastian said the Committee did not want to discuss the issue at that point, that Bob had stated his view, and that he should respect the wishes of those attending. Nancy Seferian said that if Bob did not stop disrupting the meeting, he would be removed from the office. Bob said he had made arrangements for 'drop-in night' and that the meeting would disrupt it. Chris said that the office was open, and that nothing was interfering with members' access. Bob left the meeting, with assistance.

Peter Cook reported on the status of Club News and the calendar. Tim McGraw said the calendar could be prepared according to the usual schedule. Discussion was held about advertising. Liz Lane reported that there were 22 pages in the June issue. Kym Knutson was in charge of coordinating advertising copy, but would not be back until the end of the month. Tim McGraw said that using McArdle might be a problem after the dispute over the June issue. Marty Milrod asked who would lay out the revised June issue. Tim said that he, Nancy and Frank could do it, but that the resulting issue might be thin. Chris Bastian said that sending out a thin Journal quickly was better than delaying it to find more material.

Frank Potter suggested leaving blank spaces where material had been deleted in the June issue. Dale Smith said the letter explaining the deletions needed to be very carefully written. Tim McGraw and Frank Potter said they could meet the next morning to lay out the June issue.

A question was asked about the issue of using the Second Class mail permit which had been applied for. Chris Bastian said the Board had considered using it and had rejected the idea. Chris raised the subject of using icons to identify articles and sections of the July issue. Tim McGraw said it was worth considering. Tim asked who had facilities with sufficient space and tables to do the paste-up of the July issue. Lee Raesly said he had office space but no tables. Jay Heller said he could bring a van to move tables to the meeting

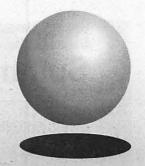
Marty Milrod said someone would need to design templates on PageMaker to lay out the articles received. Frank said he could design them. Gary Hayman asked if Tim McGraw had the ability to read in Apple II graphics. Tim said he could use them as is or scan them in.

Marty raised the issue of sending a postcard to members announcing the July Garage Sale and explaining the delay in the June Journal. Nancy Seferian said the Editors did not have budget authority, and the approval of the Board of Directors would be required. The decision was made to lay out the Journal on the 17/18 of June, and the meeting was adjourned at 8:45 PM.

#### ATTENDEES:

Nancy Seferian Frank Potter Tim McGraw Jay Heller Frank Lotz Marty Milrod Liz Lane Chris Bastian Lee Raesly Sam Knutson
Bill Logan
Doug Tallman
David Harris
Gary Hayman
Kathy Dunten
Leon Moore
Ellen Caswell
Robert Platt

## BEYOND **IMAGINATION**



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#### On the Trail of the Apple III

### Summer Is Upon Us...

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



And that has to mean a tremendous amount of news to report to you this month. Let's begin with some good news...and some bad news. The bad news (I always like to get that out of the way first!) is that Joe Dobrowolski's Apple Users Group International has, in fact, decided to call it quits, at least for the Apple /// end of things. As I reported to you earlier, Joe moved to Japan in mid June to be with his family and has been trying to decide what to do about his oneman operation.

When I talked to him prior to his departure, he was unsure exactly what track he would take. But he promised that if he decided to end his association with the /// community, he would donate his huge Apple /// public domain library to WAP and your /// SIG. That is, in fact what has happened (I told you we'd get to the good news). The additional disks (more than 100) will add a tremendous boost to our own PD library. I do NOT plan to add them all to our own offerings. What we WILL do is go through and pull those programs and other materials that will add to our own library in a significant way.

I do NOT plan to destroy the AUGI library, however and will keep it intact for the present. It is a tremendous resource and the /// community owes a great deal to Joe Dobrowolski's single-minded and determined efforts on behalf of the ///.

In addition to the PD disks, by the way, we have also gotten many more newsletters and magazines to add to and update our hardcopy library offerings. Our goal in obtaining these from Joe was to make sure that we have complete copies of as many publications as possible. With these additions, I think that goal will have essentially been realized. Thanks to Jim Jutzin's efforts, the hardcopy library is organized and usable. And it just happens to be the most complete Apple /// library available anywhere, something we all can be proud of!

#### AND AT ON THREE

Trying once again to scale down costs, On Three has now had to discontinue its 800 number telephone service. To order, you'll have to make a toll call at 1-216-820-1874. At one point, On Three also had a BBS that you could call for information and even placing orders, but that too, has been disconnected.

#### THE LISA SHOP

I had a long talk with Frank Freeman of The Lisa Shop recently and we discussed what his company is doing and its current projects. As I have mentioned in the past, The Lisa Shop bills itself as LISA and Profile specialists. Its five employees have been working on an upgrade to the Profile that will increase its capacity from 20 MB to 1 Gigabyte of storage. That would be accomplished with a new interface card, and new hard drives installed inside a Profile case, which Freeman says "will be comparable to a SCSI Drive."

At this point, the upgrade is being aimed at the Lisa, but with the Apple /// (and //) in mind. Freeman was talking of a trade-in deal where the purchaser would send in an old Profile interface card for a new one that would be

used with the new Profile. A new Apple /// driver would also be part of the package. Vaporware? Hard to say at this point but Freeman sounded serious about this project.

He also mentioned that the 10MB hard drive installed in the old MAC XL (the last version of the Lisa) is actually the 10MB drive used in later Profiles. Some folks have been unbolting the drives from the MAC XL and putting them into their Profiles with few operational problems.

What about reports that they were working on a way to place an 800K drive into the /// as a replacement for .D1? Freeman says that was an offshoot of his Lisa work and believes it is something that could be done. The question, of course, is money. Unless there were enough ///ers who would be interested in the upgrade and were willing to commit to it, the effort wouldn't make any sense. The upgrade would apparently require the development of a new "WOZ Chip" that allows the /// to work with the disk drive. Freeman says he'll look into it more closely in the next year or so to see if there's a market (unfortunately, the longer you wait, the less there will be...)

I also asked about the possibility of an AppleTalk card for the ///. But the work there would also be extensive, especially with the software end and the number of potential users not enough to justify the work. Interesting note here. Freeman says Apple was originally developing a fiber optics network for the //, // and Mac that would have been tremendously fast. There was a working system set up, apparently but the folks at Cupertino apparently decided not to go forward with it.

finally, for anyone with Lisas or Mac XLs who needs technical support, The Lisa Shop has (what they say is) the most extensive library about that computer in the country (some material fished out of trashcans). For more information, you can call 1-916-668-5637.

#### WAP ELECTION

By the time you read this, we should know whether your /// SIG Co-Chairman was reelected to the WAP Board. Win or lose, I want again to thank you for your support and appreciate your interest.

#### DISKETERIA

Our PD library grew by three disks this month. As promised, we are adding a second "Best of ///'s Company BBS" disk to the pile as disk 1057. It's got a lot of excellent information about using the Catalyst program selector with various programs, writing in Assembly code and many more goodies.

PD disks 1058 and 1059 bring my "Best of Ottalini" compilation up to 1988. Save for a few Trail columns that I seem to have misplaced, you'll find just about everything this old Apple /// traveler has written for WAP and many other publications. I hope you enjoy them.

Next month watch out for our first /// EZ Pieces template disk (a hint: it's for business users), another contrib disk and even a graphics disk. Looking further into the future, we are hoping to bring you some additional telecommunications programs, including XMODËM /// and Kermit. We're getting another former /// commercial program, Phase /// Graphics, placed into our PD as well as some other graphics programs you might enjoy. Our PD disks are now available at our /// SIG meetings, by the way, so if you want to purchase a disk or two you are welcome.

We're also updating two of our older disks this month. Disk 1000 now reflects all the recent additions to our PD library. And our New Member Disk, 1005, has been updated to reflect a number of changes going on in the /// community.

#### MEETING NOTE

As normal, your /// SIG will NOT be meeting in August to give all our vacationing members a break (though as usual, we will offer an article or two). We will be

back in September, looking forward to another fall's worth of travel on the Apple /// Trail. So head 'em up, move those li'l Apple ///'s out, and enjoy your summer! 📽

#### Gam SIG

#### June Meeting Report

by Steven Payne, Reporter

On June 1, 1989, GameSIG members met in the sweltering, non-air-conditioned WAP classroom to discuss what's "hot" in computer games (besides ourselves). Actually, this was a slow month for new gaming software, so there is relatively little to report.

Charles Don Hall announced his coming retirement as GameSIG Chairman, though he will help to organize the August main meeting, traditionally dedicated to computer games. We also discussed Shogun, Journey, and Quarterstaff, the three most recent Infocom releases for the Macintosh. Of these, Journey seems to be getting the best reviews; it is a kind of lazy person's fantasy/roleplaying game, where the command options are provided for you at each step. Shogun, on the other hand, seems to be a text adventure with pictures which almost slavishly follows Clavell's novel of the same name — difficult to play through if you haven't read the book, and redundant if you have.

Charles himself has lately been playing Tangled Tales (Origin, Apple II series with 64K) a fantasy/role-playing adventure with a sense of humor, in which you play a bungling wizard's apprentice, out to redeem yourself from your mistakes; the game includes three quests, automatic mapping, and (hallelujah) relatively small mazes. Origin also promises Space Rogue for "some time this fall' (announcement to be taken with

several grains of salt!).

The following programs were received during the last month:

Gauntlet (Mindscape, Mac Plus or better, with color for the Mac II): arcade game;

Leprechaun (Shodan, Mac Plus or better): arcade/puzzle game;

P51 Mustang Flight Simulator (Bullseye Software, Mac Plus or better): as the name implies, a new flight simulator.

Of these, the last two were merely demo disks. Once again we plead with software companies to send the total product if they want a review. (As one member put it, a demo disk evaluation might better be called a movie review, since often you just sit and watch screen shots of the game go by.)

Nonetheless, we did take a look at Leprechaun (which reminded us of Lode Runner). As usual, the meeting ended with the latest rounds in Robot Tanks, with Jeff Stetekluh beating all opponents twice (it helps when the programmer includes a bit of code causing all other tanks to malfunction at the critical moment). Our next regular meeting will be at the WAP Main Office on July 6, 1989 at 7:30 PM. **©** 

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DOT-MATRIX & LASER PRINTERS	LASER & INKJET PRINTERS
Panasonic 1180 (192 cps, 9-pin, Epson-compatible)	General Computer Personal LaserPrinter (QuickDraw-compatible, six fonts)
1124 (192 cns. 24 nin)	Rusiness Legar Printer (A nom Postscript 2-mag) 9040
Okidata 320/321 (300 cps, 9-pin, NLQ mode, std/wide carriage)       .375/525         390/391 (270 cps, 24-pin, std/wide carriage)       .525/749         NEC 2200 (170 cps, 24-pin quality at a bargain price)       .369	WriteMove (QuickDraw-compatible inkjet printer) 519 NEC LC-890 (8 ppm, Postscript/HP emulation, 3-meg, dual-bins) .3296 QMS 810 (8 ppm, Postscript/HP emulation, 2-meg) .3996
NEC 2200 (170 cps, 24-pin quality at a bargain price)	QMS 810 (8 ppm, Postscript/HP emulation, 2-meg)
5200/5300 (255 cps, 24-pin, std/wide carriage)	HARD & FLOPPY DRIVES
Toehiba 321SL (216 cps, 24-pin)         515           Olympia NP-30 (150 cps, Imagewriter-compatible)         285	Peripheral Land PL 20/30/50VL (3:1 interleave SCSI for Plus, SE)
HP LaserJet II (8 ppm. 512k)	PL 20/30/50 Turbo (1:1 interleave SCSI for Plus, SE)
DeskJet (240 cps inkjet, 300 dpi, LaserJet-compatible)	PL 20i/30i/50i/70i Turbo (1:1 interleave, internal for SE only) 525/649/775/925
MODEMS	PL 100i II Turbo (100 meg, 1:1 interleave, internal for Mac II only)
Applied Engineering DataLink 1200/2400 (1200/2400 card w/sft)	TurboFloppy 1.4 (1.44-meg floppy, read/write Mac & IBM disks, SCSD
Anchor 1200E/2400E (1200/2400 external, Hayes-compatible) 109/169	CMS 20-meg SCSI
Prometheus Promodem 1200A/2400A (1200/2400 card w/software)	60-meg SCSI
MEMORY EXPANSION & VIDEO BOARDS & CPU'S	45-meg internal (SE only)
Applied Engineering RamWorks III (256k, for IIe)	Rodime 100-meg (internal, Mac II only)
RamFactor (256k, for II+ or IIge)	Video Technology 800k floppy 199 DaynaFile (360k floppy, reads and writes IBM disks) 489
gzRam (256k, for   gs)	68020 / 030 ACCELLERATORS
Transman CS S09	Dove Marathon 68020 accelerator (for SE)
PC Transporter (IBM-on-a-card, 768k)	68030 accelerator (for Mac II)
PC Transporter (IBM-on-a-card, 768k)	General Computer Hypercharger SE (0-K, 16-mhz 68020)
HARD & FLOPPY DISKS	MISCELLANEOUS HARDWARE
Sider II (20/40-meg for II.) I/os or Mac) 489/639	Cornerstone 15° Single Page Display (for SE & Mac II)
CMS 60-meg (for ][e or ][gs)	Sigma Pageview 15 (full-page display for SE)
A.5d (143k, daisychain port, for ][gs)	Anchor MacPac 2400E (2400/1200 hps w/software & cable)
INTERFACES & BUFFERS & CLOCKS	DataDesk 101 keyboard
ProGrappler (parallel printer interface w/graphics)	Dove MacSnap & SIMM memory upgrades (call) Kensington System Saver Mac (for 512, Plus)
Grappler c/mac/gs (use most parallel printers from your serial port)	System saver as:
SeriAll (serial interface for modems or printers)	Turbo Mouse ADB (trackball for mouse-haters)
Quadram MicroFazer (5k-126k parallel buffer)	Mac Software
	WORD & PAGE PROCESSING
)(-series Software	Microsoft Word 4.0
WORD & PAGE PROCESSING	Write
Appleworks 2.1	Word Perfect Mac
Appleworks GS	FullWrite Professional
Appleworks Word Perfect (for Ile, Ilc, Ilgu) 95 pfs:Write (w/speller)	PageMaker 3.0
Bank Street Writer (64k and 128k Plus versions)	ReadySetGo 4.5
Publish It   2.0	Springboard Publisher
Sensible Grammar	SPREADSHEET
SPREADSHEETS	WingZ (super spreadsheet-look out, Excel !)
SuperCalc 3a	DATABASE
DATABASE	Filemaker II
pfix:File w/Report	FoxBase+/Mac 1.1
HOME & BUSINESS ACCOUNTING	dBASE Mac
Managing Your Money 3.0	Double Helix II
Business Works (best M-series business accounting)	GRAPHICS
DAC-Easy Accounting	MacDraw II
	Claris CAD
COMMUNICATIONS Ascil Express Professional (DOS & PRODOS versions)	Cricket Draw
MouseTalk	Graph
ProTERM 2.1	SuperPaint 2.0
Hayes Smartcom I	MacDraft
MISCELLANEOUS SOFTWARE	HOME & BUSINESS ACCOUNTING
Beagle Timeout SideSpread/FileMaster/DeskTools/Thesaurus	Quicken
UltraMacros	DAC-Easy Light
QuickSpell/SuperFonts	Peachtree Back-To-Basics Professional
pfs:Workmates (includes Write, File, Report, Plan)	Bedford Simply Accounting
Print Shop/Print Shop Companion	MISCELLANEOUS SOFTWARE Microsoft Works 2.0 (word proc, calc, database, commun, speller)
Copy II+	TOPS for MAC 2.1
Avery List & Mail PaintWorks Gold (for I[gs)	Symantec Utilities for Mac
Flight Simulator II / Jet	Suitcase II
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### June Meeting Report



by Robert Golden

PISIG met in the new office conference room at 7:00 pm. The planned agenda was on fonts, to include demonstrations, questions and answers, discussion, and possible solutions of problems. As usual, time was set aside for new products news, new ideas, and exchange of written information and references to interesting journal articles.

Ted Meyer demonstrated a demo disk of "GENESYS", scheduled to become available in September. It is designed to speed up and facilitate software development for the Apple IIgs. It claims to generate source code for menus, create program data structures in Pascal, C, Assembler and Basic II, and create windows which can be saved to disk. Meyer then compared fonts for the Mac versus those for the IIgs. He emphasized how in recent literature, there

appears to be a movement developing by which some features of these two machines are becoming more sinilar. This led to a series of comments and speculation about the GS system disk 5.0, rumored to be faster for certain functions by a factor of 4 or 5 to one, when compared to the current system disk. We then opened up a grabbag of ideas and hopes by which the IIgs could be speeded up.

Dick FitzHugh demonstrated his font program "IIGS Fonts and MultiScribe GS", based on his June 1988 article in the WAP Journal. This included "Program Font40" which uses a 40-column display. It permits the programmer "to view any chosen characters from a font, including the hidden (non-keyboard) ones". He followed up with programs Fontfam, Chgfam, and Fontshift, all designed to facilitate use of fonts with the IIgs.

Bill North presented an interesting and intriguing program to create fonts utilizing APW-C. Although still incomplete, it provides windows to show a character set in miniature, and large window in which an individual character can be designed. Preplanned moves of the cursor are design ed to create the structure. Some moves provided unusual results, and so provide a challenge to those familiar with APW-C.

8

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Walter Urban introduced 8-bit IIGS Font Editor V1.1, downloaded from the TCS as shareware. This program enables the programmer to make a font from scratch, after setting appropriate parameters; supports viewing and editing character images; files "stuff" or font file facts; displays lines, etc.

The July meeting will be held in the business office by special arrangement Monday July 10, 7:00 pm to avoid the Mac Tutorial scheduled for the conference room. We will look at interfacing of analog inputs into the computer. Richard FitzHugh has accomplished some interesting work in this subject, and will demonstrate. We hope that those with an interest in this kind of interfacing will contribute their ideas, projects and even problems.

### **July Elections**

We extend the heartiest congratulations to the next WAP Officers and Directors at Large: The election results are as follows: President:David Morganstein (No run-off election will be necessary.)

VP Apple II: Sam Knutson VP Macintosh: Eric Rall Treasurer: Ed Myerson

Secretary: Chris Bastian (write -in candidate)

Directors-at-Large:

Richard Byrd Thomas Piwowar
Barbara Garlock Leon Raesly
Patricia Kirby Robert Shaffer
Gary Hayman Thomas Warrick
Priscilla Myerson David Weikert

The winners' terms of office begin on July 1. The club is in your care; may you guide it well.

- Jonathan Hardis, Chairman, WAP Election Commission

P.S. - If the Board of Directors actions of recent weeks are sucessfully challenged and we must return to seven directors-atlarge, the Board will have ready at its disposal the data on the outcome of the alternate way of counting the vote.

#### Green Eyeshade Department

#### A Flexware® – Serious Accounting for the Macintosh

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by Cindy Carter

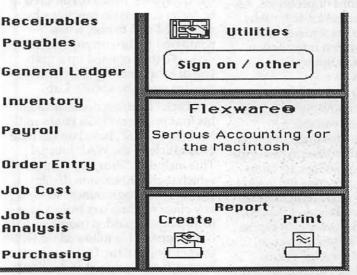
Flexware offers solutions for today's serious accounting needs. It brings together an accounting and information system that will

not only keep books, but will also provide management information. Flexware is a growing line of business solutions including Receivables, Payables, General Ledger, Inventory, Job Cost, Payroll, Order Processing, and Purchasing with the capability to run separately as well as integrated. This

powerful network/multi user solution affords plenty of room for growth. The software supports multiple companies, departments, keyboard equivalences, and ease of movement between modules.

The Report Writer capability allows the end user the ability to create reports from every module. Your local dealer can assist in the creation of more complex reports that extract information from multiple modules. All reports can be sent to the screen, printer, spreadsheet or word processor. Flexware's interface with Excel and WingZ is one of its powerful and unique features. All fields from all modules can be sent to these spreadsheets where management can then produce reports and graphs through the use of a spreadsheet.

Businesses should work with an accounting software consultant or accountant when planning their accounting computerization.



Flexware should be treated the same way. Because this software is so comprehensive, the screens are full of choices. Each choice is represented by an icon with a brief title. Through the inquiry option in each module, you can go deeper into each screen of information to get more detail. As with most Macintosh software, the learning process is intuitive. Flexware has enhanced this process with their help function and "Learn Mode." The help function appears on each screen. It offers a brief description of each icon. The "Learn Mode" allows you to get additional information on the screen without going to the manuals.

Speaking as one who has worked in the "trenches," I want to note a feature that is sure to bring a smile to the face of many overworked bookkeepers. In every

module where you enter items into a journal, Flexware allows the operator to start, stop, and resume entry without being in balance. No more waiting for supervisors to determine the costing of a vendor's invoice before entering into the system. Now you can enter invoices and distribute later. Since journals will not post until balanced, accounting integrity is guarded. Through the report section of each module you can print out a list of all processes started and not finished.

> All modules operate in a similar fashion. Those piles of documents for identification of vendors. clients etc. can be removed from your desk. That information is available at your finger tips through

the cross reference option. Pallet selections assist you in data entry and are consistent throughout all modules.

Flexware is a database software written in its own database language of the same name. Working with a local developer, modifications can be made to meet specific requirements not addressed in the software or through interfacing with a spreadsheet. There are many vertical packages written by other companies including Property Management, Point Of Sale, and Production Control.

As you will see, this is a comprehensive package with multiple report options. The complexity of software is often reflected in its reports.

#### (Add-A) (Inquire-I) (Change-C) (Delete-\*) (Scan-S) (Invoices-D)

Flexware General Ledger collects information from supporting accounting applications, records financial transactions, and maintains all necessary records for preparation of management and financial reports. Entries from other Flexware applications are totaled, summarized, and recorded into the appropriate journals maintained in General Ledger. This module can be used by itself or interfaced with Accounts Receivable, Accounts Payable, Inventory, Payroll, and Job Cost.

During setup, you create a framework or foundation. You must define account numbers (xxx.xx), departments (xx), journal types, and closing account ranges(for retained earnings). You have a choice of 12 or 13 accounting periods in either a fiscal or

calendar year.
There are multiple levels of security, some of which need to be set by a Flexware Developer.

Entries are made into journals as batches. This however, doesn't mean batch processing. Processing is done in real time. You post your entries against a total figure. If you

make an error in keying a dollar amount or skip an entry, the batch will be marked as not in balance. Until the error is corrected or the batch total corrected if that is your error, these entries will not post. You can make entries in a current or future posting period without closing a prior period. Once closed, the accounting period cannot be opened. A Trial Close allows you to update account balances any time during the month. The ledger

detail is not deleted and the system is not advanced to the next month. Full Close does the same as Trial Close but also deletes the ledger detail, updates the ledger balances and year to date debits and credits. It "bumps" the current accounting period to the next period. The ledger detail can be maintained for an indefinite period of time by so indicating in the setup procedure in an account by account choice.

Special processes are allowed such as recurring entries, budgets, year end reversing entries, the copying of company information to set up a new company, and posting to job cost. Journals from other modules when posted are sent to General Ledger, and/or Job Cost. These journals can be viewed in General Ledger before they are

to indicate types of information in Flexware database. You can set up your financial reports in any format you desire. To obtain the figures in your spreadsheet a combination of the predefined words and simple formulas are used. Through General Ledger the information is linked to the spreadsheet for your finished product. These reports can be kept separate or linked together.

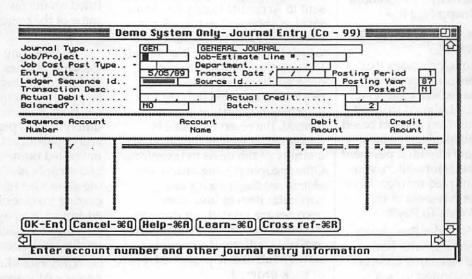
The Flexware Accounts
Payable system is designed to
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labor involvement in processing
payables, cash flow forecasting,
and vendor discount processing.
Whether you're large or small,
Flexware can accommodate your
accounting needs. Accounts
Payable (A/P) can be operated independently or interfaced with

General
Ledger (G/L), Purchasing,
Payroll,
and Job
Costing. It
operates in
an on-line
interface
mode. Set
up and
vendor information
includes:

Interfaces, Void checks, Multiple

Bank Accounts, Expense Default, Purchase History Recurring Payments, Journal types Reconciliation, Supports 1099,

Invoices are entered against a data input batch total. Each line item in an invoice can be posted to a different job/project, job-estimate line, job cost post type, department, and account number. Entering invoices for vendors not yet in the system? No need to exit from this process. Flexware will allow you access to the new



posted. Thus, you can detect errors and make reversing entries to correct before the data becomes part of your account totals. Through the report module, you can view the results of your data entry. The typical reports are available as well as analytical reports that are based on the data.

To build financial statements you use either Excel or WingZ. Several predefined words are understood by these spreadsheets vendor screen, let you enter the information, and then return you to where you started. Below are processes performed in Accounts Payable.

Summary journal entries are created when posted to the General Ledger. However, the A/P to G/L audit report lists the separate vendors, invoice amounts, date, and G/L batch number that have been posted. A list of the available reports are shown below:

Vendor List/Alpha Vendor LIst Invoice List

Invoices by Batches Aged A/P Invoices Check Register

Uncleared Check Rpt Detailed Check Reg Unappl Manual Ch

YTD Activity Rpt Undistributed Inv A/P to G/L Audit

Check Reg/Vendor Check by Batch Inv Pay History

Vendor Activity Vendor Pur Hist Unapp Neg Inv

Vendor w/G/L Acct Number A/P Batch Header

Some unique processes that Flexware offers can become valuable management tools. One such process is designed to select vendor invoices for payment based on funds available, vendor priority, and the next intended payment date. Using this information, you can see what unpaid invoices have been set up for payment in the report "Calc What To Pay".

Flexware's Order Processing application interacts with both Inventory and Accounts Receivable. It is not intended to be a stand-alone application. Setup only requires interface identification. You can place an order in one of three ways.

When identifying a customer for any of these orders, the screen will display valuable information about the client. Before proceeding further you may view that client's payment history and current balance as well as credit limit. Proceeding through the process, default values for salesperson, terms, and sales tax are just some

	ATTENTI	UN F	EDERAL	EWPLO	TEES:	
SF 171	<ul><li>Provides S</li><li>Has modif</li><li>Contains 2</li></ul>	F 171 on so ied pages 7 pages of	RAL JOBI creen for easy to accomodate popular form July 1988 or ca	completion. e your needs s; not copy p	protected.	SF 1/1
SF 171	Isn't care	er adv	ancement n; MD res. add	worth \$4	Melon smit	24 1/1
SF 171	P.O. Box 235	Washingt	SOFT RESO on Grove, MD Macintosh & M	20880 (30	01)-977-6972	2H 1/1

of the changeable items. Entries can be made for materials, freight, and labor. Discounts and sales taxes are figured on total materials only. Total cost of the order is compared to the minimum gross profit percent determined in the setup. If the profit margin is less then what has been defined, a warning message is displayed.

Sales orders can be changed before printing. For an order to be sent to Accounts Receivable as an invoice, shipment notification is necessary. Here you indicate which items are in stock and ready to be sent and which are backordered. Items requested are marked as reserved for sale. Once shipment notification is performed, the reserve for sale is decreased as well as the on hand quantity of the items in Inventory. Other people placing orders are able to see the status of any particular item in Inventory. Invoices are printed out through Accounts Receivable. The reports available indicate the possible status of all orders processed, open or back-ordered.

The Accounts Receivable module yields many effective management tools. You can predict cash flow, avoid credit losses, and forecast sales trends to name a few. This module can be run as a stand-alone or interfaced with Inventory, General Ledger, Order Processing, and Job Cost. The setup creates the structure for receivables. Besides the obvious, several important features are available. Multiple sales tax percentages including zero tax are

supported. Credit types indicate types of payment or credits such as payments, prepayments, and returned goods. When entering parameters, you indicate the type of preprinted invoice (long or short), open or balance forward statement type, what type of charge to be taxed, minimum gross profit percent, numbering system for the various documents, and whether component parts are to be listed on the invoice. These are just some of the options you can choose

The entering of invoices allows the same choices that are offered in Order Processing. Invoice lines can be posted to as many as 30 different sales accounts as well as to different jobs/projects, job lines, and departments. A virtually unlimited number of customers and records is allowed. This module allows for features such as recurring invoices, multiple ship to addresses, prepayments, partial payments, void checks, open credits, and discounts.

Understanding how businesses really operate, Flexware offers flexibility. Need to get the checks into the bank ASAP? Enter the amounts and later apply. Of course the entering and applying can be done in one step. Don't worry, you can print out through the reports menus, information on the status of any process. Making a collection call? You can record your conversation on the screen for that client.

The reports available through Accounts Receivable are:

Customer List Misc Cust Info List Cust By Salesm

Ship Location Invoice Summary Inv By Number

Commission Profit Inv/ Payment Summary Detail Inv Rept

Aging Credit Report Tax Code List

Term Code List Cr Type List A/R to G/L Aud.

A/R line B/Order Unapp Credits Cr/ How applied Inv By Date Inv How Paid Cust Sales Hist.

Cus Type List Salesperson List Type & Cust

Prod Cat Product Prod &Cust

Cust & Prod Cust Type Customer

Salesperson Sales By Inv Date Inv Retainer

Journal entries are posted to both General Ledger and Job Costing. Invoicing, cash receipt entry, credit memo entry, open credit application and customer file maintenance are instantly updated to the data files. They can be changed until the posting is performed. After posting, additional entries would have to be made to show any changes.

The Flexware Purchasing
System is used to enter orders for
restocking items into inventory, to
suppliers or vendors. Purchasing
can be used as a stand-alone or
interfaced with Accounts Payable
and Inventory. Setup requires
interface information. Four types
of Purchase Orders (P.O.) are
supported. They include standard,
blanket, release, and special.

When you enter a P.O. for inventory items, the part cost automatically defaults to the last "landed cost". Entries on a P.O. can be changed before finalization. Upon receipt, each item can be marked as received and the Inventory files updated. Part of each item quantity ordered as well as other items can be left open until receipt is indicated. P.O.'s can

be created based on inventory item levels.

Reports available are:

P.O. Register Monthly P.O. Receipts Open P.O. Line

Open P.O. by due date Open P.O. by Part ID P.O. Dollars Sum

 $\begin{array}{ccc} \text{P.O. History} & \text{P.O.} \\ \text{Proof Report} & \text{Blanket Order} \end{array}$ 

Blanket & Release

As an aid in projecting business cash flow requirements, P.O. dollars on sum is a useful report. This report is used to survey expected cash requirements to pay for purchased items with expected delivery dates over the next 24 weekly periods. Other processes that afford management valuable information are P.O. History and Purchase Sources.

The Inventory module can be used as a stand-alone or directly interfaced with General Ledger, Job Cost, Order Processing, Accounts Receivable, and Purchasing. It gives you the ability to

## MacUpgrades

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#### **Drives**

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#### Scanners

Kurzweil, Xerox, & Datacopy, have all teamed up to deliver the ultimate in graphics / OCR scanning systems. The 730GS, with AccuText software.

MacUser said 'you can't go wrong with the 730GS...superior gray range...best scanning software we've seen."

MacWeek said of AccuText "the highest level of accuracy found in any personal computer based OCR product...AccuText's performance is brilliant".

DataCopy 730G\$ ......\$1895 DataCopy AccuText .....\$775 maintain adequate stock levels for sales while not overstocking and / or investing more capital than necessary. Under setup you can define multiple warehouses, product categories, inventory classes, and interfaces desired.

As you enter a new part, you proceed through several screens, starting with the "part id". Then you assign product category, inventory class, manufacture part number and units of measure. Another screen asks questions about items on hand, reorder quantity, and bin location to name a few. As transactions are processed, information recording the movement of items is recorded. From this screen you can get a graphic comparison of on hand to economic order points showing the reorder point, on hand and maximum stock. The last screen asks for the cost type (LIFO, FIFO, Weighted Average, or Standard). There are nine different price levels available for each item. Four purchase dates with quantity and cost are displayed. Part purchasing and issuing can be accomplished either through the Purchasing and Ordering modules or directly through Inventory. These parts can be assembled together to make yet another item. Flexware allows for single-level assembly/components structures. Each part or finished good can have up to 999 different sub-assemblies. You can designate the number of each component for the assembled part and up to a maximum of 1000 components.

You are able to perform warehouse transfers, physical adjustments, as well as see on screen status of inventory items. Posting can be made to General Ledger and Job Cost modules.

The reports built into the system offer the standard required pieces of information. Several reports deal with the finished goods and the cost, availability of, and "where used" of their components. Available reports are:

Product List Part Cost/
Price Price List
Stock Status Reorder

Report Inventory Value

Physical Inv Part Hist Report Single level BOM

Trial Build Detail Trial Build Where Used

History Reference History/ GL Purchase Sources

The Flexware Job Cost System helps managers build project estimates, spot cost and time overruns and measure profitability. The Job Cost module takes accrued costs from Payroll, Accounts Payable, Accounts Receivable, General Ledger, and Inventory to be posted to defined jobs. It can also be run as a stand-alone element.

During setup, you define interfaces, default codes and levels, overhead codes, and post types. Overhead codes allow percentages to be assigned to labor, equipment, materials, indirect, and contingency. Posting type codes are predefined indicating description and cost category such as revenue, expense, material, administration, labor, and other. Each time you enter an invoice from a vendor for instance, you can post each line item to a job, level within the job, and post type. Description can be changed on these post types to meet your particular needs. These icons represent some of the choices offered on each screen. Each job setup allows for determination of the number of estimate levels. There are nine combinations of estimating levels. The most complex level allows for five different estimating levels.

After finalizing the estimates, and the job starts, the budget stage is entered. As entries are made into the interfaced modules and posted in Job Cost, the totals are seen in job detail. Job/project totals are based on three time frame designations: job-to-date, year-to-date, and specified accounting period.

Valuable bits of information are displayed on the job/project total screen. Displayed are actual vs estimated as well as percent complete.

Change orders are allowed. The field titles are preset but can be changed by a Flexware developer. Information from other modules are posted to Job Cost. If any changes are necessary, they can be made in Job Cost. These changes do not affect the other interfaced modules. Once the posting procedure is performed in Job Cost, no changes can be made. This allows management the flexibility to handle real business situations. The reports available are extensive:

Job List Completed Jobs Comp Job Detailed

Jobs in Process In Process/ Priority In Process/Due Date

In Process/Detailed Job Detail List In Process Job Detail

Comp Job Detail Job Detail/Type Job Detail/ Period

Job Totals/Period Print Job Estimate Estimate vs Actual

The Payroll module can either work as a stand-alone or interface with General Ledger, Job Cost, and Accounts Payable. Setup requires the entry of bank accounts, payroll parameters, pay rates and types, pay grades, voluntary deductions, and payroll frequencies. Federal tables are supplied along with those for some states. The end user can enter state tables and a Flexware developer can make changes for states that do not use a method consistent with current tax withholding methods. Other information entered includes FICA percentage, unemployment contributions, workman comp, state disability insurance, employee life, health insurance, loan repayment, Christmas club, and 401k deduction plans.

Entries into timecards can be distributed to jobs/projects and job estimate line numbers. This module allows for multiple labor distribution records per employee per period. Also allowed is the indication of whether this is regular, overtime, or doubletime. Paychecks are printed through the system. Posting to General Ledger

## MicroPhone II version 3.0

#### A "Stunning" Achievement in Software Engineering

The software that takes the hassle out of telecommunications. Like a finely crafted European touring sedan, MicroPhone II offers you unsurpassed power and allows you to communicate with style and agility.

Here are seven reasons why, if you're serious about telecommunications, you should consider owning MicroPhone II:

POWER TRAIN. MicroPhone II is charged by the most powerful scripting engine for telecommunications, offering variables, string and, math functions, arrays and file manipulation. You develop scripts with either the program's learn mode or its point-and-click script editor.

**DESIGN.** Surprisingly, with all its unparalleled power, MicroPhone II is simple to use. Menus, dialog boxes and on-screen controls are well organized and pleasant to look at. Its ''outstanding'' manual is easy to read, clearly laid out and contains a thorough index.

SPEED. Routinely clocked at 18,000 bits per second over ordinary telephone lines, MicroPhone II is the fastest telecom software around. Its file transfer protocols — XMODEM, 1K XMODEM, YMODEM, YMODEM-G, Kermit and ZMODEM — are all optimized to make your files fly across the country or around the world. The intelligent ZMODEM negotiates the most treacherous channels of a packet-switched network and resumes broken transfers with no loss of data.

**COLOR OPTIONS.** MicroPhone II lets you assign color icons to your scripts, thus turning the *icon bar*, shown here, into your control panel. The icon bar can be scrolled,



resized and placed vertically or horizontally anywhere on the screen, awaiting your next click. Choose icons from the large collection provided with the software, or create your own.

CRUISE CONTROL. Flexible scripting means that MicroPhone II can run on *automatic* while you're taking care of other important business. Whether collecting your electronic mail in the background, or calling Paris at midnight to transmit the daily sales report in French, the program is always at your service, saving you time and money.

**RELIABILITY.** Because Software Ventures' engineers value your time on-line, they spend countless hours applying the most rigorous testing procedures to ensure that the program is crash-resistant. In the words of *The Macintosh Buyer's Guide*, MicroPhone II is "the most reliable of all the telecom programs we tested."

**TEST DRIVE.** Software Ventures so firmly believes in its superior technology that it gives you an unprecedented chance to test drive MicroPhone II for 30 days risk free. If for any reason you wish to return the program, you may do so for a full refund of your purchase price directly from Software Ventures — no questions asked.

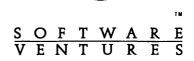
But enough talk. Start using MicroPhone II today and find out for yourself why Jim Seymour and John Dvorak are the great communicators. After all, having invested all this money in the best hardware in the world, don't you deserve the best software?

#### Jim Seymour:

"... arguably the best communications software ever written."

John C. Dvorak:

"... stunning. Fast, slick; it does everything except slice bread."



allows you to show what tax liabilities need to be paid depending on Federal and State tax laws. Quarterly totals are maintained allowing for the filing of required quarterly reports. Required reports and forms such as 941, 940, and W2's can all be printed from the system onto IRS approved forms.

#### Summary

If your business has serious accounting needs, Flexware is a package that should be considered. It is a high-end comprehensive program that requires a qualified bookkeeper or accountant. As is the case with most instruction manuals, Flexware's manual could be improved. Flexware will not train you in accounting principles. But in my opinion, anyway, it is not the responsibility of an accounting package to teach you accounting. At \$795 per module, it is an investment that can grow with your business as well as give you the management information needed for that growth. Flexware

is an accounting package that aids management in achieving objectives through analysis, internal control, and understanding of the day to day operations of businesses.

Flexware is not sold in local stores. Sales, training and support is supplied by your local Flexware Dealer. Call Flexware at 1-800-527-6587 for the name of your local dealer.

Accounting Software is an Investment in Your Company's Future

Next Month: Insight - Accounting software for the small to medium business.

(Cindy Carter works at Automated Accounting Solutions, Inc. (301) 924-3502.)

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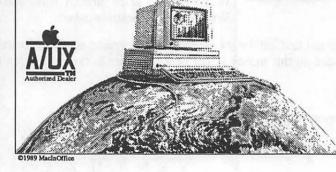
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#### Putting the Mac on the Map

## Low-Cost Microcomputer Mapping Using the Macintosh

by Kim Cimmery

Adding a few low-cost programs to your microcomputer system can make it easy for you to build your own maps. I am going to outline a process I have used several times to produce small size black and white maps. Using this process I have produced a set of 11 maps at a scale of 2 inches to the mile in a little over 13 hours. This included converting three data source maps to a digital format (this is called digitizing), entering necessary attribute information, manually calculating acreages, and generating hardcopies on a slow dot-matrix printer.

My basic microcomputer system consists of a Macintosh SE with 1 megabyte of memory, a 30 megabyte internal hard disk, and two internal 3-1/2 inch disk drives. I use an Apple Imagewriter I dot-matrix printer for output.

Three low-cost, off-the-shelf computer programs are used to support making maps. One is a mapping program called MapMaker (Select Micro Systems, 40 Triangle Center, Yorktown Heights, NY 10598). MapMaker sells for \$349. This program has an option which allows you to import a bitmap or paint formatted file and convert your bitmap lines into

objects. What this means is that you can create the digital version of your map with any program that will output a file in a bitmap or paint format. This file is then used with MapMaker. You can also export a MapMaker map to a bitmap file.

For capturing boundaries, i.e. polygons, I use a low-cost scanner: ThunderScan. This small piece of equipment sells for \$249 and is interchangeable with my printer printhead. Thus, when I want to scan something, like a map, I replace the printhead with this scanner, and am ready. The software that accompanies the ThunderScan will allow you to save your scanned map or graphics in a bitmap format that can be used by the SuperPaint program. ThunderScan is available from Thunderware at 21 Orinda Way, Orinda, CA 94563.

SuperPaint 2.0 is a basic graphics program used to supplement MapMaker and the Thunder-Scan. It incorporates both bitmap

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MONDAY		TUESDAY	WEDNESDAY		THURSDAY		FRIDAY
Introduction to Macintosh	3	HOLIDAY 4 Happy 4 <sup>th</sup> of July!	Introduction to PageMaker	5	Introduction to Quark XPress	6	Introduction to Microsoft Word
Introduction to HyperCard*	10	Beginning 11 Filemaker II	Intermediate 1 PageMaker Skills	12	Introduction to Canvas 2.0	13	Introduction to MacWrite
Introduction to Macintosh	17	Introduction to 18 MacDraw II	Introduction to PageMaker	19	Introduction to Illustrator 88	20	Introduction to Microsoft Word
Anti-Viral Strategies*	24	Introduction to 25 Quark XPress	Intermediate 2 PageMaker Skills	26	Hard Disk Management	27	Introduction to WriteNow 2.0

(paint type features) and objectoriented capabilities. This program is distributed by Silicon Beach Software (9580 Black Mountain Road, P.O. Box 261430, San Diego, CA 92126). It lists for \$149.

I use SuperPaint for three tasks. The way a scanner operates means that everything on a map is captured whether you want it or not. SuperPaint is used to edit the scanned map file to exactly what I want for input to MapMaker. Secondly, I use SuperPaint to edit the final map generated by MapMaker. As mentioned earlier, MapMaker can save maps in a paint format. This provides a lot of flexibility, allowing me to customize the map legend, titles, labels, etc. Third, SuperPaint is used to prepare what I call a base map. This is sort of like a blank map form or template. It contains a frame, a place for the map title, north arrow, scale, etc.

The last program I use to support my mapping is the popular Excel spreadsheet. It is available from the Microsoft Corporation (16011 N.E. 36th Way, Redmond, WA 98073-9717) for \$395. MapMaker can use text files to import attribute data for map polygons (you can also enter data from the keyboard). Text files can be created by a number of programs. I use Excel because of its row/column setup. It is very easy to enter data in that format.

By shopping wisely and looking for discounts from reliable sources, you can purchase the programs and hardware device described above for around \$800.

The map making process takes five steps:

- Planning and Design.
- 2. Data Collection.
- 3. Data Capture.
- 4. Map Construction.
- Map Output.

I am going to use, as an example, mapping needs related to a new housing subdivision. The maps I want to generate will show limitations for home foundations, streets, and earth movement.

These happen to be three interpretations that are included in the standard published USDA Soil Conservation Service County Soil Survey.

First, I should explain some of the limitations of this process. This process is most appropriate for project areas requiring maps that are no larger than a standard page, i.e., 8-1/2 by 11 inches. The size is constrained by the scanner and not by map scale. The scanner I use will only scan a page-size document. Another version is available that will scan documents up to 15 inches wide. Larger areas could be handled by using SuperPaint to electronically "glue" a series of page size panels together. I have not attempted that approach. The project areas I have dealt with have been about 5 inches square.

#### Planning and Design

During this step I identify the maps that I want to produce. On the basis of their content, I find out what basic map data is needed. (For example, if the maps relate to limitations for home foundations, streets, and earth movement, the map data source would be the County Soil Survey.) Next, I decide on how I want the final maps to look. I use the SuperPaint program to build a base map. This map may contain such features as a frame for the study area, north arrow, scale, and political boundaries. The base map is used during the Map Construction step.

#### Data Collection

The list of needed basic map data is used to guide the collection of these maps from normal sources. Since the data maps are going to be scanned I look for maps that are white with black lines. The scanner will pick up everything on the map including labels, symbols, fingerprint smudges, etc. Only the lines are retained for export into MapMaker. Thus, the less information on the source map the less edit work will have to be done. Rarely will you find such "clean" maps.

The County Survey I am using here has a photo background. This is about as undesirable a form for scanning as you could find.

#### Data Capture

It takes the ThunderScan about 20 minutes to scan a full-page document. You can identify smaller areas for scanning with corresponding shorter scan times. I use SuperPaint to edit the bitmap file created by the scanner, deleting everything in the file except the lines I want on the final map. For my example, in a soil survey map with a photo background, the scanning and editing took an hour for a 5 inch size area. This also includes line thinning.

The scanner is very accurate. Often when it converts a line to pixels the line will be wider than a single pixel. This means the line takes up more space than necessary. Line thinning is the process of "weeding" lines down to some pre-determined pixel width. Single-unit width for a line is the goal in this process.

#### Map Construction

I use MapMaker to build my maps. Two steps are involved. The first is to import the bitmap file containing the polygons that will form the final map and convert the bitmap "lines" into objects or real polygons. This is an interactive process. A label is entered for each polygon as it is created. This label will link the attribute data contained in the Excel file. Importing this data is the second step. MapMaker has an option for handling this. It is very easy and automatic. Up to 30 pieces of attribute data could be imported for each unique map label. My example only requires 3 attributes per polygon. Once the data have been imported, a map can be created for each variable merely by selecting them one at a time and saving the results to a file. I saved each map to a paint formatted file so that it could be accessed by the SuperPaint program.

Using SuperPaint I first loaded

in my base map. It was placed in the background. Next I loaded in the variable map created with MapMaker and superimposed it on the base map. Using SuperPaint tools I changed the default map title and modified the map legend. The last task was to save it as a final map. The map was then ready to be printed.

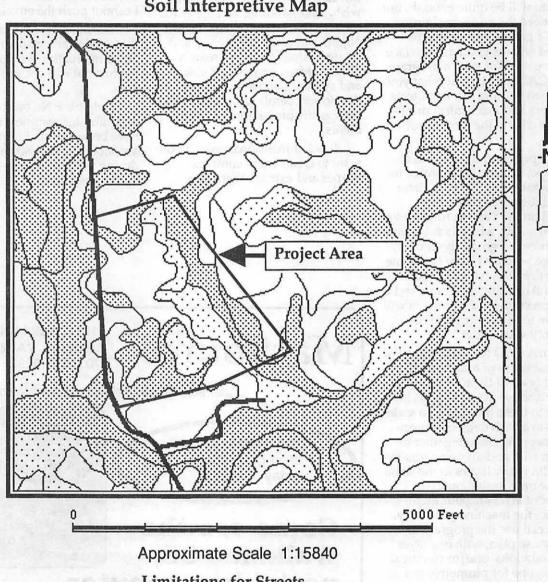
#### Map Output

This step was the easiest. It only involves selecting the correct option for sending output to the

I have described the tools and a process that can assist Macintosh owners to efficiently generate special maps for small areas. The combination of programs and the ThunderScan provide flexibility comparable to more expensive computer mapping approaches. The cost is not high and the same tools can be used for other applications as well.

#### Pine Butte Study Area

Soil Interpretive Map



**Limitations for Streets** 

LEGEND

- Slight
  - Moderate
- Severe

#### Macintosh Reviews

#### Claris CAD



by Frank Potter

Claris CAD has taken the art of computer drafting one step further with its new program. It is not for everyone; for the great bulk of Macintosh users, MacDraw or some similar vector graphic program will be quite enough. But if you need the additional precision of a good CAD program, coupled with as good an interface as I have seen for such a program, Claris CAD may be just what you have been waiting for. Architects, engineers and mechanical draftsmen are clearly the target audience.

The program comes with a VHS tape, illustrating many of its basic capabilities. There is also a tutorial diskette, linked to a manual on the various functions of the icon menu, which is substantial and intricate. I go on about the interface because I have had some experience with complex and powerful drafting programs and I am impressed. And beginners will catch on to the program in remarkably short order.

Claris CAD has virtually all of the capabilities of MacDraw II (probably all of them, but I am a lawyer and we are a cautious lot). It adds to these the ability to scale objects to a high degree of precision, snapping them together or apart at will, and allowing you to deal with many layers in the same file. The only limitation to the number of layers is your memory—no, the machine's memory. So you can use the program to lay out a house plan, with one layer for foundations, one for electrical systems, one for plumbing and so on. Landscape architects will appreciate its ability to draw layout for plantings, with an ability to use different and userdefined cross-hatching on different areas.

You can create objects in many ways, including typing their dimensions and locations in an info box. In this respect, it mimics, but goes beyond MacDraw. You can also zoom as precisely as you wish. Text-handling is roughly the same as MacDraw; text entries are objects and can be expanded and rotated. Also, you may create a library of frequently-used objects and symbols, and a third party developer (Berol) has created sets for specific professional requirements.

It is 2-dimensional only; if you want to create more complex shapes and extrude them into

three dimensions, you will need to look further, perhaps in the direction of MiniCad+ (which we hope to be able to review soon). It doesn't yet link to spreadsheets or database programs, but I wouldn't be surprised to see that happen some day. I hasten to add that I am privy to no inside information: this is speculation only.

Liked Most: Ease of use; learning tools in package.

Liked Least: Still looking. I don't really need its capabilities, so I cannot push the envelope.

Documentation: Good—up to the usual Claris standard. Videotape instructional help—this plus the tutorial will get you well on the way.

Help files: No (and with a program this complex, they might have been useful). Support is available at a non-800 number during working hours—6am to 8pm weekdays (PST), with time

### **MacSource**

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rent time on our Macs for scanning, laser printing, data translation (MS/DOS to Mac), OCR translation, or just to do your resume or presentation graphic. We also have one of the largest selections of software and peripherals .... out for Friday afternoon beer

Publisher: Claris Corporation, 440 Clyde Ave., Mountain View, CA (415) 960-1500.

Copy-protected: No.

Compatibilities: I think that it runs on the Mac Plus, but hasten to add that a program like this is probably going to be really useful

only if you are running a version of the Mac II, with a larger-thanstandard screen.

Price: \$639 street price.

(This review was reprinted, with permission, from The Twilight Clone, a local bulletin board with extensive Macintosh files. It can be reached at (301) 946-5032.)

able to compress magnetic storage on a 3 1/2-inch floppy disk was obtained by placing extremely thin magnetic media onto the plastic base of the floppy disk. Unlike the far less significant differences between single-sided (SS-400k) and double-sided (DS-800K) disks, (either of which can be initialized as an 800K disk,) the new High Density disk (HD-1.44Meg,) really requires the thinner coating, only found on the HD disks, to retain magnetic material reliably. We strongly recommend that you not use SS or DS disks as HD disks! The risk is yours and we believe that data loss is inevitable,

even if you get away with it in the short term. HD disks are overpriced right now, and re-

tail stores are definitely not the place

to buy them where, we are told, the price can exceed \$7 each. Try any of the mailorder discount houses (1-800-MAC-DISK, 1-800-USA-FLEX or 1-800-634-3478,) but please stick to "standard" brands such as SONY, KAO, 3-M, etc. You'll find prices closer to the \$3-4 mark, and you even those will almost certainly decrease over time as more SuperDrives become available.

One other comment: the SuperDrives from Apple are very expensive. Look to third party providers—the first of which we are aware is PLI ((415) 657-2211)to produce the same drive, bought from the people who supply Apple, at much less cost than Apple's.

#### Mac Answers

#### Q&A



by David Morganstein & Martin Milrod

Apple has released Laser-Writer driver 6.0. Should I upgrade from my current version 5.2 ?

For most people the answer is no! LWPrep and LW6.0 are designed to be used by people who have grayscale-capability in their machine and monitor; the rest of us do not need the improvements included in this upgrade. Stick with LW5.2 if you do not use grayscale pictures.

By the time you read this Apple should be close to announcing its latest system releases-which we expect will be numbered 6.0.4 and 7.0. That is, to be clearer, we expect that Apple will maintain two tracks for System Versions in the foreseeable future—one relating to non-color Macs and one (7.0) dealing with full-blown systems that also support color. According to rumors and some reports—no facts about these features are clearly known as this is being written-System Version 7.0 will require a minimum of 2 Megs of RAM to operate and will only support a multifinder environment.

We recommend that you "hunker down" and hold off any immediate major purchases until after Apple makes its major hardware and System Version

software announcements, which are expected to take place August, 1989.

Can I use standard one-sided or two-disks as High Density (1.44 Meg) disks by simply making a hole in the corner of the disk which is "sensed" by the new 1.44 SuperDrive (FHDH)?

The new so-called SuperDrive (FDHD)—which is standard on the SE30 and MacIIcx—is capable of reading all Mac-formatted disks (400K, 800K and 1.44Meg,) and is also capable of being able to read some non-Mac-initialized disks. This is a great breakthrough in the concept of "interoperability" or "interconnectability" of data among computers.

This dramatic increase in being

MicroSoft has upgraded Word to version 4.0 and Excel to version 2.2. Upgrade costs are roughly \$75 and \$100. Do I need these upgrades?

If you are heavily dependent upon these programs or are a "power-user" (however that term is defined,) you will probably want to "pay the man the \$2" and upgrade. But there are arguments to be made on both sides. For instance, one of us is an Excel expert and the other a quivering owner of Excel who fears using any macro. One of us will certainly upgrade and the other may not. (Care to guess which?) Let us lay out some of the arguments.

One, MS is the powerhouse producer of Mac software and they claim a virtual lock on the market distribution of these programs, some 70-80% in the case of Word in the word processor field and even more in the more limited spreadsheet arena.

Two, if you need to transfer files to others or are on a local area network, the chances are high that Word will be the required platform for WP data. In such cases, there ain't no choice kiddies.... upgrade.

Three, if you need a full-featured WP program, you only have four reasonable choices: Nisus, FullWriteProfessional, WordPerfect or Word. Each of them costs much more that \$100 upgrade cost. (For those of you with less than full-featured WP needs, we recommend that you look carefully at MacWriteII and WriteNow.)

Four, if you are already well-acquainted with Word or Excel, why switch and have to learn another? If a program has a specialized need which Word or Excel do not meet, that is a valid reason for considering buying another. For instance WingZ has much improved 3D graphics capability which Excel 2.2 does not have. The WingZ people, in a masterful marketing gambit, are offering WingZ to registered Excel owners for \$99, the same price as

the Excel upgrade.

We are not pleased with upgrade costs in general. Frequently they are cash producers without a compensating increase in program quality. For instance, the people (CPS) who produce CopyIIMac charge for their upgrades about as much as you can buy the upgraded version for at mailorder houses; we think that that is outrageous.

On the other hand, Word4.0 is a major improvement albeit still lacking the ability to change text by font and size, among other things. The upgrade cost is not unreasonable, in our opinion, for the extensive Word improvements. Similarly, if you are "into" Excel and need it in your business environment, you will want to get the upgrade to maintain compatibility with others.

I hear that a 25 MHz Mac is coming. Should I wait for it before making a new Mac purchase?

Our answer is a qualified—hell yes! The 25 Megahetz (MHz) Mac will be much faster than the "standard" 9 MHz Plus and still much faster than the 16 MHz SE, SE30 and MacII family. (Megahertz is one measure of the speed by which electronic goodies travel within your Mac.)

Apple will be relying upon the 68030 chip for years, and the 68040 chip is probably some 3-5 years away, in terms of commercial availability in a Mac. You will be struck by the improved speed and efficiency which you can achieve with the 25 MHz Macs, particularly since the addition of System Version 7.0 is supposed to contain its ROM-on-a-SIMM-like-chip (easily upgradeable,) a color "card" on a chip, virtual memory so that the Mac can use space on your hard disk to deal with programs, and many other improvements. This means that memory hogs, such as color graphics, should move along better than anything we have seen before in the Mac world. Font "jaggies" will be done away with, with the

use of a new manager.

Now for the "qualification" in our answer. If you are satisfied with your current Mac environment: i.e., it does what you want right now, don't be swayed by Macnuts like us who feel we need the latest and best Macintosh technology available. In short, keeping up with the Joneses doesn't make a lot of sense in computers; we do not support conspicuous consumption. If your current Mac environment doesn't have you completely satisfied then consider getting the faster, sexier Mac.

The new 25 MHz Mac should be announced next month (August) at the MacWorld/Boston. It's sure to have a snappy name such as the Mac/ex, MacIII, or MacIIPlus. Any wagers, folks?

One last item: 33 MHz + third-party accelerator boards are certain to be announced in Boston. Our experience has been that they rapidly become out-of-date and that accelerator boards have special problems with certain kinds of software—they do not always follow Apple's standard handling conventions. Anyone want to buy a couple of Radius 16 MHz accelerator boards with a 68881 math co-processor chip? If so, get in touch.

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#### Apple // Regions

#### L.A. CRACKDOWN



by Jim Wellman

L.A. Crackdown (Epyx, Apple II series with 128K, color monitor recommended) is a game from "The Master Collection," produced by Epyx. It places you in the seasoned-cop role with orders from the mayor to "crack down" on the drug problem in Los Angeles.

To bring the narcotics criminals to justice you must solicit the aid of a rookie cop from a portfolio of six rookies. He is your sidekick and your right-hand man. Your rookie will plant bugs, pick up clues, and arrest suspects. As Epyx puts it, "Watch out—this is a rookie with a brain!" And he does just what is threatened. He has in fact quit working for me more than once!

You start the game at police headquarters where you choose your rookie. Each of the six available has strong and weak points. Choose the one that you think will help you bust the criminals.

You have to plan out your surveillance and when you will sleep. If you wait too long to rest, your rookie will quit! Remember that you are looking for evidence to bring the criminals to justice. You will need to stake out all places at different times (day and night as well).

The criminals you are after are Patrick Sims (owner of the Pacific Shipping Company), Edward Hartman, Aloysius Braddock, John Carmichael, Armando Verdi and Lisa Foreman. There is a (somewhat complete) dossier on each of these suspects in the game's documentation.

Remember to keep notes about what is happening and when. Don't rely upon your memory. I found the documentation adequate

to get started, but you *must* rely on your rookie and your detective skills to solve this game.

I found two shortcoming in this program. The first has to do with trying to give orders to the rookie. Sometimes you get the order into the computer in time and sometimes you don't. This "timing" error can lead to a missed clue. You must be alert or you will miss opportunities to go after possible leads.

The other shortcoming is that you must remember to save, save and save! Should you fail to do so frequently, you could lose many hours of playing time due to a power failure or any other instance of Murphy's Computer Laws.

When L.A. Crackdown was released the suggested retail price was about \$45—though competitive, a bit high for this game. I have seen the price as low as \$25 in software stores; lower from mail order companies.

All things considered, L.A. Crackdown is a good game, which will give you many hours of enjoyment. And, as a final bonus, when you do capture the bad guys they will stay in jail! There is no parole, plea-bargaining, or any other loophole to let these criminals out on the streets again!

Armed with that knowledge, go be a super-sleuth and enjoy! You should be able to solve L.A. Crackdown in 20 to 40 hours of play.

#### **RATINGS:**

Animation 7.5	
Disk Accesses	10.0
Documentation	9.0
Ease of Mastery	8.0
Fun8.0	
Graphics 8.0	
Meets Promise	10.0
Playing 8.0	
Playing Time	8.0
Price vs. Product	<u>7.0</u>
REPORT CARD	8.3

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### Apple / Reviews

## DungeonMaster (//gs)



Tricks, traps, and things to trounce! A Haven for Hack and Slash!

by David Wood

Everyone braces for bloody combat. The warrior in front readies his sword. The wizard in back readies a fireball. Someone hits the button by the door, and it ca-clacks open. Beyond it, you can hear something moving around, but at this distance, it's hard to tell what. You increase the volume on your stereo in the hopes of telling the direction and distance....

Let's pull back a bit. I wasn't reading from the new generic fantasy novel. I was discussing a potential sample of play from FTL's classic game for the IIGS, DungeonMaster. Of course, you may only now think, "It can't be a classic. I just heard of it!" Well, that's true. It's been out for the Amiga and Atari ST for several years now, and FTL only recently released the GS version. It requires 1 meg of memory, and it's really helped along by a stereo card and, if you have it, a good amplifier. Because not only are the game's many sounds (gulps, clacks, and so on) amusing, but they also serve an important function.

...on with the story. An old wizard, your master, tried to recover a very powerful gem from the Inevitable Great Whacking Huge Underground Fortified Complex (read: dungeon) and failed. Miserably. His soul got split, and you, who were far away, were reduced to a noncorporeal entity. Now you have to go into the I.G.W.H.U.F.C. (Go easy on me; I'm paraphrasing wildly) and try to recover the Firestaff, which he lost in there, so he can reenter.

When you start the game and go in, you'll have your choice of pregenerated characters. In the story, they were twenty-four of the hundreds that were sent into the I.G.W.H.U.F.C. and died. Now, there are twenty-four mirrors, each one holding a different character. By touching the mirror, you can look at each one's equipment, stats, and levels. There are four different classes: Fighter, Ninja (thief), Priest, and Wizard. Anyone can be any class, and many are several. When you choose each one, you may "Resurrect" (take the character verbatim), or "Reincarnate" (exchange all experience for improved stats).

Movement is controlled by a group of six boxes which provides options to move ahead/back, left/ right, or turn left/right. Mapping is fairly easy because of the gridlike structure of the place. When you're confronted by an opponent (you'll see it in unpleasantly living color), you attack by selecting from a group of readied weapons (a weapon is ready if it's in someone's right hand) and choosing the particular action available with that weapon (slash, chop, shoot, jab, etc.) Picking up and dropping or throwing things is as easy as pointing your hand and clicking.

The magic system is also fairly innovative. Rather than have a list of predefined spells invoked by using little combinations of letters like "YACC" and "GREP", this system has four groups of symbols. Selecting from the first group sets the power of the spell, from the second selects the general realm, the third selects effect, and the fourth selects class and/or alignment. Some combinations of symbols are meaningless, others you may discover are currently

beyond you, and some which aren't documented anywhere may surprise you by working.

Oh, and another thing about this gaming environment... It's real time. Sure you can pause the game and all, but you may occasionally wonder whether to prepare the wizard's fireball or have the thiefer, ninja- fire his bow. Or you may want to get out of here; the keyboard will let you back up and get out of there if you don't back into a well or anything like that on the way. You'll have to act in real time along with it. While you're passing through, you have to worry about peoples' recovery, how much power the magic-users have recovered, how well fed and watered the people are... That's right. You have to pick up food and water for the group too otherwise they starve and make a mess on the floor.

There's also this little matter of sounds. Doors open and close. there are footsteps everywhere, and from the volume on each speaker (that is, like real stereo sound), you can tell the approximate distance and direction. This is important, because these will sometimes provide important clues to getting through doors, readying for opponents, and so on.

You'll pardon me for saying this (as I seem to do it in every review I write), but the graphic interface used in this game seems somehow natural and quicker. With the mouse, the ease of many actions in the game is comparable to that of many real-life actions, like picking up, throwing, examining, etc. Some things, like casting spells or whatnot, are considerably easier than in real life, but that's real life's problem.

And yes, there are one or two things about it that bug me. It takes a while to load (And why not? Look at how much memory it takes), and some things are just not as fast as they should be. Case in point: Flying snake approaching fast. Priest (in back of the fighter) launches an arrow. It plainly moves out in front of the party. The party moves forward, and the

fighter is nailed in the back with the arrow. Some spells, like poison cloud or fireball, could devastate a party in this way if you're not careful. Movement is also fairly slow as it has to place walls and change views and such. Also, while pregenerated characters may do something for game balance, it would have been nice for it to allow you to draw pictures, select specialized equipment, and just create your own characters. After all, part of role-playing is choosing a role you like.

Overall, the game is well worth going out and getting. If you don't have a stereo card, you'll want one. Despite its shortcomings, the graphics are great, the sounds are impressive, and some of the puzzles will either bloat your ego or make you feel like an idiot. And that's part of the fun of every game.

Look: 10/10 A good way to tell the quality of graphics is to note the size of the smallest important details. The rating says it all.

Feel: 10/10 The inventory screen, for instance, is a wonderful idea. Infocom would be proud to have an easy-to-use setup like this. (Problem is, they don't.)

Play: 9/10 It's good hack&slash, but is hack&slash really good? The general rule is: "Anything and everything is hostile." That's one thing that I wish I had to think about in a game like this.

Overall: 9/10 Wanton killing and slaying isn't quite my cup of tea. Still, anyone looking for a good fight will find this and [what I hear] its ten levels will find it entertaining for a

long time.

points from combat. Sir-Tech explained that the problem was mismatched version numbers among the many diskettes. They sent a new set of disks very quickly. Kudos to Sir-Tech's customer support!) And, of course, the 3.5" diskettes are more rigid and data entry is better maintained

The second problem I had with the game is one that I had also encountered in Wizardry III: the changing of character alignments from evil to good or good to evil. This is something that mainly affects priests and bishops, since they can only be good or evil. I have no idea what causes this but it is not totally disastrous as it is relatively easy to have a party that is mostly neutral.

The third (and fatal) problem is best described as a hiccough. The program just sort of crashed, with a message that "a fatal error has occurred and to please restart from Scenario Disk A." Restarting did not remove this error, nor could I transfer my characters over to a fresh copy of Wizardry V (or at least not without bringing the hiccough along). Calling Sir-Tech brought no relief, which is a pity. I really liked the game, with its irregular maze levels (they're not in a 22x22 grid) and the interactive monsters (if you kill an interactive monster and it turns out later you need to get something from him you have to go to the Temple to resurrect the monster, an expensive procedure). In fact, the interactive monsters are one of the nice features of this game; if your party is of opposite alignment then in all likelihood you will find it very difficult to talk to the monster unless you can "charm" him.

And then there are the locked doors, which you'll have to pick to get through. And pools to swim in, with several levels of their own. In fact, there are a lot of things about Wizardry V to recommend adding it to your collection. The drawback at this writing are the bugs. Once they are gone, this could be a real winner!

Applicate Regulates

# WIZARDRY V: THE HEART OF THE MAELSTROM

by Kim Brennan

Wizardry V (Sir-Tech, Apple II series with 64K), the latest scenario in the Wizardry series, is a revival of the standard format. You manipulate a party of 6 adventurers as they map a new dungeon, solve various puzzles and encounter monsters. Using the "windows" format first pioneered in Wizardry III, this scenario will seem familiar to veterans of the other Wizardry campaigns. And for those new to the series, Heart of the Maelstrom includes a good manual covering all of the essential details that were scattered through the manuals of the first three scenarios. There is also a quick reference card for Priest and Mage spells—very useful!

However, there are several problems with the program. First

off, Wizardry V comes on five 5.25" disks, nine sides in all. This is a BIG game, designed to be playable on any 64K Apple II. But a large number of people who have an Apple II also have 3.5" disk drives. I wish that Sir-Tech had made this game available on 3.5" diskettes as well; it would have saved a lot of disk-swapping.

There are many reasons why 3.5" disks would be advantageous. They would almost certainly mean a switch to the ProDOS operating system (instead of the Pascal system that Wizardry has been using) and along with that the possibility of installing the program on a hard disk, a definite advantage with a game this large.

When I started playing the game I gained no experience

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### Application Comments

# **Memory Game**

(WAP Disk #140)



by Phil Shapiro

Memory Game is a game of delightful simplicity. The computer flashes a "nonsense" word at you for a second or two. You remember the nonsense word, and then type it in as you saw lt. If you're correct, the computer wlll glve you a longer, different nonsense word. If you make a mistake, the computer will give you a shorter, easier nonsense word.

I've played this game with third and fourth graders in my class. Once the children warm up to the game, they really love it. But this game isn't just for kids. At the harder levels, Memory Game can be a real challenge for adults too. You can play it by yourself, or with up to five other players. When you play it with other players, the game takes on the form of friendly competition.

The program first asks you to tell it how many players are playing. Each player then types in his or her name. The program then asks you how many points to play up to. To get a feel for the game, I suggest you start off by playing up to ten points. Later, when you play with friends, or if you want a better challenge, you can play up to fifteen or twenty points. (The kids in my class get a kick out of typing some gigantic number to play to, knowing that they will never end the game before the end of class.)

Now you're ready to begin the game. The program will tell you who's turn it is to play. (With one person, it's always your turn.) The first nonsense word is three letters long. This seems trivially simple, but greater challenges are just a few turns away.

You'll notice that the nonsense word is made up of a consonant, then a vowel, then a consonant. All the nonsense words are constructed by alternating consonants and vowels. So every single nonsense word is pronounceable.

The way to excel at this game is by trying to pronounce the nonsense words the program gives you to remember. Here's a big tip: pronounce every vowel with it's long vowel sound. So if the nonsense word is "JOTULABOFI," pronounce this as, "JOE - TUE - LAE - BOE - FIE".

To give you a better idea of some of the nonsense words this game creates, here is the list of "words" from a game I recently played: LAF, JUSU, HIDOJ, MIDOZO, VAMABYJ, QYQYNAKE, BORECIFUP, TINURULYNA, ZOGOLECAKYP, BUJOBUZIDINO.

Since I didn't make any mistakes in remembering and typing these words, each word is one letter longer than the one before it. And as you can see, the game quickly snowballs into delightfully silly nonsense.

Over the years, I've picked up some tricks that help me play the game. To help you get the most out of the program, here's a recap of some of these hints:

l) Since the program randomly selects letters for the nonsense word, the letter "Q" is rarely followed by the letter "U." So whenever you see a solitary "Q," pronounce it as if it were a "QU."

- 2) If the nonsense words starts with the letter "X", pronounce the "X" as a "Z", as in xylophone.
  - Pronounce the letter "C"

with the "K" sound. (Then make sure to mentally note which of these two letters is responsible for the sound in the nonsense word.)

- 4) Pronounce the letter "Y" with a long "I" sound. (Then make sure to mentally note which of these two letters is responsible for the sound in the nonsense word.)
- 5) Pronounce the letter "G" with the hard "G" sound. Then you won't confuse it with the sound from the letter "J."
- 6) If you want to start over during the middle of a game, type the two keys <Control-Reset>, at the same time.. You'll then see a flashing cursor at the bottom left side of your screen. Type RUN, and press return to start the program over.

7) Always remember to press down the Caps Lock key so that your typing is in capital letters. Memory Game cannot be played with lower case input.

In the classroom, Memory
Game can be played both competitively and cooperatively. Youngsters will quickly be overwhelmed when the nonsense word gets to be more than six letters long. At that point, you can get the kids to work in teams. One child remembers the first part of the word, while another remembers the second part. By cooperating with each other, children can gain a vivid sense of the old maxim: "Two brains are better than one."

Memory Game is a real gem. It teaches concentration skills in a lively and entertaining way. This program ought to enhance spelling skills by getting kids to concentrate intensely while the nonsense word is on the screen. The game is extra exciting for hunt-and-peck typists, because they have to hunt down the letters before their memory trace of the nonsense word fades away.

Applesoft programmers should note that it's easy to change the timing loops in the program. To make the game move faster for adults, you might want to shorten the handful of delay loops in the program. The main delay loop is in

line 250. Also, you could get the program to start right off with a six letter nonsense word by changing the value of the variable NL(K) in line 70. That way you could skip over the part of the program that is not challenging to adults.

A big thanks is owed to David 8parks, of Waterloo, Iowa, for creating Memory Game and generously donating this fine program to the public domain. As

a historical note, David says the game was written on an old Apple II+, at a someone's party, back in 1980. The game was thought up on the spot, as a demonstration of how easy it is to write a program in Applesoft BASIC. Easy or not, this one is a real treasure.

(The author teaches computers in elementary school, and develops educational software for the Apple II family of computers.)

over! The question and answer challenge is only for a new or short game and in Microprose's insurance against software "pirates." I didn't find this a problem in the least; I had to start over a couple of times but it was my own fault, and I learned my lesson.

The documentation educates you about weapons and fencing tactics (fighting type), tells you how to recognize ships, and provides information about the famous expeditions. A word of caution: don't try to take on a Spanish Galleon with a Merchantman ... you'll lose! I spent six months in prison because I got cocky.

Microprose also includes a detailed map of the Spanish Main that has the latitude and longitude markings as well as the names and years of the forts, who occupied them and when, and a summary card for quick command reference. Microprose did an outstanding job on the documentation.

You will have the chance to find your fortune and take on a special mission or two if you are really good. Be sure to check in at the taverns only once per port and listen to the talk. You might get a treasure map

One more thing, read the Memoirs of Cap'n Sidney and heed 'is advice! Methinks that ye will find them quite interesting, and ye just might keep yer head, if ya know what I mean!

### RATINGS:

Animation 9.0	
Disk Accesses	9.0
Documentation	9.0
Ease of Mastery	9.0
Fun	10.0
Graphics	10.0
Meets Promise	10.0
Playing	10.0
Playing Time	9.0
Price vs. Product	10.0
REPORT CARD	97

Microprose

### $Apple \cap Reviews$

### Pirates!



by Jim Wellman

"Yo ho, yo ho ... a pirate's life for me!" I hear the lyrics of the the theme from the "Pirates Cove" in Disneyland while I'm playing Pirates! on my IIc! "Avast, ye maties. Grab the mainstay! Swab the poop deck! Keelhaul the player!" Saying these words puts me in the mood for a really great game! I have to give four stars to Sid Meir and the crew at Microprose, since they have really produced not only a fun game but a historically correct replication of the Spanish Main from 1560 through the 1700s.

Pirates! (Microprose, Apple II family with 128K, joystick required, color monitor recommended, \$39.95 list) starts you out as a destitute servant who has sold his life to come to the New World to find his fortune. You have become frustrated as a servant and enlist in the navy to find something better.

Pirates! sets about this adventure with two basic types of games. You can start a new game, continue a saved game, or (when you are up to it) "Command a Famous Expedition." The last choice is not for the faint of heart, as you will have a short career becoming one of six famous pirates. For example, you could play John Hawkins and command the Battle of San Juan de Ulua in

1569. Maybe you can change the historical outcome of the battle...

Pirates! allows you to adopt a country. You can pledge your life to England, Spain, France or Holland. When you choose a country you will be obliged to fight for its defense. There are many honors to earn, and if you prove yourself, you may become an Admiral. From there you can earn titles of nobility and (more importantly) land.

The harder the level of play you choose the greater the rewards. As an Apprentice Captain you will end up giving most of the booty to your hands. As a Swashbuckler, you get to keep most of the money ... but then again you will be taking most of the risks too!

To start the adventure, the program will give you a year and a city, and ask when the Treasure Fleet or Silver Train will arrive there. You have to respond with a month and when the "goods" will be delivered: early or late in the month. If you are correct, you will then fight the old captain to earn the position of apprentice captain on a ship. If you are wrong, or lose the fight, you will be told that "You have gotten off to a rather unpromising start for your career." Having been there once myself, I heartily recommend that when you get that information you start

### 

# Late Nite Patches for AppleWorks



by Gary Hayman

I recently returned from the Boston AppleFest where I was able to meet and talk with famous people whose programs I have been using these past years. This is to report my excitement about LATE NITE PATCHES that I purchased from Jem Software via the Beagle Brothers people. Actually the author, Mark Munz, was at the booth demonstrating some of Beagle's new products—but that is another story.

Randy Brandt (ULTRAMAC-ROS) suggested LATE NITE PATCHES (LNP) for a particular need of mine: I wanted a macro, or AppleWorks addition, that would allow me to import text files into

AppleWorks without having to type complete pathnames as I presently must do (you can't select text files from a menu because normal AppleWorks won't list them).

LNP has a patch that will let AppleWorks display the file names of the text files on the screen when you choose to create a file from an ASCII text file. With this patch, you can import the file by menu selection. This is a boon for some of the text files that I have downloaded from the TCS or that appear on my various disks. They can now easily be loaded to the desktop and you are no longer forced, by AppleWorks, to type in

pathnames for loading text files. If you regularly import text files to AppleWorks this patch will be a help.

In addition, on my disk is a Timeout style addition that you copy to your initial Timeout collection. It is called DIRECTORY MANAGER. This program, after configuration, provides you with a pop-up OA-ESC choice which will allow you, with just a couple of key strokes, to change the "Standard location of data disk" instantly to one of 12 previously selected locations. I have installed my normal locations of data that may appear on my hard drive or my 3.5 disks. Now switching locations is an instant breeze-no more laborious typing of locations.

The combination of these activities are well worth the price of LNP. (I paid \$15 at the show but it may be \$20 by mail.) But let's not stop here. The disk is jam-packed with other patch goodies—some I am using and some I am not using as yet. MOUSETEXT jazzes up



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your screen with little disks and folders at appropriate places in menus and displays, plus a couple of other things. OA-Q MENU MOVER lets you decide where the OA-Q menu should be. PROTO-COL PATCH is useful for those of us with a slot 3 Ramdrive. BELL PATCH changes the sound of the bell (better than the popular SUPERPATCH). I use 255/255/ 255 for a neat effect. FILETYPE PATCH allows you to change SEG.OO/XM/RM from SYS files (which they shouldn't be) so they won't show up in System Program Selectors such as BIRD'S BETTER BYE, PROSEL, etc. This is for AppleWorks 2.0 users only—2.1 owners are already taken care of.

TAB SETTING PATCH allows you to alter the default TAB patterns into a different pattern. DATA BASE CATEGORY allows you to change the default "Category 1" or even to make it a blank so you can start typing as you prepare your new data base. CURSOR PATCH allows you to change the insert and over-strike cursors to whatever mousetext character you want. (The popular

SUPERPATCH only changes the insert and leaves me with an undesirable over-strike character.) With this I use the "hour glass" or big X as the over-strike cursor, but the user can choose whatever he or she wants. DATE SHOW PATCH shows the current date instead of the 'OA-? for Help' prompt. Here, I like the SUPERPATCH better. It shows 'xxxK Avail.' which is more useful to me. KEYPAD ENTER changes the enter key on the keypad to act as a down arrow when you are entering numbers.

Still more. There are a couple of TO compatible programs that temporarily change the bell, or even give you vital statistics of various AppleWorks locations, reporting what they contain. The disk is also full of hints and tricks as well as some interesting-looking macros that you may have some use for.

JEM SOFTWARE and Mark Munz can be contacted at P.O. Box 20920, El Cajon, CA 92021 for additional information about LATE NIGHT PATCHES and other promising programs and patches.

Memory Saver will boot directly into any of them.

If you've experimented with running programs from RAM5 and are familiar with the way it works then the Memory Saver works exactly like running programs from Ram5 with one extremely nice major exception you don't lose everything in RAM when you turn the computer off. And that is the major difference. If you haven't done this type of experiment then you're in for a big surprise and a lot of fun.

When you run programs from a RAM disk or a ROM disk (as Checkmate calls it) the information is already in memory inside your computer. You don't have to read it in from the slow disk. All that is necessary is to transfer the contents of your RAM disk or ROM disk from the "disk" area of your computer memory to the executable part of memory. It is all done electronically and transfers that information as fast as the computer can work. It is even faster than reading the information from a hard disk.

This was experimentally verified at the December II/GS SIG meeting and the ROM was faster. It is still faster than booting GS/ OS. GS/OS boots up in about 35 seconds. ROM does it in 13 seconds. System Disk ver 3.1 or 3.2 takes about one minute to boot. Which means that using a ROM disk is 5 times faster.

I have used AppleWorks to write Applesoft Basic programs and switching back and forth between the two takes its toll on my patience after about the second switch using standard physical disk drive access. However, it is a pleasure to sit back and watch the screens fly by as you move from program to the other when they are both in your RAM or ROM disk. And if you are writing software thatbombs during testing, no problem, just reboot and you are off and running again in seconds (if your software didn't destroy part of ROM).

### Application of Regions

# Checkmate's Memory Saver for the Apple II/GS

Have you ever wanted to sit down to your Apple II/GS and get right to work? Well if you have you have then Checkmate's Memory Saver may be just the ticket for you. It will let you boot up from computer off to full running Finder in about 12 seconds (I actually timed it at 13 seconds, which is not much to quibble about). But that is just half of the fun. You can choose which program you want to boot into when you start up; it doesn't have to be the Finder.

If, say for example, you are writing the great American novel and you want to boot directly into your favorite word processor then you can set up your Memory Saver to do just that. Or you may always run a special program that was designed specifically for your business. You can have Memory Saver boot directly into that program too. And it makes no difference whether the program runs in Apple II/e emulation (8bit) mode or in the full native (16bit) mode of the Apple II/GS, the

### INSTALLATION

Installation of the Memory Saver board is a breeze. What you do is remove your regular memory card from its slot and put the Memory Saver board in that slot (the memory expansion slot). You then plug your memory board into a slot on the Memory Saver board next to the right hand side of the Apple II/GS.

The space between the side of the II/GS cover and the inserted memory board is very small and poster board furnished in the package is used to electronically protect the memory board from the metal side of the II/GS. Next you connect the battery holder to the Memory Saver board and then connect the power supply to the Memory Saver board. After reassembly you are ready to go.

It took me about half an hour's time from walking into the room with box in hand to booting up with the furnished ROM disk software ready to run. This was when I assembled the system for the first time. Since that time I have grown more efficient (that means I don't have to look at the manual to set it up) and can do the set up in about ten minutes.

### WHAT YOU GET.

The Memory Saver comes with two manuals, the Memory Saver board, a small power supply, a special battery holder, a disk of software and two pieces of sturdy poster board (very important for proper operation as pointed out above). Also included in the review package was a Memory Saver Extender which allows two memory boards to be used together. This Memory Saver Extender is not included with the Memory Saver itself but must be purchased separately.

The first manual was the Owner's Installation Manual consisting of 61 pages of clear directions with pictures and diagrams all of which made the installation straightforward. Additionally it contains informa-

tion on how to set up the ROM disk, booting from the ROM disk and partitioning your ROM for maximum effectiveness. Plus it has a chapter on troubleshooting problems that you may encounter while trying to run from ROM.

The second manual is the Memory Saver Utilities Manual. This is the one you read to find out about all the neat stuff you can do. It describes the three parts or software packages that are on the Memory Saver ROM Disk Software.

The Memory Saver ROM Disk Software consists of three distinct parts.

### Part 1

The first part is a ProDOS 8 text-based program which consists of three selections. The first selection lets you set the size of your ROM disk. The second selection will check out your RAM chips for both short and long-term retention capability to see if any are bad. This is a handy little tool to have around just by itself. By the way, this software doesn't work without the Memory Saver board in place. The third selection is called Squirt—a program selector that modifies ProDOS to allow you run any file ending in .SYSTEM or open any directory so you can find other files ending in .SYSTEM to run.

First, make a backup copy of your original software and put the original away for safekeeping. The second thing you should do is boot the copy of the disk that comes with the package. I decided to check out what the RAM size of my computer was without setting up the Memory Saver first. Did I get a surprise when I did that... It was like I had no memory card at all (that worried me just a little at first). But after I booted up the Memory Saver ROM Disk Software, and ran it all the RAM showed up.

### Part 2

The second part of the ROM Disk Software is a ProDOS 16 desk top with several goodies. One of the them that I thought was handy was "Help" on the menu right under the Apple icon on the menu bar. It consisted on seven screens of information which described some of the most important selections available to you on the rest of the menu bar and what happens when one of these selections is chosen. It is handy and makes things convenient. Across the menu bar are the following: Configure, Back up/ Restore, Boot Action, and Jump Start.

The menu item Configure will do just that—it will examine or change the size of the ROM disk. If you change the size of ROM the same thing happens to its contents as does when you change the size of RAM5, you loose everything in your ROM disk (and any RAM too). Also under this menu item you can check out the chips on your memory card to see if they are OK. Of course, again you lose everything on your ROM disk and RAM when you do so; it is not advisable to do this often. Also on this menu item are a few other selections, one of which sets up things like the border color, installs the two CDA's Visit the Monitor & Memory Peeker, warns you if you are about to overwrite an existing backup disk, and has a number of other handy capabilities.

The second menu item, Back up/ Restore lets you either make a backup disk for your ROM disk or restore a previously made backup disk into ROM. If you have a ROM disk that is larger than 800K, it will be stored on two or more 3.5" disks.

The third menu item, Boot Action, contains a menu of selections which sets the slot that you want to boot from. It accomplishes the same action that "startup slot" does, located at the bottom of the SLOTS in the classic desk accessories (you know open-applecontrol-escape).

The forth menu item, Jump Start, lets you define or edit the order of the program(s) you wish to run. It also has a Quick Launch selection which lets you start a program not on your list. And one other selection is "Run II GS Finder", which is the full-fledged Finder.

#### Part 3

The third part of the ROM Disk Software is, obviously, the Finder—the same desktop you find when you boot up System Disk version 3.1 or 3.2 and have at least 512K bytes RAM memory in your II/GS. The version furnished with this package appeared to be version 3.1. I'm not going to go into any detail about the Finder—you already know what that does.

### **ADDITIONS**

Also in the package was the MemorySaver Extender. This is a specially designed plug-in board, about 2 1/4 by 2 3/4 inches, that plugs into the opposite side of the Memory Saver board. This allows you to plug a second memory board into your Memory Saver so you can have two boards connected to your Memory Saver.

I attempted to do this during the December meeting of the IIGS SIG, making sure that I change the position of the two jumpers as specified by the instructions. However, as every one who attended the meeting knows, it didn't work. Since I don't have two memory boards I haven't been able to try out other combinations of jumper locations. The nice thing about this extender board is that it places the second memory board between slots 3 & 4 since you probably wouldn't give up your 80 column card or your mouse to some other board being plugged in either one of those two slots. It is designed to let you reinstall any cards that you may have in slots 5,6, or 7 and not be in their way. This is a really helpful device.

### **DRAWBACKS**

The only real problem that any RAM disk or ROM disk

suffers from is that it reduces the size of available memory for your use with the program you are running. I have an Apple memory board fully populated with one Megabyte of memory. It would not be possible for me to set aside part of that memory for ROM disk and run some of the memory-hog programs like Paint Works Gold or AppleWorks GS, since they need all of the memory that I have on my computer just to run. And in general the software you are running from the ROM disk really exists in two places in memory. One in the ROM disk and the second in the area of memory where it is running. So you lose

that amount of memory to your ROM disk that would be available for your programs to run in. But other than these negative aspects, I really liked this system and would recommend it to anyone with enough memory available to fully use its capabilities.

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### 

### NAUG Holds AppleWorks Seminar Here



by Bob Oringel

On Wednesday, April 12, 1989, at the Holiday Inn - College Park, MD, the National AppleWorks Users Group (NAUG), in cooperation with inCider Magazine, held a four hour seminar on "classic" AppleWorks, titled, "AppleWorks: Beyond the Basics. Two hours were devoted to the word processor module and its add-ons, and an hour each to the data base and spreadsheet modules.

The seminar presenter was Dr. Warren Williams, an authority on the AppleWorks program, and a technical advisor to NAUG. Dr. Williams has presented this seminar throughout the country more than 75 times. He was accompanied by James Smith of NAUG, who told me that the organization has more than 12,000 members, and a single mission: to help AppleWorks users. The College Park seminar had 65

attendees. Most were teachers, sent to the seminar by local school systems or colleges; some attendees, interestingly enough, were sent by federal government agencies. What does that say about the viability of the Apple // and its software?

I sat in on the word processor and database parts of the seminar and found them extremely interesting. Dr. Williams is an excellent lecturer. I rediscovered Apple-Works commands that I hadn't used, or considered, in years. The day was a fruitful one for this AppleWorks user, and I would highly recommend the NAUG seminar to Pi members when it comes to this community again. As an alternative, or if you cannot wait, the seminar is available in a three-hour form, on audio cassette from NAUG, PO Box 87453, Canton, MI 48187.

## The Graphics Exchange

(for the Apple //gs)



by Gary Hayman

If you are an Apple IIgs GS user and are into graphics, then you should look at THE GRAPHICS EXCHANGE (TGE) by John MacLean, published by Roger Wagner Publishing, Inc.

TGE is billed as "The Ultimate Graphics Conversion Tool" and comes pretty close to that claim. By simple menu selection - go ahead and use your mouse - you can easily load one of 15 different types of Apple Graphics, display it and save it as one of the other 14 remaining types. For example, you could load a DHR (color or monochrome) and save it as a PRINT SHOP or PRINT SHOP GS graphic. You then might also want to save it as a 320 or 640 SHR graphic, either in color or monochrome. If you had a need, you could load in a NEWSROOM clip art or photo and change it to HR, DHR, SHR, or even one of the two PRINT SHOP formats I mentioned above.

You can convert and save all or ANY PART of a graphic in another format. You can even rescale the size of the graphic "onthe-fly." hnn Standard transfers, with this and other programs, are usually pixel-for-pixel conversions, sometimes resulting in narrowed or widened converted images. TGE compensates for this by with a scaled transfer that will allow you to use all or cut a portion of a graphic and transfer it over in proper aspect to the size you determine at the screen location you determine.

You will find other useful features to your liking such as a black/white exchange—not only the whole screen but any part you

select. The restore standard palette is useful "...for bringing 640 x 200 Mono back to black and white, and for changing back to the standard 16 colors when the palette has been altered." The TGE has a way of setting background color to be ignored during a transfer so that you can effectively "lasso cut" and paste without the background. In many cases your graphics can be saved in either packed or unpacked formats.

TGE has a built in Slide Show capability that will show all graphics of a certain selected type that you have on your disk. This is handy for a quick review of your graphics to see what is where. As an extra feature, you can directly read Macintosh disks (400K or 800K, MFS or HFS) and convert graphics to any of the other forms. This means that you can use Macintosh graphics in your programs or slide shows too.

Although I haven't explored the almost endless combinations of what I can do with this program, here are some ideas that I have come up with:

- Convert NEWSROOM clip and photo art to PRINT SHOP and PRINT SHOP GS formats; also to DHR for use in PUBLISH.IT!
- Convert my PRINT SHOP graphics to PRINT SHOP GS without having to go through the graphic editor. Conversely, convert PRINT SHOP GS graphics to PRINT SHOP so that they can be used by PUBLISH.IT!
- Extract portions of SHR (320 or 640) to DHR for use with PRINT SHOP (both).

- Use THUNDERSCAN for saving art as DHR graphics, then, with TGE, convert to PRINT SHOP format so I can use the new art with LABELS, LABELS or either PRINT SHOP.

 Expand my HR, DHR, SHR, PRINT SHOP collections with "Mac" originated graphics.

There is an excellent tutorial to get you started, a 34 page manual; the program itself comes on a 3.5" disk that is not copy protected and includes an extra label for your back-up copy. The program automatically decides to run in 8 or 16 bit operation depending upon how you called it, and there are some sample graphics to get you started. It does require an Apple II GS and 768K RAM.

A number of graphic modes are supported:

Normal Low Resolution Color (40x40) Double Low Resolution Color (80x40)

Normal High Resolution Color (140x192)

Normal High Resolution Color (280x192)

Normal High Resolution Mono (280x192)

Double High Resolution Color (140x192)

Double High Resolution Mono (560x192)

Super High Resolution Color 320 (320x200)

Super High Resolution Color 640 (320x200)

Super High Resolution Mono (640x200)

Print Shop Graphics Mono (88x52)

Print Shop Graphics GS Color (88x52) Newsroom Clip Art (245x192)

Newsroom Photo Mono (231x168)

MacPaint Document Mono (576x720)

THE GRAPHICS EXCHANGE lists for \$49.95 but I have seen mail order listings for about \$35.00.

# A History of Robert Lissner's /// EZ Pieces

(AppleWorks)



by David Ottalini, /// SIG Co-Chairman

When he was designing it he said, "Should I do it on the Apple ///?" and I said, "You'll never be able to sell the Apple II product to Apple if you don't do it on an Apple ///." Because internally at Apple everybody was using the Apple ///. There was not an Apple II being used around the company. If you want to sell them something you've got to have software that can run on what they are using."

#### - Don Williams

Former Apple Business Marketing Manager

At the Phase /// Conference October, 1987

Apple /// users are lucky to have /// EZ Pieces, the original AppleWorks integrated program that combines a word processor, data base and spreadsheet. It was a hit almost from the start, and drew rave reviews from the computer press. But it almost wasn't developed for the ///.

This article looks at the history of /// EZ Pieces and how it came to be developed for the Apple ///. It's an interesting story that could not have been told without the help of Don Williams, the current President of Productivity Software (the developers of Microsoft Works...the Macintosh version of AppleWorks). Williams worked for Apple Computer during the early 1980s, years when the Apple /// was being developed, introduced and later reintroduced. This article makes heavy reference to two talks given by Williams about Apple Computer and the Apple /// during the Phase /// Conference in Chicago, Illinois in October, 1987.

### The Early Days

Our story begins with a lucky coincidence. Don Williams and Rupert (later Robert) Lissner lived across the street from each other. Williams had worked at IBM for 16 years and in September, 1979 jumped ship to Apple. He did financial forecasting to begin with and then took a full-time job as Apple's Business Marketing Manager. Williams did not want his family to live in Silicon Valley, choosing instead Scotts Valley, a good 17 "miles of terror" (Williams' words) drive away over the Santa Cruz Mountains. He and Bob Lissner were soon to become close friends:

"The first time I ever met Bob Lissner, he was in his bathrobe and slippers coming out to get his newspaper (NOTE: he stayed up all night programming). He lived across the street from me. And he was writing mainframe code in Silicon Valley for the public school system."

Lissner had bigger ideas than writing code for public schools, however. He wanted to know what he could do to "make some money in the micro business" and looked to his new-found friend Don Williams for some answers.

An Apple II data base program called file Cabinet began the journey towards a solution. The President of Apple, Mike Markkula, had rewritten file Cabinet as "Small Job." But the Apple // Division refused to publish it because they claimed it was "spaghetti code" and not in Pascal, Apple's language of choice

at the time. Markkula needed someone to rewrite it, and Williams realized that Robert Lissner was that person.

By mid August, Lissner and Markkula had met and by October, 1981, the Pascal version of "Small Job" was up and running. Lissner later rewrote the program in assembly code, speeding it up by about 40%. "Small Job" finally got published as "Quick file" in both Apple /// and Apple II versions.

### The Integrated Idea

By the Spring of 1982, Don Williams had left Apple the first time to start his own software company (before Productivity Software). To get things going, he proposed to Bob Lissner the development of a word processor for the IBM PC because at that time there weren't many available. But Lissner was more interested in a version for the Apple II family.

Now comes the interesting part. Lissner got the idea to merge the word processor with Quick file. Writing to the National Appleworks Users Group in November, 1988, Lissner said the Lisa Integrated Office System convinced him that he could do something similar on the Apple II (but without the graphics interface). Basing the word processor on Quark's Word Juggler, he got the program (combined with the data base) running enough to show Mike Markkula at Apple. Markkula thought that was a great idea, but had his own suggestion: marry it to a spreadsheet for a truly integrated package.

That night, Bob Lissner banged on Don Williams' door, asking what he should use for a spreadsheet. It just so happened that Don had a spare copy of VisiCalc. And by the Summer of 1983, the program with word processor (based on Word Juggler), data base (based on Small Job/Quick file) and spreadsheet (based on VisiCalc) was up and running.

One other note here. Because Don Williams told Bob Lissner to

develop the program for the ///
first (see the quote above), he
decided to make it as easy on
himself as he could. So, Lissner
wrote his own high speed Assembler that could be used to turn his
source code quickly into either an
Apple /// version or an Apple II
version with a minimum of change
(the programs really were the
same at the start. The only major
difference was how they dealt with
their respective operating systems:
SOS and ProDos).

In fact, if you list the /// EZ Pieces boot and program disks, you'll notice that SOS.Interp, Seg.00, and Seg.PR are all listed as ProDos System disks. There's no mention of a SOS file type on either disk!

### Apple Makes a Decision

It was at this point that /// EZ Pieces came to a crossroads. Bob Lissner wrote the program on and for the /// so it would be accepted by Apple and published for both Apple II Family machines. Yet Apple decided not to distribute the /// version. There never was an "official reason" for the decision. But by that point, it was probably obvious to the "Powers That Were" in Cupertino that the /// was not going to last much longer (development stopped in May, 1984 and was discontinued in 1985). Had the decision been otherwise, well, Bob Lissner put it this way:

"Given the ultimate popularity of AppleWorks, one must wonder what impact Apple's decision not to publish /// EZ Pieces had upon the longevity of the Apple /// computer."

And so, while deciding to distribute AppleWorks for the Apple II, Apple returned the Apple // rights to its author in late 1983. Bob Lissner signed an agreement with Chaz Haba of Haba Systems to publish the package as // EZ Pieces. It was called "The Executive Work Station; A High Performance 4-part Business Package" and the retail price was \$295.00.

In a July, 1984 article in the old "Softalk Magazine", author David Hunter wrote that Haba had made a "smart move" by picking up /// EZ Pieces and that it "is currently a runaway bestseller in the /// market." Chaz Haba even said that Bob Lissner was a big influence on the company and its programmers.

Despite the optimistic outlook provided by the article ("Busting down the walls of its current space, financially healthy (the company just received \$2 million dollars in venture capital) and bubbling over with creativity, Haba Systems seems destined to get its name in lights. And they don't give a damn about IBM"), Haba had its troubles. Refusing to write programs for the IBM was short-sighted, and its new programs for the Macintosh proved to be less than best-sellers. The demise of the /// also didn't help matters, although Apple did bundle 3 EZPs with all Apple ///s for the final few months it was still produced.

Only Bob Lissner and Chaz Haba know exactly when it happened, but at some point (probably about the time the /// was discontinued in 1985), Haba stopped sending royalty checks. That decision was made before Haba System's "name in lights" burned out and it faded into bankruptcy (even after it had taken on a partner and was called Haba/ Arrays). There's little information about it, but Lissner apparently has yet to get the rights back from Haba for the program (word is he simply doesn't want to waste his time with it).

At the point of Haba's bank-ruptcy, Sun Remarketing in Logan, Utah purchased all the remaining 3 EZP stock. On Three buys copies from Sun to sell to its customers as well. Bob Consorti, On Three's President says it makes more sense to continue selling the program, with the instruction manual, rather than have people ask for support for illegal copies. The May, 1989 Sun Remarketing catalog offers the program for a bargain \$59.00.

### The Final Upgrade

As released, 3 EZP was and is version 1.0. Those who purchase On Three's 512K memory kit also get an upgrade to version 1.1, that simply allows the program to take advantage of the additional memory. There have been no additional changes.

Unlike AppleWorks, there have never been any attempts to "patch" the program to improve it (and AppleWorks patches do not work on 3 EZPS). However, there was an attempt in early 1987 to upgrade the program to the thencurrent 2.0 version of AppleWorks. Bob Consorti of On Three got Bob Lissner to agree to write the upgrade if 5000 /// users would pay a \$50.00 fee. flyers went out to On Three's huge mailing list of 22,000 Apple /// users and /// ers on CompuServe and in the remaining clubs spoke of nothing else for a number of months.

Even with the publicity, no more than 1000+ users agreed to the update and Lissner decided not to go ahead with it. That effectively ended all hopes for ever upgrading the program and it stands now as it always has at version 1.0.

Despite the disappointment, /// EZ Pieces remains the favorite Apple /// program of all time. Its roots with AppleWorks make it a program that will continue to be a favorite for as long as there are users of the Apple ///. And that, we suspect, will be for a long time to come!

# A Nearly/// EZ PIECES Bibliography

For more information about how /// EZ Pieces was originally received in the /// community, the following articles might help. All are available in either the WAP hardcopy or PD library (TAU Tales articles).

TAUTALES Demonstration:/// EZ Pieces Rann2 5 February 1984 Disk

Hardcore Update #65 Apple News February 1984 1

TAUTALESThe Unicorn's News and Views Galvin 2 9 June 1984 Disk

Apple ThREE Newslettr An Interesting Quote... 2 12 December 1983 14

The Apple Tree The /// and Me Lloyd 22 March 1984 5

The Apple Tree The /// and Me Lloyd 24 May 1984 5

The Apple Tree The //e and /// and Me Lloyd 26 July 1984 5

The Apple Tree The //e and /// and Me Lloyd 27 August 1984 3

The Apple Tree The //e and /// and Me Lloyd 28 September 1984 3

The Apple Tree The //e and /// and Me Lloyd 31 December 1984 3

TAUTALESProduct News Rann2 5 February 1984 Disk

Apple Orchard /// EZ Pieces Chu 5 5 June 1984 54-55

A+ /// EZ Pieces Albertson 2 8 August 1984 62-67

InfoWorld /// EZ Pieces Brevdy 6 19 May 1984 110-1

InfoWorld Apple /// Integrated Software Freiberger 5 49 December 1983 28-30

- \* TAU TALES was the original name for the newsletter of the Third Apple Users Group in Wheaton, Illinois. New publication name is TAU Journal.
- \* The Apple Tree is the publication of the Syracuse (New York) Apple Users Group.
- \* Apple ThREE Newsletter is the publication of the Colorado Apple /// Users Group.

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### Apple III Rumor Mill

# APPLE ANNOUNCES NEW MICRO LINE

by Ken Chapman

(Reprinted from Maple Orchard Vol 8, No 3; May/June 1988) (WAP /// SIG NOTE: While this is something we'd all like to see, please take the following with a grin and a grain of salt!)

Apple Computer, Inc. today announced the release of a completely new product line. The new series of micro-computers will be based on the earlier Apple /// system, using an enhanced Motorola 65816e processor, as well as math, graphics, sound and Hyper-Talk co-processors. The new series will have the same look and feel as the earlier Apple ///, although there will be a completely new revolutionary sound system installed at the optional discretion of the purchaser.

"The simple fact is," says John Sculley, CEO of Apple, "the Apple /// was ahead of its time. But we didn't abandon it, just as we will never abandon the Apple // series. We truly believe the Apple ///'s time has come." Rumors that Apple Computer may be phasing out the Macintosh line are denied by Apple officials. "However," says Jean Louis Gassée, "we simply cannot sacrifice innovation for the sake of compatibility."

"The Apple SOS environment is simply too powerful and flexible to abandon," Gassée continues, "We just never gave it a proper chance before. But some of our fellows have been continuing to work with the system, and have come up with some truly remarkable capabilities we never before dreamed were possible for a little box that sits on the top of the desk."

Del Yocam, V.P.-manufacturing, noted that it may be true that production of the Macintosh product line may have to be severely curtailed. "We simply don't have the production capacity to handle the anticipated demand for the new Apple /// enhanced model."

Another spokesperson inside Apple Computer who wished to remain unidentified confirmed that parts and supplies for the Macintosh products have not been re-ordered, and minimum stocking levels have been considerably reduced. "We just want to get out of that mess. We know that the new Apple ///e will be a winner. We all feel it. The excitement around here is so intense, everyone is actually running into work every morning, and the only grumbling heard around here now is at quitting time and we're ordered to leave by the armed security personnel."

Rumors of the new product line first began circulating when some third-party developers began talking about new developments they were working on. For example, Supermac Technologies is said to be ready to announce a new 150-gigabyte, 5.25" floppy drive system that just happens to fit snugly into the earlier Apple /// drive casing.

Rumors have also leaked out of Redmond, Washington, that Microsoft is already working on a new Presentation Manager system for the Apple /// and that Excel had originally been designed to run under SOS but had to be slowed down to accommodate the Macintosh User Interface. Bill Gates was once heard to remark to

a group of IBM supporters that he only wished the new OS/2 could come close to the power and speed of "good old SOS."

Microsoft is also rumored to be developing a speedier version of Unix for the Apple ///e, as well as Fortran, COBOL, BASIC and LOGO packages. Asked if their new product developments included a Pascal compiler, Microsoft Chairman Bill Gates replied "No comment!" Steve Jobs of NeXT Inc., when asked if there could be any substance to the reports, replied, "No comment!" However it is known that someone in his company recently placed an order with Motorola for 1,000,000 of the new 65816e chips.

Industry analysts have responded to the news with enthusiasm. DataOuest Research claims, if the rumors are true, Apple Computer will clearly outpace IBM in "gross sales" within six months. Wall Street analysts, on the other hand, are more cautious. "If it's true," commented one rue savante, "there could be major upheavals in current market trends that could have far-reaching effects on the long-term outlook. The thought of the potential market penetration is absolutely staggering. I simply cannot imagine anything of this magnitude happening in our time."

Asked if there would be a gala introduction show similar to the Mac II rollout, Scully replied, "We've invited The Woz to do this one. We feel it needs his touch to kick it off properly." "But," Scully went on, "this does not mean that we are planning on changing advertising agencies. We just want to do the rollout thing right, that's all."

When asked why Apple was thinking of abandoning the Macintosh, Gass'ee explained, "There are two reasons, really. First of all, the Apple //e is unquestionably the most powerful micro system we've ever seen, anywhere. We simply cannot ignore the obvious implications of going with it all the way.

"Secondly," he continued, "we have been listening to our customers. They are tired of having to work with a toy. Sure, the Macintosh Users Interface was friendly and all that, but our customers just didn't feel that they were getting a real day's work done with it. They want a computer. They want to know they've got a computer. Well, now they know they're going to get one. And they'll know they've got one."

It has been suggested that the new Apple ///e will be capable of processing 500 MIPS at 75 MHz. It has been further rumored that Apple Computer is already working on model ///e+ that will employ an expanded keyboard (347 keys, including function keys and 3 Command keys), and will feature the yet-to-be announced Motorola M66816e chip that will process up to 650 MIPS at 85 MHz.



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## The Play Room

by Steven Payne



This month's column will be short, since even the most hairraising adventure games pale by comparison with recent local events

In the news department, Sir-Tech is now bundling the first three Wizardry scenarios; if you buy them together at the regular price, you get a fourth for free. (It's not clear whether this offer is available through mail order purchases.) Also, Sir-Tech is sponsoring a "Wizardry — What's Hot and What's Not" essay contest; in 2,000 words or less, contestants must describe what they like and dislike about the

series and what they hope to see in the next scenario. Entries should be sent to Sir-Tech Software, Inc., "Wizardry Contest," P.O. Box 245, Ogdensburg, NY 13669 before September 30, 1989. You can write to them for further details.

Mac owners will be glad to hear that Cliff Johnson, author of The Fool's Errand (Miles Computing), has just come out with The Puzzle Gallery: At the Carnival (Miles Computing, Mac), a new game in a similar vein with 180 puzzles, digitized sound and Mac II color. Meanwhile, look elsewhere in this issue for reviews of L.A. Crackdown, Pirates! for the Apple II series, and Wizardry V:

The Heart of the Maelstrom. It should be noted that Pirates! is now also available for the Mac, and a GameSIG review of the Mac version should appear soon.

Finally, I'm trying to gather information for a future column about gaming via the modem and BBS. I'd be interested to hear from others. Which is your favorite gaming BBS, and why? (I'm assuming that the answer to the "why" question won't be "because they have pirated games to download.")

And how do Falcon fans, for example, find other pilots for a telecommunicated dogfight? What about NetTrek? Inquiring minds want to know (or at least some WAP members do, I think). Drop me a line, or post a message for me on the WAP TCS game boards, if you have any ideas to contribute. And until next time, enjoy the games of summer!

# **Bits and Bytes**

by Lynn R. Trusal

### MacWorld - Washington

When the crates were finally packed and the dust had settled, Mitch Hall Associates was pleased by the larger than expected turnout for this first test of the Washington market. On the basis of the success of this show, they say that they intend to hold future MacWorlds in Washington on a 12 to 18 month schedule. It should be noted, however, that the moving of the San Francisco MacWorld to April 1990 may eliminate D.C. as a site for next year.

MacWorld attendance was estimated by Mitch Hall Associates to be 25,000 for the three-day show—which is pretty good, considering. The principal limitations may be that local advertising was limited and that most "capital"

city" computer show goers are not used to paying \$20 for admittance to exhibits. Both the Federal Office Systems Expo (FOSE) and the Capitol Microcomputer Users Forum (CMUF) effectively charge nothing for exhibit attendance.

Although many large Macintosh vendors were present including Apple, Ashton-Tate, Microsoft, Informix, Oracle, and Word Perfect; others were noticeably absent. Among them were Acius, Aldus, Claris, Lotus, Adobe and QMS. Several of these vendors took suites at the Grand Hayat across the street from the convention center, which won no points with the convention organizers.

One damper on vendor participation may have been the back-to-back MACdex in Chicago,

Macintosh Business Forum in New York, and the National Computer Graphics Association show in Philadelphia.

The true test of any show is the vendors' impression of how worthwhile their efforts were. Industry Day was held on Tuesday, prior to general attendance on the 26th. Most of the vendors I spoke with on the last day of the show had been pleasantly surprised by both the total attendance and the "quality" of participants. One vendor characterized the quality of the attendees as the highest of any show she has attended.

The Macintosh is still not a generally accepted standard in government or military offices. The presence it commands today is still largely due to dedicated Macintosh enthusiasts who brought Macs in the "back door" and are still fighting guerilla warfare to be able to bring them in the front door. That battle has not yet been won.

Shows such as MacWorld will

ultimately be important in breaking down existing barriers of ignorance—frequently exhibited as: "Isn't it a toy?" or "Is there any software for it yet?" MacWorld Washington landed the troops on the forward beaches and the troops are more enthusiastic than ever, but more must done.

Mitch Hall Associates must realize that Washington, D.C. is a different market and some changes need to be made to fit this environment. First, better advertising is needed, similar to what was done in Boston. Radio and TV spots would help, as would better press coverage in local papers. More Industry Day passes need to be given to third-party vendors and government offices. Government purchase orders should be accepted and perhaps discounted tickets made available to government employees for one out of the three days of the show.

# First Impressions of MultiClip

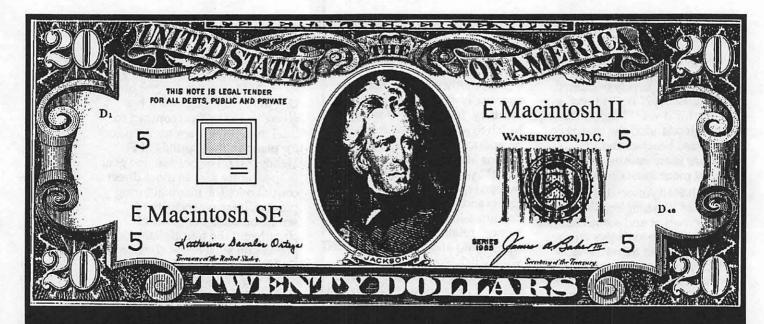
The only purchase I made at MacWorld was MultiClip by Olduvai. I have often been hampered by the one-item limitation of the original clipboard and now the price was right. MultiClip is an addition to the regular Macintosh Clipboard and Scrapbook but does not replace it. Most of the normal commands for cut, copy and paste are the same except that you also add the "option key" to the regular "command key" sequence. There are many key sequences to customize the storing and retrieving of "clip frames," including text only, graphics only and text and graphics combined, as inPage-Maker.

It still does not retain text formatting in programs that use proprietary clipboard formats, such as Microsoft products. You can edit text from within MultiClip but this too results in loss of formatting. Also, if you edit text when it is combined with a graphic, the graphic is lost. It does take a while to get used to.

#### Real Bits

- 1. Another lawsuit may eventually affect the software industry. James Reid is suing Mitch Synder over the rights to reproduce a homeless sculpture he did for Mitch Synder's group. "So what?" you say. At issue is the ownership of the reproduction rights and whether or not the "commissioner" or the "commissionee" retains those creative rights. IBM and AT&T have sided with Mitch Synder, who claims that since he commissioned and paid for the sculpture he owns the reproduction rights. Free-lance artists and even computer programmers could lose rights to their creative works if Mitch Synder and his backers win the argument. Selfemployed creators usually keep the right to profit from reproductions but a 1976 change in the copyright law has led some courts to rule that corporations can keep those rights. (USA Today)
- 2. Motorola has recently announced the 68040 CPU, due later this year, but they have also succeeded in producing a 50 MHz version of the 68030 microprocessor. This is the fastest "complex instruction set" (CIS) microprocessor so far produced, but Intel is also expected to have a 50 MHz version of the 80386 CPU in the near future. Intel already makes a 33 MHz version of the "386" that is used by Compag and others in production machines. This was one of the major disappointments, for me, with the new Macintosh SE/30 and IIcx which still run at the "slow" clock speed of 16 MHz Mac II.... Come on Apple—you can do better than that. For Mac Plus owners and earlier, I apologize for calling 16 MHz "slow."
- 3. General Motors will be including the 68020 (68000?) CPU as the "brains" of its 1993 automobiles. It will be the first 32-bit computer in U.S. cars and has 8 times the computing power of the current 8-bit versions. Although the cost will be twice as high, it will replace two of the 8-bit CPUs and therefore should not

- significantly increase car prices (Business Week, May 1,1989).
- 4. NSA, the most secret of the U.S. intelligence agencies, has given an \$85 million contract to Intel to build its own semiconductor plant on the grounds of Ft. Meade, MD. The bottom line goal is apparently to gain more direct control over the manufacturing process, increase security of semiconductor designs and circumvent the traditional bidding process on such chips. (Investors Daily, April 18 and March 21, 1989)
- 5. The publisher of the International Data Group/Peterborough, whose titles include, PC World, MacWorld and InfoWorld has become the new publisher of Playboy effective May 1, 1989. He is Michael Perlis and is only 36 years old. (Do you get the feeling that life has passed you by?) Hugh Hefner is still "editor-in-chief." (USA Today, April 20, 1989).
- 6. John Sculley showed his sense of humor at a recent MacWorld Press Conference by asking an *InfoWorld* reporter if the portable lap-top computer he was using was one of ours? He was also seen strolling through the MacWorld aisles with a "Diet Coke" in his hands....
- 7. The SCSI interface seems to be gaining more respectability. The American Standards Institute X3T9.2 Committee is nearly finished with a new SCŠI-2 standard to be formally adopted in 1990 or 1991 (why so long?). Some vendors are not waiting and are already offering this new 32-bitwide data path that offers higher throughput rates than the current SCSI standard. (PC Week, April 10, 1989).
- 8. Apple seems late at the plate but is apparently committed to producing a low-end Macintosh for the "rest of those without the high end" in the early 1990s. At his MacWorld press conference, John Sculley said that he felt the user community would be pleased with the value offered for a lower price. He speculated that these models would offer what is currently



# Unfortunately It Doesn't Come With Instructions

Sometimes the question isn't how to make money, it's how to use the money you've already made. At Mid Atlantic Telesis our experienced staff can assist you when buying any Macintosh computer by making sure that you get the best from your hard earned dollars. Mid Atlantic Telesis is your one stop source for Macintosh needs. Whether it is new or used hardware, software, networking, training, technical support, consulting, service contracts, or just maintenance. Mid Atlantic Telesis offers easy to use solutions with competitive prices and broad reaching support on every product we sell. Unlike other companies, we're not all talk.

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offered today in the high end models for between \$1,500 and \$2,000. (Whatever happened to the \$1,000 Macintosh?) (Investors Daily)

### The Talking Moose Lives

Steve Hall, the original creator of the popular Talking Moose DA, has created a new version 2.1 that is compatible with Macintoshes from the 512KE to the Mac II. The Moose is now a combination INIT/cdev. The moose's lips are synchronized with its MacinTalkgenerated speech and it reads menu and window title commands. Steve is trying to find a developer to market the no longer public domain moose. It is now available directly from him for \$20 by writing 303-3877 Luther Place, Saskatoon, Canada S7H-4B1 or calling (306) 374-6052.

# Are the Apple II's Days Numbered?

Rumors are flying that the days of the Apple II are numbered and that Apple might finally give up "Apple II Forever" for "Macintosh Forever." At the recent MacWorld, I attended a press conference after Mr. Sculley's keynote address on Wednesday. Although the press has been actively speculating the demise of the Apple II, Sculley stated his commitment to it: "the Apple II will be around for a long time," and "as long as there is a demand for it, Apple would continue to make it." He stressed that Apple has created a high level of compatibility with peripherals and data between the Apple II and the Macintosh lines. Jean Louis Gassée added further that Apple was "engineering both Apple II hardware and system software even as we speak."

That should put an end to the rumors for at least a week. If the Apple II eventually dies, it should be because the marketplace killed it off and not because of an internal marketing decision. (Ed.—these seem almost identical, at least to us.) Mr. Sculley did say that the Apple II represents 12-year-old technol-

ogy and was therefore limited by what could be done with it.

### **SuperANOVA**

Abacus Concepts of Perkily, CA (415) 540-1949 has released a new statistics program for general linear modeling for the Mac. Abacus Concepts is the author of the StatView line of statistical software.

SuperANOVA performs such tests as ANOVA, ANCOVA, MANOVA, and MANCOVA. They are basically analysis of variance tests. Other tests include Tukey's HSD, Tukey Compromise, Duncan's New Multiple Range, Fisher's LSD, Scheffé S, SNK and others.

All of this will probably not mean much if you're not a statistician, but if you have a need for multiple comparison of means tests, you might want to check this package out. It lists for \$495 but is available for a limited time for \$275. When I was doing active lab research, I often had need of these tests but could never find them in traditional stat packages. More and more statistical analysis capability is becoming available for the Macintosh and microcomputers in general.

No doubt David Morganstein will eventually review this new statistical program in his regular column.

#### A Word to the Wise...

I recently got a call from a non-WAP member (my number must be posted in phone booths and rest rooms) who suffered an *intentional* deletion of over 3,000 client records from his small business database. My first question was the giant killer, "did you have it backed up?", and to my surprise the answer was "yes, but..." He evidently had three backups but one was lost in the mail and the other two were with the computer and were intentionally tampered with also. At least he had it backed up, which seems to be the excep-

tion.

I told him that deleting records did not permanently erase them from the hard disk unless they were written over. He had tried to use SUM and was partially successful with some of the deletions, but not all. I told him to call Symantec and ask them if they could help but that isn't the point of this "byte."

Most of us are casual users—if we lose some records we are upset but the loss is not catastrophic. If your livelihood depends on your business and your client or membership list is crucial, you need to take special precautions.

Your database should offer multiple levels of password protection so that only designated people can get to specific portions of the database. This, of course, will not prevent someone from reformatting or initializing your hard disk. If they can get access to the files in general you still have a problem. A password should also be required to boot up the Mac.

Next, set up some organized plan to back up your client records on a regular basis: daily or weekly. Keep multiple copies of these backups and keep them in different safe places so that only you know where one of them is. This gentlemen's database was 12 MB, so he should probably get a 20 MB removable cartridge backup unit and do a daily backup. Multiple backups should be "rotated" so that if a problem develops, it will not automatically be reproduced on every single backup. In other words, on Monday backup on cartridge #1, Tuesday - #2, on Wednesday #3, and on Thursday #1 again, etc.

Finally, once every six months or once a year, make a backup and put the cartridge in a safe deposit box for safekeeping. If you do not want to do daily backups, at least have a printout of the new data for each week and then back up the database weekly. How often you perform these backups depends on how much data you have and how

important it is to you and your job. Backups can never be too frequent.

A recent article about a software problem with American Airlines Sabre reservation system brought this home. For 11 hours, the airline was back to the "paper days" because of a problem with its software. The world's largest reservation system is housed in an underground bunker in Tulsa, OK but concrete and earth doesn't

protect it from software problems. To make matters worse, 280 other airlines also pay to use this system.

If you are dependent on a computer or your living depends on it, you should consider how important it is to companies like American Airlines, who depends on it for worldwide reservations, hotels, rental cars and printing tickets and route timetables. American's Saber system handles 65 million calls daily on busy days!

BACKUP!, BACKUP!, BACKUP!,BACKUP!,BACKUP! Yea, TEAM! **★** 

(Lynn R. Trusal, Ph.D. may be reached at 301-845-2651 to answer questions about material that appears in the Bits and Byte Column. The opinions expressed in this column are solely his.)

# Recent Download Files on the TCS

by Paul Schlosser

The following is a list of new files recently uploaded to the TCS. These files are available for downloading by TCS users. A longer, more detailed browse description is available for each of these files on the TCS. Call the Pi office to obtain a password for the TCS.

File area 4 - Apple II Utils 125 PTERM.SYS.SHK 06/01/89 0004K A replacement for PROTERM.SYSTEM

File area 5 - GS Desk Accs 056 FONT.VIEW.SHK 06/04/89 0010K View installed fonts

055 FONT.BOSS.SHK 06/04/89 0007K View fonts in Deluxe Paint II

054 DPII.NDAS.SHK 06/04/89 0010K NDAs summarizing DeluxePaintII commands

053 SCI.CALC.SHK 06/03/89 0016K Scientific Calculator by Todd McInroy

File area 7 - GS Games
053 ROGUE.SHK 06/03/89
0134K Graphics-like adventure game.
Req. 1Mg

File area 8 - GS Graphics

054 EVOLUT.BNY 06/03/89 0008K A sad looking new Apple logo

File area 9 - GS Misc. 070 GE.STUFF 06/02/89 0038K GENIE Talk

File area 10 - GS Utilities 054 DISKMAP.SHK 06/03/89 0014K Show disk useage map in 640mode. 512K.

File area 14 - Mac Games 077 MILLEBOURNE.SIT 06/03/ 89 0039K Mille Bournes for the Mac!

File area 15 - Mac Graphs
103 WATCHCURSORS 06/02/
89 0005K Lots of new watch cursor replacements

102 MOONPHASE.SIT 06/02/ 89 0004K Change watch icon to Moon Phases. Neat.

54

### Wired

by Leon H. Raesly, LCSW

This month I wish to speak with you about the newest feature of the TCS (Tele-Communications System). It is called "View-Stats", and is accessible at the Main Menu with the (V)iew Stats command.

It presents you with a plethora of information! Here is a sample done last Saturday morning (each week begins at 5:00pm on Saturday. Look at it, and then we can talk about it:

Current total number of TCS callers to date....185,622

		Week	ly Cal	ller Stati	stics:		
Baud Rate	300	1200	2400	4800	7200	9600	Total
This week	75	576	1052	0	0	0	1703
1 week ago	79	597	1031	0	0	0	1707
2 weeks ago	50	562	880	0	0	0	1492
3 weeks ago	84	619	934	0	0	0	1637
New Messag	es						
		This week	1 v	veek ago	2 weeks a	ago 3 we	eeks ago
General Conferer	ice	631		731	628	5	77
Apple II Confere	nce	144		197	203	2	14
Macintosh Conference		158	107		167 125		25
Classified Conference.		34	40		44	5	58
Totals.		967		1075	1042	9	74
Downloads:							
		This week	1	week ago	2 weeks ag	go 3 w	eeks ago
Apple II		257		276	272	3	803
Macintosh		377		302	458	4	178
Other.		68		71	30	9	95
Totals		702		649	760	8	376
Files uploaded:							
		This week	1	week ago	2 weeks a	go 3 w	eeksago
Apple II.		17		18	10	14	
Macintosh.		6		5	10	1	
Other		5		17	8	8	
Totals.		28		40	28	23	

# THE WASHINGTON APPLE PI TELECONFERENCES SYSTEM

The TCS operates with 10 telephone lines using 10 128K Enhanced Apple //es. It runs on a Corvus Systems Omninet on Constellation II, and is protected by an Uninterruptible Power Supply (UPS) of 1000 Watts. The TCS currently has 129 MB of hard disk space available (including reserve drives). It operates at 300-1200-2400 Baud, using US Robotics Courier 2400 Modems.

The telephone numbers are on an automatic C & P rollover, and uses telephone numbers:

986-8085 = SYSTEM 1 986-8086 = SYSTEM 2 986-4106 = SYSTEM 3 986-4107 = SYSTEM 4 986-9218 = SYSTEM 5 986-9213 = SYSTEM 6 986-9314 = SYSTEM 7 986-9315 = SYSTEM 8 986-0113 = SYSTEM 9 986-0114 = SYSTEM 10

It has a total of 48 MEGS of Downloads available, of which 32 serve Mac Downloads and 16 MEGs of Apple // Downloads. They are organized into 24 Areas:

- < 1>...Apple II Games
  < 2>...Apple II Misc.
  < 3>...Apple II Technotes
  < 4>...Apple II Utils
  < 5>...GS Desk Accs
  < 6>...GS Fonts
  < 7>...GS Games
  < 8>...GS Graphics
  < 9>...GS Misc.
  <10>...GS Utilities
  <11>...AppleWorks
  <12>...ProSel Updates
  <13>...Mac Fonts
- <13>...Mac Fonts <14>...Mac Games
- <15>...Mac Graphs <16>...Mac Hypercard <17>...Mac Technotes
- <18>...Mac Utilities
- <19>...Mac Developer SIG <20>...GIF Graphics
- <21>...Dealer Advertisements
- <22>...CP/M <23>...Apple ///
- <24>...Journal Submissions

There are a total of 1230 Apple // Downloads available and 1353 Mac Downloads available.

The TCS Message Base is organized into 4 Conferences. They are:

- 1 The General Conference.
- 2 The Apple // Conference.
- 3 The Mac Conference.
- 4 The Classified Conference.

Each Conference has a "WIZOP" for the Conference. They handle all matters relating to the Conference, including getting new SYSOPs for each Board. If you see a Board that seems to have no SYSOP, and you would like to be SYSOP of that Board, leave a message for the WIZOP on TCS Comments & SUGGs, on Conference 1. The WIZOPs are:

Conference 1 - The General Conference - Lee Raesly

Conference 2 - The Apple // Conference - Lou Pastura

Conference 3 - The Mac Conference - Rick Stickle

Conference 4 - The Classified Conference - Alan Levy

Each Conference has up to 32 Boards (organized by topic) and each Board has up to 99 Library files of text information about the Topic of the Board.

The TCS SYSOPs can be reached by leaving a message on Conference 1 Board 13 (TCS Comments & SUGGs).

The TCS has several Special purpose SYSOPs as a part of the Crew who handle special items. They are:

Lou Pastura (Library SYSOP)

Harvey Kaye (New Member SYSOP)

Dale Smith (Downloads SYSOP)

The TCS is based on a program called Universal Bulletin Board System written by Les Kay and David Sugar. Individuals involved in the programming of the modules to fit the Washington Apple PI's Special Needs are:

Paul Schlosser Rich Mlodoch Eric Rall

Lee Raesly

Jon Thomason

Joe Chelena

Kim Brennan

Working on the TCS Committee in various functions are:

Lou Pastura

Harvey Kaye

Dale Smith

Nancy Seferian

Bill Logan

Harry Erwin

Gary Hayman

Kelly Smith

The Washington Apple Pi has over 7000 members, about half of them Mac and half Apple //. There are currently 2944 passwords on the TCS! Wow! It is good that we have 10 telephone lines!

These Statistics will be expanded as time goes on. If you think of something you would like to see added to the count statistics at the beginning, please leave us a message about it on TCS Comments & SUGGs, and we will see about adding it.

#### The Crew

As you can see from the above, the Stats are organized into two groups. The first group is the numerical Statsthat present numbers of: messages, callers, downloads, etc. This area is non-abortable, and is presented in two screens, with any key strike telling it to move on.

The second area is general information about the System, and depressing any key will abort it—once you have read it, why read it again? The date of the last time it was edited is presented as the second line, so if it is changed, you will know, and can read it again if you like.

In the interest of space, that is all for this month. If you don't have a password yet, call the PI Office and get one. It could be the best computing \$6 you have spent.

Take Care, Now! Lee...



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# Best of the TCS (Apple II)

by Paul Schlosser

Joysticks and children FROM DAVID HAWKINS, ON 05/09

Anybody have a recommendation for a good joystick for the IIGS. We bought a Gravis but after a year and a half of service it is giving out: erratic output from diagonal movements and delayed response from trigger button. We're looking for something that will survive in a family of three kids. Thanks.

FROM DUNHAM SWIFT, ON 05/09

From my experience, with 2 kids, you have done well with Gravis. I have been through several brands, currently using a Gravis, and it has lasted the longest of any. I am not aware of any better price/performance ratio.

A Dead Battery and a Fast Mouse

FROM KIM BRENNAN, ON 5/23

Frustration! Turned on my computer and all battery backed up info gone (not Ramkeeper battery, but that oh so wonderful lithium battery that Apple put in our GSs). It really is surprising how much is kept in that battery ram. Time, Modem settings, printer settings, and FAST MOUSE! Argh, how frustrating to work with a slow mouse.

FROM DAVE RANDALL, ON 05/25

My battery died 2 months ago. I got an exact replacement at Arlington Electronics, took the old battery out and put the new one in. Now it works fine, just as good as new! I believe it was \$6.30 plus tax.



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#### Shrink What?

FROM ROCKY RAGANO, ON 05/07

I just downloaded a file with a suffix of "SHK". Is this some new program to compact data? If so, where do I get it?

FROM KEN DE VITO, ON 05/

You need to use a program called "SHRINKIT" to unshrink the SHK file. I believe that it is available in the Apple // Utilities section of the Files Area.

### Prodigy, Sears, and IBM FROM THOMAS BLASI, ON 05/08

Lately I've seen ads on TV for what appears to be a new commercial service called Prodigy. Anyone know anything about it? I believe I heard the names Sears and IBM mentioned in the ad.

FROM ROCKY RAGANO, ON 05/08

The Prodigy software only runs on IBM compatible PC's. I got a one month free subscription (which included the software). The graphics are sort of nice, however the substance of the service is shallow at this point. The cost is \$9.95 a month and you can use it for as long as you like during any time of the day (this may change if the service gets popular and people remain on-line too long). Here's a toll free number: 1-800-759-8000

### FROM GEORGE LEYEN-DECKER, ON 05/11

Tom, I called Sovran Bank today asking about Prodigy and was told it was strictly IBM specific. However, an Apple version is due out later this year. Like the other reply Sovran was willing to give me a three month free subscription for the \$90 price for my Zenith at work. I told them no go but want to add one other item. Sovran Bank offers an online banking service for bill paying etc. for \$6 per month. You need to make at least 24 mail transfers to

warrant the saving in postage. If you bank with Sovran or any other local bank call and ask about online services. Hope this helps.

### How do they do that? FROM THOMAS BLASI, ON 05/18

This is probably a silly question, but how does one skip more than one line at a time when entering messages. I see many messages with anywhere from two to ten blank lines between written lines. When I try this, I get put into the editor.

FROM LOU PASTURA, ON 05/18

Tom, those lines that look "blank" have either a few spaces or tabs in them

like that! New TimeOut Products

### FROM LEE RAESLY, ON 05/ .06

Four New Beagle Brothers Items - 3 TimeOut and 1 standalone!

PROGRAM WRITER - A standalone Program that uses the AppleWorks interface. It makes writing BASIC Programs duck soup! TIMEOUT - TimeOut Telecom Module. Works Great. From directly inside AppleWorks, and save files to AppleWorks WP format, sends, receives many protocols. Released now! REPORT WRITER - Makes report writing easy. Links data base and Spreadsheet data to a WP report. All from Inside AppleWorks! FAST! Available now!! FONT EDITOR - From within AppleWrks edit existing Fonts, or make new ones! Fast & simple to use with the Apple-Works Interface. Available now!

FROM SAM KNUTSON, ON 05/10

Program Writer is great if you have to work with BASIC. It supports PRODOS and DOS 3.3 and provides you with a Full-Screen editor for BASIC. Once the editor is loaded you just get into it

by entering &&. The program has been around a while under the Software Touch label but with Beagle and Software Touch back together you can upgrade to this spiffy, new version for \$10 if you bought it under the Software Touch label. Great program! The greater significance is that this is not an AppleWorks enhancement!! Finally with this product and the Font Editor Beagle starts taking all its eggs out of one basket and is once again selling software that will appear in the Utilities column of an ad.

### FROM GARY HAYMAN, ON 05/11

Sam, I saw Program Writer too at AppleFest. It was just like using a word processor to write a program plus a couple of other features such as auto numbering. However, if you want to test your basic program you have to save it first, do a run, load it back if you want to make corrections using Program Writer. I feel that EDIT.PRO will let you do the same thing and let your remain right inside your basic program. Perhaps GPLE would do the same thing.

Do you see some advantage to Program Writer that I missed?

FROM SAM KNUTSON, ON 05/14

Yes! You missed that Program Writer will let you do that too! Program Writer is memory resident. You install the editor (I also install Beagle's XLIST command) and then you can load and run programs as usual and the editor stays resident. To enter the editor you just type && (uses our friend the ampersand hook ) and make changes to your program. Open-Apple-Q quits the editor and you run the changed program, examine the results of your changes, reenter the editor, and so on. GPLE lets you edit in a limited way while Program Writer is a full-screen word processor that even includes the ability to define macros to help you work, renumber, cut and paste, search and replace, find, and more. Program Writer supports

DOS 3.3 and PRODOS and is of course not copy-protected. EDIT.PRO and GPLE are both line oriented if I am not mistaken. Program Writer even includes mouse support for those that want it.

### Macros for AppleWorks FROM GARY HAYMAN, ON 05/17

I have left two interesting and useful macros in the AppleWorks Download Area which you may find of high value. You must be using Ultra Macros from Beagle Brothers to use these macros. Complete directions are contained in the two AppleWorks AWPfiles. Just compile the files and test them on one of your data bases. You will be impressed with what it does.

#### **MACRO NUMBER 1**

Have you ever prepared an AppleWorks Data Base and then had to go through each category and look for the longest entry—then go back to the reports layout and try to increase or decrease the column width to match the longest entry or at least the width of the category name? It was quite a long and tedious problem. WELL NOW YOUR TROUBLES ARE OVER. All you have to do is to press two keys and everything is done for you "AUTOMAGICALLY".

The purpose of this macro is to automatically establish a tables report format for your particular data base and adjust each column in there port format to the width of the largest entry or the width of the category name (whichever is largest).

MACRO NUMBER 2

AUTOMATIC SCREEN DISPLAY COLUMN WIDTH ADJUSTMENTS!

FOR YOUR APPLEWORKS DATA BASE

This macro is a companion to my AUTOMATIC REPORT COLUMN WIDTH ADJUST-MENTS FOR YOUR APPLE-WORKS DATABASE. It differs from the other as it will automatically adjust the COLUMNS IN

THE SCREEN DISPLAY AND THE LAYOUT of your data base to the width of either the widest entry or the category title width - whichever is longest. The earlier macro will do it for your RE-PORTS.

### Advice on Assembly Language

FROM ROBERT GRIFFIN, ON 05/09

Could anyone give me a little help - I am trying to learn to read and write files from assembly language. A program listing, example, or a book I could buy.

FROM SAM KNUTSON, ON 05/10

Assembly Lines: the Book by Sandy Mossberg - good book on Assembly Language. Prodos Technical Reference Manual - How to do I/O with Prodos from Assembly or other languages, a must. Prodos 8 Assembly Tools from Apple Computer Inc. - Order from APDA Sounds like a big help for someone jumping into Assembly language programming in a serious way. Includes: Editor, Assembler, Bugbyter debugger, and relocating loader on disk and a 270 page manual. \$35. The best assembler for my money is Merlin Pro written by Glen Bredon.

## System Software v5.0 Announced at AppleFest Boston

FROM PAUL SCHLOSSER, ON 05/05

### New Apple IIGS System Software at AppleFest

NEW SYSTEM SOFTWARE IMPROVES APPLE IIGS PER-FORMANCE AND ACCESS TO THE APPLETALK NETWORK SYSTEM

Boston, Massachusetts. May 5,1989. Apple Computer, Inc. announced and demonstrated at the AppleFest(R) trade show here today new system software that improves the speed, performance and ease of use of Apple IIGS(R) computers. Apple IIGS System Software 5.0 is the first 16-bit

operating system for the Apple IIGS that operates over the AppleTalk(R) network system. It provides easier access to network services under an improved native-mode operating system that serves both individual and networked users. The new software will be available this summer.

"The Apple(R) II continues to be an important part of our business," said Jean-Louis Gassee, president of Apple Products. "Products such as Apple IIGS System Software 5.0 and the Apple II Video Overlay Card, introduced last month, demonstrate Apple's continued commitment to providing evolutionary improvements that add functionality and richness to the Apple II computing experience."

Apple IIGS System Software 5.0 is compatible with applications written for ProDOS(R) 8 and ProDOS 16 that follow Apple software design guidelines. It replaces both System Software Version 4.0 for the stand-alone Apple IIGS and AppleShare(R) IIGS WorkStation Software for networked IIGS systems, providing a consistent graphics interface and high performance for both the individual and networked users.

AppleTalk Network System Compatibility Benefits Users in Schools

The Apple IIGS is used primarily in homes and elementary and secondary schools. There has been a growing demand from schools for networking solutions for classrooms, administrative offices and computer labs. Schools that network realize economies of time and resources by sharing data and peripherals and reducing floppy-disk handling. The AppleTalk network system, which uses AppleShare software on a Macintosh(R) file server, enables schools to network their Apple IIGS computers with each other and with Apple IIe, Macintosh and MS-DOS computers.

System Software 5.0 provides easy access to the AppleTalk network system through a graph-

ics interface in the Finder(TM), Control Panel and other utilities. Compared to the AppleShare IIGS Workstation Software it replaces, the new software provides more information about and easier access to network resources. Sharing data files, printers and other peripherals is easier than before. In addition to accessing the network by starting up, or booting, from their own disks, users may boot over the network. This means a computer can operate on the network without its own disk drive.

Apple IIGS System Software 5.0 provides a platform for new network-aware applications that take advantage of the native-mode operating system. Because it is compatible with ProDOS 8 and ProDOS 16, users also have full access to all existing network applications.

Revised and New Features Improve Apple IIGS Performance

Large portions of the Apple IIGS Toolbox have been revised to provide greater speed and efficiency. The Toolbox includes the software for sound, drawing, scrolling, fonts, menus, dialogs, window manipulation and memory management. Compared to System Software Version 4.0, toolbox operations running under System Software 5.0 are about twice as fast, so the user experiences a more responsive Apple IIGS.

System Software 5.0 also includes two new toolbox components for developers, a resource manager and text editor. These tools make programming for the Apple IIGS easier and faster.

System Software 5.0 also comes with ExpressLoad development tools. Developers who write new programs or modify existing ones with ExpressLoad will offer users dramatic improvements in program loading speed.

Other new features include an improved SCSI manager (which provides faster communication with hard drives and CD-ROM drives), an improved

AppleDisk(TM) 3.5 driver (which provides quicker access to 3.5 inch disks), faster switching to and from ProDOS 8 applications and a graphics-based Control Panel.

System Requirements

The stand-alone Apple IIGS System Software 5.0 user requires an Apple IIGS with 512K RAM, ROM version 01 and one 3.5-inch disk drive. (The Apple IIGS has come with 512K RAM since March, 1988.)

Networked systems require Apple IIGS computers with at least 768K RAM, ROM version 01 and appropriate LocalTalk(TM) cables.

Price and Availability

Suggested retail price and further details will be available when the product is released this summer.

Apple Press Releases 5-5-89

FROM PAUL SCHLOSSER, ON 05/08

From GEnie:

I confess. I have obtained a copy of 5.0. Yes, I have a copy, you heard me. I have been playing with it. No, it's obviously still got some rough edges, BUT... It's true. The thing is unbelievably fast. I turned off my Transwarp GS and the drawing of graphics in the Finder and in other software appears to be as fast or faster than it was with the old system with the Transwarp ON. WITH Transwarp, the thing is blinding. Switching from GS/OS to P8 is noticeably faster. Switching from P8 back to GS/OS is also faster than it used to be, but not as fast as I'd like. The new graphics-based control panel is very nice, and contains many new features that the old one did not have. Most exciting, we now have CDEVS like the Mac! CDEV = Control Panel Devices. This means that any company can make addons to the control panel to do all kinds of things. That is, if Apple releases the specs for it. Boot time is faster, disk access in general is

faster, drawing is MUCH faster, switching operating systems is definitely better. The new control panel is neat. So far all of my desk accessories, as well as things like Startsound, Startpic, and Animated Watch, all work without trouble, as does all of my software. It's not finished, but it's very close to it, and yes, it is all it's cracked up to be.

CDA and NDA Problems Solved

FROM GARY HYATT, ON 05/15

I've downloaded a few of the TCS's CDA's and NDA's and must admit my ignorance I've been unable to get anyone of them to work or even show up on the control panel. I can only assume that it's an operator malfunction. Does anyone out there know the magic words (keystrokes) to load CDA's and NDA's.

FROM RICHARD ZEMAN, ON 05/15

You don't load them...you unpack them and put them in your /\*/system/desk.accs. folder where /\* is the name of your system disk. To access CDA's, you hit openapple/control/escape (same as reaching the control panel) and for NDA's you pull down the Apple in the top left corner of your Screen. You can only use NDA's with Desktop applications. Oh yeah, after you install the DA's into the DA folder YOU MUST REBOOT for them to take effect.

FROM DALE SMITH, ON 05/

Copy, drag, or whatever, the CDA/NDA into the DESK.ACCS directory of or your boot disk - it'll be \*:SYSTEM:DESK.ACCS. Then when you reboot next the CDA/NDAs should be loaded and active. However some of them might have been uploaded in DEACTIVATED state. To activate them, use the Finder to go into the DESK.ACCS folder, select the DA of interest, and use <OA>-I to Get Info. The Get Info box has a box for Deactivate - remove the X if it's

there. You can also do a normal catalog with CAT.DOCTOR for instance and check the AuxType column to see if the AuxType is of the form: \$8xxx. The "8" in the hexidecimal entry indicates "DEACTIVATED".

### Praise for Hyperstudio FROM PAUL CULLEN, ON 05/27

I ordered Hyperstudio last Feb from Tech Alliance. It finally arrived yesterday. Looks like a real winner even to a novice at sound and graphics like myself. I hope the program catches on and is supported by all GS users by creating and sharing stacks. I'm very interested in what some of our experts think about this new program.

### FROM FRANK EVANGEL-ISTA, ON 05/27

Saw a demo of Hyperstudio at the last GS SIG meeting and was very impressed.

### Praise for the TCS

FROM JACK MORTIMER, ON 05/17

I see that you have been given the answer to your question before I could get it to you. That is the nature of this BBS (opps, I meant TCS). I am always amazed at the speed and accuracy of answers that this TCS has available. Enjoy the system, experiment on it and expand your horizons.

### FROM DUNHAM SWIFT, ON 05/17

Thanks, Jack. I agree with you wholeheartedly. The help and the new things that I have learned and become aware of since joining the TCS have been amazing. I feel I have received more than my dues in the first month. And I know that I've got lots more questions coming up as I struggle with the new technology.

Will it really fit inside a //c? FROM SAM KNUTSON, ON 05/14 Chinook was demonstrating their new internal modem for the //c Plus along with their //c hard disk drives. It is a 2400 baud and was in a closed //c Plus which they declined to open. The rep told me it is not ready yet, but will be in a few months at most. He also told me it will fit in a //c Plus along with AE Ram Express memory board.

### PC Transporter News FROM ALAN D. HOFFMAN, ON 05/02

I have made an amazing discovery (ahem!). There is a program called PC Anywhere (v.3.1 most current) that retails for \$69.00, and allows you to do "remote computing". You install a host version on a PC at work, and a remote version on the PC transporter at home. The host can be placed in automatic resident mode, so that it is always awake in the background waiting for a call. You then dial up the work computer from home, and the screen that appears at home, is that of the one at work!. You can fully control all programs and directories at home, and run programs that are on the host computer at work. For example, I have 10 megs of my Apple HD20SC devoted to MS-Dos, and it is chock-full at home. I can dial up my work computer and run Lotus 123, DB3+, Statgraphics, Quickbasic (and run programs), Microsoft Word, and SigmaPlot. It will run CGA-level graphics on the PCT, but of course not EGA, VGA or Hercules. With a 2400 baud modem at each end, the delay is not bad at all. With Courier HST 9600 baud modems, I am told that it is identical to working at the host computer. PC Anywhere has been named as the best of the remote computing programs in PC Magazine. I was thrilled to see the Norton Commander screen on my work PC pop up on my Apple at home. Try it. You'll like it.

#### FROM ALAN D. HOFFMAN, ON 05/07

When I obtained my PCT, I bought a single 5.25 transdrive because it was cheaper. I soon found the pleasures of 3.5 "drives, when I hooked up an Apple 3.5, and was able to run the MS-Dos 720K formatted disks. The AE manual for the PCT mentioned a 3.5 transdrive, but when I called tech support, they told me that they were not marketing such an item. However, i was told that any 3.5 drive should work, and that they recommended SONY drives. Accordingly, I plunked down \$79.00 for a SONY 3.5 from JAMECO (cat: MPF11) along with \$9.95 for a 3.5 adapter cage plus bezel to fit in the empty slot in my single transdrive (CAT: JE1013). When my package arrived 2 days later by UPS blue, I noted to my dismay that the SONY drive connector was a male 34 pin one, when the short cable in the transdrive ended in a 34 pin cardedge connector. I then ran out to Radio Shack, and to my delight, they had all the accessories to make a new cable: ribbon cable, 36 conductor (cat: 278-774) for \$4.69, 2 x 34 position female pin computer connectors for \$2.49 ea (CAT: 276 1525), and one 34 position card edge connector for \$2.99 (CAT: 276-1564). In about 10 minutes, I was able to make a new drive cable for the transdrive, and it WORKED PERFECTLY! The new 3.5 SONY drive is silent, and fast. The position of the 2 drives (A: vs B:) can be swapped via the PCT control panel, so I don't recommend touching the jumpers in the transdrive case. Now, I can't help wonder - if one can put together a 3.5 MS-DOS drive for about \$100.00 in parts and 10 minutes of work, why do Apple 3.5 inch drives cost \$329.00 from Apple dealers? Is there a way to make Apple drives cheap? Hmmmm.

### **Mac Disketeria**

by Martin Milrod



### New and Recent Disks

We have only five new disks this month as we are still recovering from our extra efforts for MACWORLD Expo. Recent disks include reissues of the Desk Accessories (Mac Disks 2.01B through 2.10B), ImageWriter Fonts (Mac Disks 5.01 through 5.04) and System Utilities (Mac Disks 16.01 through 16.04) and mostly original issues of Anti-Virus Utilities (Mac Disks 1.01 through 1.03), Sounds (Mac Disks 12.25 through 12.31), System Utilities (Mac Disks 16.05B and 16.06B) and StackWare (Mac Disks 19.25 through 19.29).

### More ImageWriter Fonts Series

This is the second increment of the ImageWriter Fonts and these fonts are arranged mostly in alphabetical order. The five new ImageWriter Fonts are numbered as Mac Disk #5.05 through #5.09. Most of the included fonts are new to the Washington Apple Pi disk collection but many have been available in other collections for some time. A number of the fonts were extracted from the Shenendoah Macintosh User Group (SMUG) collection and these have been identified in the title by appending "smug" to the folder or file name. There are a number of attractive decorative faces and some specialty faces (such as Braille) in the collection so look them over and take this opportunity to add to your font collection. We will issue additional disks this summer as time permits and expect to complete this series by fall.

The previously issued ImageWriter Fonts, Mac Disks #5.01 through #5.04, are assembled from fonts previously on 400K Mac Disks deleted from the library. The only new fonts in this collection are updated versions of the "super fonts" Clairvaux and Palencia.

### Anti-Virus Utilities Series Whoops

The original Anti-Virus
Utilities series, Mac Disks #1.01
through #1.03, included a
ReadMefirst file which was saved
in Microsoft Word format instead
of a text or MacWrite format. We
just revised this disk so recent
purchasers will be able to open the
file with any word processor. For
those of you without Word or a
word processor that will open
Word formatted files, help is on
the way. Call the office and ask
that the ReadMefirst file be mailed
to you.

### **Donations Wanted**

Most of the programs in our Mac Disketeria are archived on five inch 20 Megabyte Bernoulli cartridges or on 45 Megabyte SyQuest cartridges. This includes material already issued as well as downloads waiting to be tested, annotated and assembled onto disks. Because of the expense, the club has been able to purchase only a limited number of these cartridges. I have used a number of my own cartridges but am running low and the programs keep coming in. If anybody has any of either type that they would be willing to donate, I (and the club) would be eternally grateful. You may leave them at the office to my attention or give me a call at (301) 948-9646. The Bernoulli cartridges may be from IOMEGA, Mountain Computer or Bering; the SyQuest cartridges may be from PLI, CMS, MassMicro, LaCie or a number of others. Thanks.

### About Shareware Requests

Remember, please honor the author's requests for shareware fees if you decide to add these programs to your software library. Shareware is an important distribution channel for low-cost software and it is important to encourage authors to use this channel by paying them for their efforts.

### DISK #5.05 — IW 5 IMAGEWRITER FONTS

.view fonts paint f: This folder includes edited screen shot samples (in MacPaint format) of each font on this disk and the ViewPaint 1.7 application which may be used to view the MacPaint files.

Akashi: A decorative 12 point font in an oriental style.

Albuquerque BayArea:
Albuquerque is a spastic
looking script font in 24 and 36
point sizes. San Francisco is the
Apple decorative font in 36, 54,
72 and 106 point sizes.

Alderney 1.0: By Andrew Welch.
Alderney: An attractive
correspondence serif font in 9,
10, 12, 14, 18, 20, 24, 28, 36 and 48
point sizes. This could qualify as
an addition to the "super fonts"
along with Andrew's Palencia.
Shareware – \$12.

Alexandria • smug: A 12 point font with a variety of mathematical symbols and Greek letters as well as English letters.

Alexis • smug: A 24 point script font.

AMSLAN • smug: An 18 point American sign language font. Andover • smug: A 9 point sanserif monospaced font with a variety of symbols.

Arabic smug: A 24 point ornamental Arabic font.

Art Deco • smug: A decorative font in the Art Deco style in 9, 12, 18, 24 and 36 point sizes.

ASCII\$ f: By Dennis Dunkerley.

ASCII\$ is a 24 point specialized font showing the ASCII character and its ASCII decimal and hexidecimal numbers.

Keyboards and Key#s ASCII\$ are supporting MacPaint files. Notes on ASCII\$ provides information from the author.

Athens Lite f: By Fred DeMarco. AthensLite and Read This first! are a "thin" version of the Athens serif font in 12 point size and brief documentation.

Athens • smug: An addition to the Apple serif font in 14, 18 and 24

point sizes.

### DISK #5.06 — IW 6 **IMAGEWRITER FONTS**

<u>.view fonts paint f:</u> This folder includes edited screen shot samples (in MacPaint format) of each font on this disk and the ViewPaint 1.7 application which may be used to view the MacPaint files.

Aspen f: Aspen-48: A 48 point decorative san-serif font documented in Read me-Page 1 (PAINT) and Read me-Page 2 (PAINT) which show the key

layouts.

Atlantic City f: By David Stovall. Atlantic City 36: A decorative font with a gambling motif (cards, dice, slots) in 36 point size. Atlantic City Sample will show properly only if the font is first installed in the system.

Bauhaus • smug: A san-serif font in a contemporary style in 10 and

20 points.

Berlin: A decorative 12 point font in German style.

Big Apple Fonts *f*: By Bradley Poulson.

Big Geneva: The san-serif Geneva font in 28, 36 and 48 point sizes.

Big Toronto: The Toronto font in 28, 36 and 48 point sizes.

Medium Monoco: The Monoco mono-spaced san-serif font in 18 and 24 point sizes.

More Chicago: The Chicago sanserif font in 9, 14, 18, 24, 36 and 48 point sizes.

More Seattle: The Seattle sanserif font in 12 and 24 point sizes.

Black Shadow • smug: A decorative san-serif font in 48 point size.

Blake(Los Angeles) • smug: A decorative script type font in a 24 point size.

Blockbuster: By Jim Alley. A decorative font (upper case letters only) in a heavily shaded block letter style in 36 point size.

Boise smug: A decorative but not very readable font in 12, 18 and

24 point sizes.

**Borders:** By Michael Mace. A decorative 9 point font for making a variety of border

Boxie • smug: A 10 point san-serif font comprised of straight line

segments.

Braille • smug: The Braille alphabet in 12 and 24 point sizes.

Braille Fonts: Braille.eng-24 and VBraille.eng-24 are the Braille and English alphabets respectively in 24 point size.

Broadway smug: A decorative san-serif font in 24 point size.

Bubbles • smug: A decorative sanserif font in 14 and 24 point sizes.

**Bugatti**: A san-serif font of very narrow straight line segments in 9, 12, 18 and 24 point sizes.

Cairo • smug: A decorative font that is composed of pictures or icons of objects in 18 and 36 point sizes.

### DISK #5.07 — IW 7 **IMAGEWRITER FONTS**

view fonts paint f: This folder includes edited screen shot samples (in MacPaint format) of each font on this disk and the ViewPaint 1.7 application which may be used to view the MacPaint files.

Calig.Roman • smug: A calligraphic like decorative font

in 24 point size.

Camelot (Gothic) • smug: A decorative font in 18 point size.

Camelot • smug: A decorative font (with elegant lower case letters) in 12 and 24 point sizes.

Candy • smug: A san-serif decorative font with a candy cane stripe in 24 point.

Canterbury: A decorative font in 14 point size.

cartoon: A san-serif font with a

hand printed look in 12 point

Casey • smug: An 18 point font with a distinctive heaviness at the top and bottom of each character.

Cavanaugh f: By Andrew Welch. Cavanaugh 18,36: A decorative font in 18 and 36 point sizes. The lower case characters are elegant; the upper case ones are not. Manual includes information on the Apollo font series. Shareware - \$15 for any or all of the Apollo fonts (see Mac Disk #5.01).

Centura • smug: A decorative font in 12 point size.

Century • smug: An attractive serif font in 18 and 24 point sizes.

Chancery: By Peter Schug. An Old English (Gothic) style decorative font in 24 point size.

Chicago by Night smug: This is 12 point Chicago in reverse (white on black).

Circus • smug: A san-serif font in 12, 18, 24 and 36 point sizes.

Cirth•smug: By Bill Andel. A font patterned after JRR Tolkien's Elf runes in 48 point.

Columbia (HvyT) • smug: By Michael Mace. A heavy serif font in 12, 18 and 24 point sizes.

Columbia f: By David Shear. Columbia 9-24 (1.4); Columbia\* 18-24: A correspondence font in 9, 10, 12, 14, 18, 20 and 24 point sizes and in 18, 20 and 24 point sizes for the \* version. About Columbia 1.4 is the documentation provided in MacWrite, Word, WriteNow formats and ReadMe Columbia Font, v.1.4 is in TeachText

Columbia.big: By Doug Miles. An addition to the preceding Columbia in 27, 30, 36, 40 42 and 48 point sizes for the ImageWriter LQ and LaserWriterII SC.

Compute pix (Parker) • smug: Another font with graphics or icons; these are computer related and come in 24 point size.

Computer(Mos Eisley) • smug: A decorative font (with an appearance of being computer (OCR) readable) in 24 point size.

### DISK #5.08 — IW 8 IMAGEWRITER FONTS

.view fonts paint f: This folder includes edited screen shot samples (in MacPaint format) of each font on this disk and the ViewPaint 1.7 application which may be used to view the MacPaint files.

Congo • smug: By Michael Mace. A decorative font in 12, 18 and 24 point sizes.

Cooper • smug: A san-serif font in 9 and 18 point sizes.

corvallis • smug: A san-serif font in 9 and 12 point sizes.

Creamy smug: A san-serif font (with script like lower case letters) in 10, 12, 20 and 24 point sizes.

Crossfire • smug: A decorative block-style font (with a telescopic sight motif) in 18 and 24 point sizes.

Cursive • smug: An attractive script like serif style font in 12

point size.

Cyrillic: A serif version of Cyrillic characters in 12 point size.

Dali • smug: A decorative san-serif font in 24 point size.

Dancingmen: A font of "stick men" in 12 point size. No, folks, I don't know what you do with it!

Demographics • smug: By Maurice Naragen. A font with demographic icons in 36 point size.

Detroit: A 24 point decorative font in upper case only.

Devanagary • smug: A foreign font in 9, 12, 18 and 24 point sizes.

Diacritics • smug: A san-serif font containing additional characters with diacritical marks.

Diamond • smug: A rather angular, heavy stroked san-serif font in 24 point size.

Digital: A font that replicates the look of a segmented LCD calculator display in 24 point size.

Digits: A font that replicates the look of a segmented incandescent calculator display in 14 point size.

Doodles • smug: A rather

undistinguished and hard to read font in 18 and 36 point sizes that represents doodles.

Durango f: By Ed Warren.

Durango is a decorative font with a western motif in 56 and 112 point sizes.

Engraver's script
(Monogram) • smug: By Doug
Miles. An elegant script style
font in 24 point suitable for
monograms.

Fargo: A bold decorative font in a western motif in 48 point size.

fingerSpell f: By Clinical Speech Systems, Inc. Fonts is a 24 point finger spelling font. The supporting documentation describes finger spelling and related products.

finney(art deco) • smug: A decorative font in 12 and 24

point sizes.

firenze smug: A decorative font in

18 point size.

Futura black all smug: Centura is a bold decorative font in 9, 12 and 24 point size. Futura black is a bold decorative font in 18 and 36 point sizes.

Futura • smug: A bold decorative font in 12 point size.

Genji: A san-serif font in 12 point size.

Genoa • smug: A san-serif font with a lot of extra symbols in 12 and 24 point sizes.

Gibson smug: A font with decorative icons (such as chess men, etc.) in 24 point size.

Grafik • smug: A san-serif font in 12 point.

# DISK #5.09 — IW 9 IMAGEWRITER FONTS

.view fonts paint f: This folder includes edited screen shot samples (in MacPaint format) of each font on this disk and the ViewPaint 1.7 application which may be used to view the MacPaint files.

Graham • smug: A specialty font with the outlines of the states of the USA in 24 point size.

Greek Fonts • smug: A font of the Greek alphabet in 12/12, 18/12, 18/18 and 20/20 point sizes (first number is upper case, second is

lower case).

Guitar f: By Paul Lemieux.
Guitar1, Guitar2 and Guitar
Font d.mwt are two guitar fret
fonts in 36 and 72 point sizes and
the documentation for its use
respectively. See the authors
notes for reasons for the
apparent discrepancy between
Font/DA mover point size and
installed size.

Hiragana: By Oi. A Japanese font

in 24 point size.

Hollywood f: By David Klein.
Hollywood Stretch and Read
me first!!?? are a 36 and 48 point
decorative font and its
documentation respectively.
Shareware – \$5.

Hombre 18 smug and Hombre 36 smug: A script font in 18 and

36 point sizes.

Hood River•smug: A very tiny san-serif font in 12 point size along with a number of faces and symbols.

Humanistic • smug: A semi-script font in 18, 36 and 48 point sizes.

Hunt smug: A san-serif

decorative font in 18 point size. IBM Extended 9: A 9 point sanserif monospace font with a typewriter look.

Icons • smug: Various icons, mostly computer related, in sizes of 9, 10, 12, 14 and 24 points.

Isaich f: By Alexei P. Tsvetkov.
Isaich and Note are a fancy
Russian font in 9, 12, 18 and 24
point sizes and documentation
respectively.

Kana f: By Yoshihisa Takayama. Yokohama, Kana Installer, Kana Installer INIT and About KanaInstaller & Yokohama includes a Japanese Katikana font in 9, 12, 18 and 24 point sizes along with installation documentation. Shareware – \$20.

Kanchi • smug: A Kanchi foreign font in 12 and 24 point sizes.

King Arthur (Camelot) smug: An old English like decorative font in 18 and 36 point sizes.

Koloss • smug: A heavy decorative font in 18 point size.

Kossack • smug: Another Cryllic font in 12 point size.

Kutaisi • smug: A serif font with a lot of diacritical mark characters in 10 point size.

Latinica • smug: A san-serif font with a lot of diacritical mark characters in 10 point size.

Latvian • smug: A large serif font with a lot of diacritical mark characters in 12 point size.

Leroy: A decorative font with a hand lettered look in 12 and 24 point sizes.

London Fonts: A decorative font with an Old English look in 18 and 36 point sizes.

Long Island: A serif font in 12 and 18 point sizes.

Los Ângeles • smug: The semiscript looking font in 24 point size.

MacGothic smug: A serif font with somewhat of a Gothic appearance in 12 point size.

MacPaint: By Steve Marcus. The patterns and tools of the original MacPaint in an 18 point size.

And even some tutorials on how to program in 6502 Assembly code (using Pascal):

ABSOLUTE.CODE
CALC.PGM.SIZE
CLEAR.KEYBOARD
CLOCK.N.SLOTS
fiLE.TYPES
LEARN.TO.PGM
TITAN.RAMDISK
UNUSED.MEMORY
WHICH.DRIVERS

AND THAT'S JUST THE START!
PD Disks 1058 and 1059
contain articles by this author from 1987 and 1988 for your reading pleasure. Included are most of the Trail columns from those years, as well as other articles submitted to On Three, the Third Apple Users group and others.

As mentioned in my Trail column, we are currently going through the PD library of the Apple Users Group International (ÂÛGI) which was recently donated to us. Joe Dobrowolski has now moved to Japan and will apparently refocus on the MAC if he decides to continue the organization. In any case, the WAP /// SIG is grateful for all the support AUGI has shown the Apple /// community over the years and wishes Joe all the best in the future. If he does decide to continue, I will seek board approval to send him some of WAP's MAC disks as a trade to say "thank you."

As for the PD library, we will keep it intact for the present as a resource for the Apple /// community. Over time, I hope to incorporate some of the better material into our own library for all to use and enjoy.

We now have the SIG PD library available at our SIG meetings, by the way, along with the hardcopy catalog of of offerings. So please join us for a fun evening of demonstrations and talk about our beloved SARA.

Apple III Disketeria

### /// DISKETERIA

By David Ottalini, /// SIG Co-Chairman

Three new PD disks bring us to 59 offerings now in our library. This month, we present a second disk full of programs and information from SIG member Ed Gooding's //'s Company BBS in Richmond, Virginia. Disk 1057 is self-booting on side one and offers a number of useful files, including information on getting the most out of the Catalyst program switching utility:

CATALYST.2.1 CATALYST.COMPAT CATALYST.COPY3
CATALYST.DCTORY
CATALYST.DRAWON
CATALYST.EMMODE
CATALYST.PFS

There's information on /// EZ Pieces:

EZP.BUG EZP.fiXES EZP.FORMATS

# Virus Problems? Crashed Disk?



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DOS 3.3 Volumes
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42 One Key DOS 43 IAC 29 Utilities H
43 IAC 29 Utilities H
44 Utilities I 45 Diversi-Copy
46 French Vocah Tutorial
46 French Vocab. Tutorial 47 Tic-Tac-Toe in French
48 Boot for l'Hote
49 l'Hote Storv
50 l'Hote Quiz
51 French Poetry Tutorial 52 Apollinaire Biography
52 Apollinaire Biography
53 Albert Camus Interview 54 Tic-Tac-Toe in Spanish 55 Rafel-Boot
55 Rafel-Boot
56 Katel
57 Rafel Oulz
58 Matute
59 Lo Fatal
70 Business/Math/Statistics 71 Music
72 Keyboard Games
72 Keyboard Games 73 Text Adventure Games
74 Paddie Games
75 Color Graphics for Fun
76 Education 77 Utilities
// Utilities
90 Spreadsheet C Genl. Bus.
92 Spreadsheet F Rue Recd
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
102 Games A 104 Business A
106 Science Engineering
107 Games R
107 Games B 108 IAC 10 (Graphics)
109 IAC 11 (Applesoft Tutrl.)
110 Personal/Education 111 Games C
111 Games C
112 Utilities C
113 Business B 115 IAC 12/13 Misc. 117 Picture Packer
117 Picture Packer
118 Utilities D
119 IAC 15 Misc.
119 IAC 15 Misc. 120 IAC 16 Misc.
122 IAC 17 Misc. 123 French Vocabulary
123 French Vocabulary
124 Utilities E 125 IAC 18 Misc. 126 Sights and Sounds 127 Math/Science
126 Sights and Sounds
127 Math/Science
128 Games D
128 Games D 130 Diversi-DOS (rev.) 131 Personal/Educ. 2
131 Personal/Educ. 2
132 IAC 19 - Utilities F 133 IAC 20 - Pascal & DOS3.3 137 IAC 21 Spreadsheet A
137 IAC 21 Spreadsheet A
139 IAC 24 Education 3
140 Education 4
141 Special Data Bases
142 IAC 28 PIRDAH Games
144 IAC 27 Anniesoft Prog
144 IAC 27 Applesoft Prog. 145-147(3 disks)Ap.Logo Util.
144 IAC 27 Applesoft Prog. 145-147(3 disks)Ap. Logo Util. 150 EDSIG1 (Elem. Math)
144 IAC 27 Applesoft Prog. 145-147(3 disks)Ap.Logo Util. 150 EDSIG1 (Elem. Math) 152 IAC 31 Miscellaneous
144 IAC 27 Applesoft Prog. 145-147(3 disks)Ap.Logo Util. 150 EDSIG1 (Elem. Math) 152 IAC 31 Miscellaneous 153 Investments A
139 IAC 24 Education 3 140 Education 4 141 Special Data Bases 142 IAC 28 Pinbail 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 154 Investments B
144 IAC 27 Applesoft Prog. 145-147(3 disks)Ap.Logo Util. 150 EDSIG1 (Elem. Math) 152 IAC 31 Miscellaneous 153 Investments A 154 Investments B 155 IAC 33 Miscellaneous 156 IAC 33 Applesoft. AW//a
155 IAC 33 Miscellaneous 156 IAC 35 Applesoft-AW//e 157 IAC 36 Arcade Games
155 IAC 33 Miscellaneous 156 IAC 35 Applesoft-AW//e 157 IAC 36 Arcade Games
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504 Database - LOGIC
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811 Adventures Disk 812 Toddlers and Kids
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815 TAWUG-3
816 TAWUG-4 817 Telecom
818 1987 AW Tax Template
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CP/M Volumes
401 Master Catalog 402 Utilitles 1
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418 Kermit Running Code
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1024 POWER PRINT ///
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1027 Power Cat/Basic XRF 1028 ASCIDIF(Bloom)

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	42 Studio Session (512K) 44 Boston II Fonts
	45 Games IV 46 Games V
	47 Fonts IV 48.3 Fonts V
	48.3 Fonts V
	54 Games VI 55 Games VII
	54 Games VI 55 Games VII 56 Games VIII
	54 Games VI 55 Games VII 56 Games VIII 74 Fun & Games IX
	54 Games VI 55 Games VIII 56 Games VIII 74 Fun & Games IX 75 Fun & Games X 76 Fun & Games X
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For Sale: Word Perfect 1.0.2 (new update) with original documentation - \$100; PowerPoint 2.0 - \$125, Call Lynn, (301)845-2651 evenings before 10:30 PM.

For Sale: Claris CAD new, in shrinkwrap. (Mail order price, \$632) Your price: \$550/offer. Call Gary at 585-2667.

Help Wanted: Part-time hlp or experience on Mac programs such as Word, FileMaker, Excel, HyperCard, to provide administrative assistance to small environmental consulting firm located in Alexandria near Rt. 395 and Duke St. Call (703) 354-5450 after June 22.

For Sale: Mac SE with 2 internal 800K floppy drives and internal Apple 40MB hard disk drive—\$2,390. John Willis, (301) 353-4095 (day), (301) 694-9410 (night).

For Sale: Full Impact spreadsheet (new—won at MacWorld Expo) Call Steve Heise at 270-9464.

For Sale: Mint condition Mac IIx, 4MB RAM, 84MB Cirrus hard disk drive (1 yr. warranty), Apple extended keyboard, 13" Apple color monitor, Apple 8Bit video card—\$7,500. Also available: 4-bit video card extension, Imagewriter II, Summagraphics tablet, Thunderscan, MacVision, computer floor stand and extension cables kit. Richard Stanley, (301) 771-2166 (office), (301) 526-6371 (home).

Wanted: Mac SE/30 ADB keyboard donation for mentally disabled person to aid in her organization. Please call Marty at (301) 949-1854.

For Sale: Orion 68020 accelerator board for Mac SE. New (Rev. A) and never used. Runs at 16Mhz; slots for 6 SIMMs. Price—\$500 (I want a scanner). Call Chris Bastian at (301) 530-1935 (home), 223-6800 (work).

Help Wanted: Outstanding opportunities for Macintosh enthusiasts to sell their dreams to the commercial world. We are a rapidly-growing Macintosh-only dealership. Fax your resume with cover letter to MacInOffice at 532-7469 or call John at 532-7400.

For Sale: Claris CAD. New and in shrink-wrap. Mail order price: \$632. Your price \$550/offer. Call Gary at 585-2667.

For Sale: Mac II, 6 months old with 8 bit color card, 13 " color monitor, 2 meg RAM, extended keyboard, 60 meg hard disk. Also Apple IINTX LaserWriter. All under Apple Care. \$11,00./best offer. Call Llew Davies: (301) 963-8757.

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WAP Journal Tutorial Input July 1989 By Lynn R. Trusal

Apple II e,c: The following three WAP tutorials are being of ared to Apple IIe,c owners on the first three Tuesday evenings of the month for 2 to 3 hrs beginning at 7:15 PM, at the office. Arrive by 7:00 PM to set up your computer. We are currently alternating months between the Apple IIe,c and the the IIgs. These tutorials are designed for "beginners" — not experienced users. You may sign up for one or more of these tutorials. The fee for each session is \$15 for WAP members and \$20 for non-members. You are urged to bring an Apple, monitor and disk drive. Please note that WAP does not have equipment for you to use; if you do not bring your own, you will have to look over someone's shoulder. Tutorials without a minimum of two students will be cancelled.

July 11 (Tuesday) Welcome to the World of Apple July 18 (Tuesday) How to Use Your Apple Software July 25 (Tuesday) Popular Applications

\* NOTE THE CHANGE TO THE 3RD, 4TH AND 5TH TUESDAY OF THE MONTH DUE TO THE JULY 4TH HOLIDAY. THIS CHANGE WILL BE FOR JULY 1989 ONLY!

Macintosh: Tutorials are for "beginners" — not experienced users. They are given regularly on the 2nd, 3rd and 4th Monday evening of each month at the office, from 7:15 to 10:15 PM. The fee for each session is \$15 for WAP members and \$20 for non-members. You may sign up for 1, 2 or all 3 sessions. You are strongly urged to bring your Macintosh, external disk drive, startup disk, and several blank disks. WAP does not have equipment for you to use. (Note to Mac II owners: You are not expected to bring a computer, but we do not have a Mac II for you to use). These tutorials fill up quickly, so call the office to verify space before mailing your registration.

July 10 (Monday) Introduction to Macintosh. Prerequisite: Guided Tour July 17 (Monday) Intermediate Mac Skills. Prerequisite: Familiarity with Desktop July 24 (Monday) Personalizing your Mac for Productivity: Prerequisite: 1st two sessions.

Macintosh Tutorials in Northern Virginia

Macintosh tutorials, taught by Russ Bradley, are at the Fairlington United Methodist Church, Rt. 7 and I-395 (King Street Exit), in Alexandria, VA. They will be at three-month intervals (March, June, September and November, 1989). This year they will be on the 2nd, 3rd and 4th FRIDAY NIGHT each of these months. The fee for each session is \$15 for WAP members and \$20 for non-members. You may sign up for 1, 2 or all 3 sessions. For specific directions, call the WAP office or Russ Bradley at 703-768-2529. The tutorials will be from 7:15 to 10:15 PM.

June 9 (Friday) Introduction to Macintosh. Prerequisite: Guided Tour
June 16 (Friday) Intermediate Mac Skills. Prerequisite: Familiarity with Desktop
June 23 (Friday) Personalizing your Mac for Productivity: Prerequisite: 1st two sessions.

#### LOOKING FOR MACINTOSH INSTRUCTORS

We are looking for several new instructors to teach Macintosh tutorials. New instructors will be required to sit in on one tutorial for each of the three sessions taught prior to teaching. Acceptance as an instructor on a regular basis will be determined by critiques filled out by the students in classes taught. Contact Lynn R. Trusal at 301-845-2651 before 10:30 PM if you are interested or require additional details.

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