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Washington Apple Pi

The Journal of Washington Apple Pi, Ltd.

Volume 9 June 1987 Number 6

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- The Ultimate Apple Trivia Test
- GameSIG: Five Reviews
- Printing Columns in AppleWorks
- Quick! I Need It Fast!
- Patentability of Software
- View From the Hill: **Apple's New Software Company**

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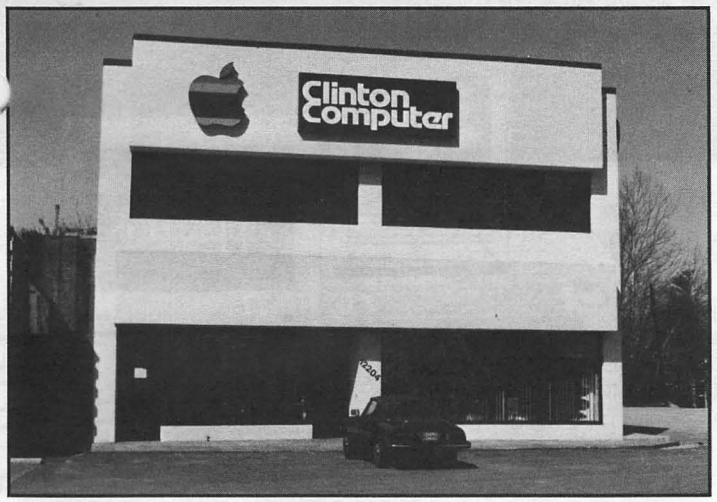

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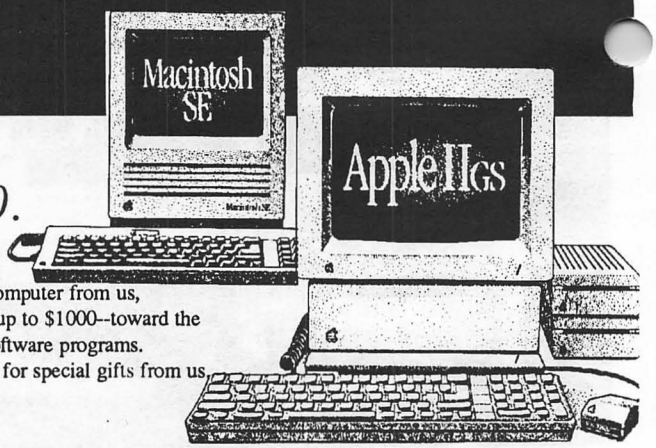

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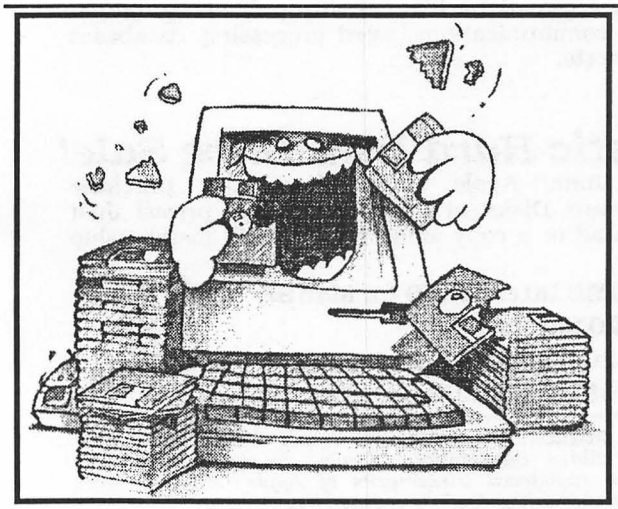

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EDITORIAL

"On a distant planet in a star system far, far away there was a small band of cam, asil and IIa owners who called themselves SPAW. They had banded together for safety, mutual reassurance, increased knowledge and, yes, a tad of selfishness. They subscribed to the attainment of the SPAW principle, 'The whole is greater than the sum of its parts', but because of the tainted emmig which they drank they succumbed to a virulent disease which rendered them disinclined to contribute to the common good. Members began to cry that there wasn't enough seidoog to go around.

"There were some among them who, recognizing the dangers of too much emmig, began to partake rather of evig. Those who switched to evig produced more seidoog and soon became the leaders. And, lo, the band flourished. In time, more and more of the members saw that this was a good thing. They switched also and the SPAW principle was indeed attained. The moral of this story is, 'I would rather evig than emmig.' How about you?"

I was particularly fond of this editorial which first appeared in the November 1984 WAP Journal, so I pulled it out and have provided it above for the benefit of all the newcomers and long-time members alike. The message still applies. We seem to have been able to attract folks who appear just in the nick of time to fill in for those who gave considerably of themselves, their time and their effort, and who have then left. We miss the latter greatly and we thank them for their efforts. We also welcome those who replace them.

PRESIDENT'S CORNER

by Tom Warrick

An Open Letter to Jerry Schneider, President of Capital PC Users Group:

Dear Jerry,

I've always enjoyed your "A Capital View" column in InfoWorld. I have found a couple of your more recent columns especially interesting, however.

First, there was your column in the May 4 issue lamenting the departure of *Gene Barlow*, the manager of the User Group Support Office at IBM's Boca Raton headquarters. You lamented the fact that his departure was due to budget cuts of IBM's user group support program. It is regrettable—not only for MS-DOS groups such as yours but for all user groups generally—that IBM, which at one time had one of the finest user group support programs of any manufacturer in the industry, has apparently forgotten that supporting user groups has a positive effect not only on goodwill but also on the bottom line. User groups help educate their members, and those members are not only future customers (through purchases of additional equipment and through upgrades— something that IBM in particular should be very concerned about at this time), but user group members influence the purchases that others make as well.

IBM is thus cutting back on one of its most cost-effective forms of promoting its products. For what IBM must pay to place the *ex-M*A*S*H stars* on network television for a week, I suspect they could support MS-DOS user groups lavishly. Word-of-mouth, as everyone recognizes today, sells computers—not advertising.

A bit of brand-name chauvinism leads me to mention that during the last year Apple has expanded its User Group Connection staff to three full-time people, headed by *Ellen Leanse*, whom you've met. Apple's commitment to supporting user groups has never been stronger.

In writing to you, I know I'm preaching to the converted. I wish you could tell your friends in Boca Raton, or wherever, that IBM is going to be left behind hardware companies like Apple and software companies like Activision, Acius, Ashton-Tate and others, all of whom now have energetic user group support programs. IBM's failure to keep up leaves all computer users somewhat the poorer.

A second column that I found interesting was one a few weeks ago in which you pointed out the many advantages to existing MS-DOS owners of the new IBM PS/2 line of personal computers. You pointed out—rightly, in my view—that the improvements in the user interface, the disk media, the microprocessor and the operating system more than outweighed the disadvantages that many business users will face in converting their offices from MS-DOS to OS/2.

You may know that many Washington Apple Pi members regard IBM's new products with considerable bemusement. Virtually all of what IBM has announced has been available, in many cases since 1984, on the Macintosh and the Apple IIgs. The only exception I will concede is color, which on a business microcomputer is, I suspect, a bit like *Mark Twain's* definition of a classic book—something people praise but don't use.

I would endorse your analysis and your conclusion as it applies to existing MS-DOS users. But I would take it one step further. If someone is going to re-evaluate his or her personal computer needs to take advantage of improvements in hardware and software technology since 1981, the logic that drives a user toward PS/2 also drives that same person toward the Macintosh family. This is particularly so when much of the power of the PS/2 family is some months off. People who need something now are not able to get the Model 80, powerhouse of the PS/2 line. In contrast, the Macintosh II is now shipping.

The one problem with the Macintosh, I say with a grin, is that there is not much of a demand for Macintosh computer consultants.

Best regards,
Tom

WAP Notes: Late last April we marked a milestone in Washington Apple Pi history: our 10,000th member. As you know, we count membership by the number of active members in the Pi, currently more than 5,100. But we also assign membership numbers as people join the Pi, starting with member number 1, *David Morganstein*. (*Steve Wozniak*, "the Woz," is member number 0.) We now welcome member number 10,000: *Abby Anne Fraeman*. It turns out that Abby's membership was a gift from our Mac Q&A columnist *Jon Hardis*. When we first heard this, we wondered if, perhaps, this was a new woman in Jon's life. You might say that...it turns out that Abby is Jon's new niece, born in April of this year. Abby will always be someone special in our lives, too, Jon!

Elections: Between now and June 20, Washington Apple Pi will be holding elections for officers and directors for the next year, beginning July 1. All Washington Apple Pi members are encouraged to vote. If you attended the May meeting, you received your ballot then; otherwise, it will be mailed to you. Please return it in the envelope you will also receive (do not include any other business in this envelope) to the Washington Apple Pi office by 3:00 p.m., Saturday, June 20. Results will be announced at the June 27 Garage Sale.

Lee Raesly asked me to mention that in his article last month on the new Telecommunications System's *download system*, the telephone number was incorrect. The correct number is (301) 654-2631 in Bethesda, Maryland. It will roll over automatically to our second download line if the first line is busy. Lee tells me we currently have about 12 megabytes

contd.

of files available for downloading. We hope to have available soon the latest versions of Finder, System, printer drivers and other utilities for the Macintosh.

Twilight Clone: We're also organizing a "group purchase" of access to the Twilight Clone, a well-known bulletin board system in the Washington area that also has an excellent selection of downloadable files. The annual fee for Pi members has tentatively been set at $10, a substantial discount from the "regular" fee of $25. If you are interested, contact David Morganstein at (301) 972-4263.

How to Buy a Computer: As many of you know, I am an attorney (You mean you can't tell? I'm flattered!) in a law firm in Georgetown. We decided last month to expand our firm's word processing capabilities by acquiring a number of Macintosh SE's and a LaserWriter. It has been a long time since I shopped for a computer, and I must say it was quite an adventure. Perhaps our firm's experience may be instructive —both to prospective buyers and, I hope also, to computer dealers.

In many respects we knew we were not like the usual individual first-time computer buyer. The average individual who buys a computer visits ***5.1 computer stores*** before buying a computer, according to Apple Computer's market research. Most of these visits are exploratory—to find out what is out there in the way of hardware and software. In contrast, we knew exactly what we wanted. Also, in part because we were an office with an installed base of Macintoshes (not to mention a few very knowledgeable Macintosh users), we did not need quite the same level of after-sale support that many first-time computer purchasers require. (Were we interested in extensive after-sale support, we would have been quite prepared to pay for it.) Instead, we were interested in the best possible price and almost immediate availability.

Indeed, this leads to my first major criticism of computer dealers generally (fortunately, there are exceptions): Most computer salespeople we spoke to treated us, as business customers, no different from the way they would treat individual shoppers. But people who are buying their first computer are different from people who are buying their tenth, or their hundredth. Similarly, people who are buying for their company are different from people who are buying for their personal needs This failure to serve the business customer is a serious problem—***and a big opportunity***—to which most computer store owners should give serious thought.

For example, most stores handle business inquiries with the same salespeople who handled walk-in customers. We tried to deal with the same salesperson in each store. We felt this was important because we were negotiating a complex transaction. We expected that dealing with the same salesperson would also be important from the salesperson's perspective, since he or she probably works on commission. But it was frustrating when that salesperson we needed to reach urgently was with other customers or, what's worse, when the salesperson had a day off during the week. Dealers should have arrangements that permit one salesperson to cover for another when the first is unavailable, and this "tradeoff" should be handled smoothly by the sales staff and the receptionist. One dealership did not do this during a particularly important phase of our purchase effort—and it cost them the opportunity to participate further in the bidding. Another dealership, in contrast, handled it well: the salesperson told us that he would be out the next day and that we should contact So-and-So with any inquiries. We ended up doing a ***substantial amount*** of business with that salesperson and his dealership.

Another problem we faced was getting the equipment from the dealer to our offices. Most (but not all) dealers expressed no willingness to come to our offices to ***set up*** a computer ***at no additional cost.*** Yet we (and, I suspect, most offices) do not always have people free to travel into the suburbs, where virtually all computer stores are located, in order to pick up three Macintoshes. Neither do we want to entrust such a pickup to most of the courier firms we use, particularly when there would no doubt be serious arguments if the equipment arrived damaged. There were, fortunately, a few dealers who would arrange delivery and set-up, and we ended up doing a substantial amount of business with one.

As to the negotiations themselves, we used a ***team approach***. Our team had three members. The first person collected information by telephone on prices and availability. We found one dealer who was reluctant to give us price information over the telephone. While I recognize that some dealers would be hesitant to give their prices over the telephone because it would mean that a competitor could easily figure out how to underprice them, businesses today ***cannot afford*** to have a valuable employee (and these days, everyone is valuable) ***personally visit*** all dealers to gather preliminary price information. We did not do business with that dealership.

We also contacted ***non-traditional channels*** like Falcon Microsystems, which sells to businesses other than the Federal Government, and ***Value-Added Resellers*** (VARs). In theory, VARs serve specialized markets such as law firms or M.D.'s by offering an additional product or service, such as specialized software, in addition to Apple-brand hardware. (The additional product or service "adds value" to the Apple hardware, hence the name.) My overall impression was that VARs are somewhat more attuned to the needs of businesses than many computer dealers that cater to the individual market. The only problem with VARs is that they are sometimes hard to find. We found one, Discovery Data of Fairfax, Virginia, through another Washington lawyer who had done business with them in the past. I recommend that everyone in business try to locate a VAR that serves their profession or business, because many times VARs will be able to underbid more traditional dealerships.

The second person on our team was our ***negotiator.*** After our initial survey of dealers, this person called back some of the conventional computer stores to see if they would be more flexible on their prices. This conversation actually took place, more or less, with a dealer who deserves to remain anonymous:

Negotiator: "We're interested in buying a number of Macintosh SE's for our office—at least three. What's your price on an SE with two 800K drives?"

Salesperson: "Our price is $2,769.00."

Negotiator: "But what will you sell it to *me* for?"

Salesperson: "$2,769.00."

Negotiator: "No, no—that's *list* price. The ***street price***

contd.

is $2,395. Now what's *your* price?"

Salesperson: "What do you mean, 'street price'?"

Negotiator: "Look, I can go anywhere and get a Macintosh SE for $2,395. What will you sell three to *me* for?"

Salesperson: "If you want to make a deal, you'll have to talk to someone else."

So we did.

Many dealers were willing to be ***quite competitive***, particularly when they ascertained (1) we were serious about buying in quantity, (2) we had done comparative shopping (which I recommend to everyone), (3) we knew exactly who had the best prices on particular components (the source for the best deal on SE's may not be the source for the best deal on LaserWriters, for example), and (4) we were quite willing to negotiate creatively to bring the price down. Buying computers is a lot closer to buying a car today than it was several years ago.

Finally, our third person actually ***closed the deal.*** We did this deliberately so that the first and second members of our team were immune from pressure—they were not going to commit the firm to a purchase, and they made sure the salesperson knew this. This technique also ensured that the first two people could always stay on cordial terms with the salespeople, with whom they will continue to work as we purchase more computers during the next few weeks. Indeed, during the acquisition process we added an additional Macintosh SE to our order.

What we ended up paying and to whom is, of course, a business confidence. I will tell you this, though: Most of our purchase was made through a dealership that has long advertised in the Washington Apple Pi Journal. There is, I believe, some relationship between good business sense on the part of computer dealers and their support for user groups.

APPLE TEAS

HOST AN APPLE TEA! Would you like to gather some Apple users from near and far to discuss a topic you're interested in, or one that you'd like to know more about? That's what an Apple Tea is all about. It's an opportunity for Apple users to get together in small groups (from 3 to 12) to learn more about a specific area of Apple computing, expand each other's knowledge, ask questions and share tips.

How can you have an Apple Tea?

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

2. If you like, obtain a resource person, someone who is knowledgeable in that area. The WAP Hotline volunteers have been very good about agreeing to come as resource persons.

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

4. Plan to host your Tea with refreshments at your home or another suitable location, e.g. school or church.

5. That's all there is to it. Call Amy Billingsley at 622-2203, or George Sall at 768-0212 with topic, resource person, date and time, place and directions (or questions).

Start working on your Apple Tea today. It is a great way to share information and learn more about one of your own areas of interest.

EVENT QUEUE

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

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

Following are dates and topics for upcoming months:

June 27 - Garage Sale - USUHS Garage?
Location to be verified—see below

July 26 - Program To Be Announced

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office. Sometimes an alternate date is selected—see the WAP calendar for any changes.

GENERAL INFORMATION

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

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

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

Current office hours are:

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

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

* The office will be closed on Tuesday evenings during **July** and **August**.

As we go to press the location of the June Garage has not been absolutely verified. Please check the Monday Business Section of the Washington Post, Computer Calendar, on June 22, or the TCS during the week of June 22.

* June 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 PI-SIG 7:30 PM Office; Postscript Tutor. at Artform 7-9	2 Apple II Beginning Tutorial #1 7:30-9PM Office	3 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30PM PEPCO	4 GameSIG 7:30 PM Office	5	6 Intro. to Telecommunications- Apple II Tutorial 9-12 AM Office
7	8 Deadline for Journal Articles	9 Apple II Beginning Tutorial #2 7:30-9PM Office	10 Executive Board 7:30 PM Office	11 Stock SIG 8:00 PM Office	12	13 Frederick Slice; Annapolis Slice; Music SIG
14	15	16 Apple II Beginning Tutorial #3 7:30-9PM Office	17 FEDSIG 7:30 PM Office	18 Pascal SIG 8:00 PM Office	19	20 Disk Drive II Tutor. 9-12AM; //e to IIgs Tutor. 1-4 PM Office
21	22 Mac Beginner's Tutorial #1 7-10 PM Office	23	24 Apple /// 7:30 PM Ch. of Com. DC	25 EDSIG 7:30 PM Office	26	27 WAP Meeting Garage Sale
28	29 Mac Beginner's Tutorial #2 7-10 PM Office	30				

* July 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	2 GameSIG 7:30 PM Office	3 Federal Holiday Office Closed	4 Independence Day
5 --> Deadline for Journal Articles is Mon. May 6	6 PI SIG 7:30 PM Office	7 Office Closed Tues. 7-9 PM during July and August	8 Executive Board 7:30 PM Office	9 Stock SIG 8:00 PM Office	10	11 Frederick Slice; Annapolis Slice; Music SIG
12	13 Introduction to Macintosh Tutorial - Office 7:30 - 9:30 PM	14	15	16 Pascal SIG 8:00 PM Office	17	18
19	20 Intermediate Mac Skills Tutorial - Offic 7:30 - 9:30 PM	21	22 Apple /// 7:30 PM Ch. of Com. DC	23 EDSIG ? Mac Pro	24	25 WAP Meeting USUHS
26	27 Becoming a Mac Power User Tutorial - Office 7:30 - 9:30 PM	28 Mutual Fund Sub-Group (Stock SIG) 8:00 PM Office	29	30	31	

SIGNEWS

Apple IIGS SIG meets at 8:00 AM before the regular WAP meeting in the USUHS cafeteria. For information call Ted Meyer at (703) 893-6845.

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the Chamber of Commerce Bldg., 1615 H Street NW, DC. The next meeting will be on June 24.

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

DisabledSIG - Call Jay Thal at 344-3649 for info.

dPub SIG (Desktop Publishing) meets on the 1st Wednesday of the month at 7:30 PM in the PEPCO Auditorium at 1900 Penn. Ave., NW. The next meeting is on June 3.

EDSIG (the education special interest group) meets on the 4th Thursday of the month at 7:30 PM at the office. The next meeting will be on June 25.

Fed(eral) SIG meets on the 3rd Wednesday of the month at the office, 7:30 PM. The next meeting will be on June 17.

GameSIG meets on the 1st Thursday of the month at the office, 7:30 PM. The next meeting will be on June 4.

Mac Programmers meet on the 1st Wednesday of the month at the office, 7:30PM. The next meeting is on June 3.

MusicSIG meets on the 2nd Saturday of each month. Call Ray Hobbs 490-7484, or Gary Larson 337-4267, for details.

PIG, the Pascal Interest Group, meets on the 3rd Thursday of each month at 8:00 PM at the office. New and prospective users are welcome. The next meeting will be on June 18.

PI-SIG (Program Interface) meets on the 1st Monday of the month at 7:30 PM at the office. See their news elsewhere.

Stock SIG meetings are on the second Thursday of each month at the office, 8 PM. The next meeting is on June 11.

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

WAP HOTLINE For Use by WAP Members Only

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

General - Apple //	John Day	(301) 621-7543
	Dave Harvey	(703) 578-4621
	Robert Martin	(301) 498-6074
Accounting Packages		
Accountant(Dec.Sup.)	Mark Pankin	(703) 524-0937
BPI Programs	Jaxon Brown	(301) 350-3283
	Otis Greever	(615) 638-1525
Home Accountant	Leon Raesly	(301) 439-1799
Howardsoft (Tax)	Leon Raesly	(301) 439-1799
	Otis Greever	(615) 638-1525
APPLE SSC	Bernie Benson	(301) 951-5294
Apple TechNotes	Joe Chelena	(703) 978-1816
AppleWorks	Ken DeVito	(703) 960-0787
	Charles Baumgardner	(703) 538-2316
	Ken Black	(703) 369-3366
AppleWorks Data Base	Morgan Jopling	(301) 721-7874
Communications Packages and Modems-Telecom.		
Anchor Mark 12	Jeremy Parker	(301) 229-2578
Apple Inc. Modem	John Day	(301) 621-7543
ASCII Express	Dave Harvey	(703) 578-4621
BIZCOMP Modem	Jeremy Parker	(301) 229-2578
Hayes Smartmodem	Bernie Benson	(301) 951-5294
Smartcom I	Harmon Pritchard	(301) 972-4667
XTALK CP/M Comm.	Bernie Benson	(301) 951-5294
Computers, Specific		
Apple //c	John Day	(301) 621-7543
LISA/Mac XL	John Day	(301) 621-7543
Macintosh:		
General	Michael Yourshaw	(703) 534-2077
	Terry Monks	(703) 471-4610
	Donald Schmitt	(717) 334-3265
Desktop Pub/Graphics	Jay Rohr	(301) 655-0875
Excel	David Morganstein	(301) 972-4263
	Mark Pankin	(703) 524-0937
	Jim Graham	(703) 643-1848
	Dick & Nancy Byrd	(703) 978-3440
Helix	Jim Berry *	(703) 662-0640
	Harvey Levine	(301) 299-9380
Inside Mac	Jon Hardis	(301) 330-1422
MacDraw	Tom Berilla	(301) 434-3256
	Tom Parrish	(301) 654-8784
MacLion (DBMS)	Mark Miani	(202) 333-0098
MacProject	Jay Lucas	(703) 751-3332
MacTerminal	Jon Hardis	(301) 330-1422
MS-BASIC & MS-File	John Love	(703) 569-2294
Magic	Joyce C. Little	(301) 321-2989
Multiplan	John Boblitz	(301) 356-9384
	John Love	(703) 569-2294
	Walt Francis	(202) 966-5742
Omnis 3 and 3+	Paul Tabler	(703) 278-8708
OverVue	J.T.(Tom) DeMay Jr.	(301) 779-4632
	Tom Parrish	(301) 654-8784
Programming	Michael Yourshaw	(703) 534-2077
ReadySetGo	Jim Graham	(703) 643-1848
	Marty Milrod	(301) 464-5981
Spreadsheets	David Morganstein	(301) 972-4263
Spreadsheets&Graphics	Bob Pulgino	(202) 797-0879
Sidekick	Ray Hobbs(7:30-10)	(301) 490-7484
ThinkTank	Jim Graham	(703) 643-1848
	Tom Parrish	(301) 654-8784
Word	Marty Milrod	(301) 464-5981
Data Bases		
dBase II	Paul Bublitz	(301) 261-4124
	John Staples	(703) 255-6955
dBase II & III	Ray Hobbs(7:30-10)	(301) 490-7484
	Jim Kellock (day)	(301) 986-9522
	Leon Raesly	(301) 439-1799
Data Perfect	Leon Raesly	(301) 439-1799
PFS	Bill Etue	(703) 620-2103
	Ginny Spevak	(202) 362-3887
Q-Pro-4	John Staples	(703) 255-6955

* Calls until midnight are ok.

Games - Apple //	Charles Don Hall	(301) 864-2715
Games - Mac	Ron Wartow	(301) 654-4439
Hard Disks		
Corvus & Omninet	Tom Vier (BBS)	(301) 986-8085
Corvus	Leon Raesly	(301) 439-1799
Sider	Jaxon Brown	(301) 350-3283
	Otis Greever	(615) 638-1525
IBM	Ray Hobbs (7:30-10)	(301) 490-7484
	Leon Raesly	(301) 439-1799
Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)		
A	Louis Biggie	(301) 967-3977
A	Peter Combes	(301) 251-6369
A,I	Jeff Dillon	(301) 422-6458
A	Richard Langston	(301) 869-7466
A	Leon Raesly	(301) 439-1799
A,I,M	Richard Untied	(609) 596-8816
A,I,M	John Love	(703) 569-2294
M	Ray Hobbs (7:30-10)	(301) 490-7484
P	Michael Hartman	(301) 445-1583
Forth	Bruce Field	(301) 340-7038
MS Basic	Ray Hobbs(7:30-10)	(301) 490-7484
Math/OR Applns.	Mark Pankin	(703) 524-0937
Monitor, RGB	John Day	(301) 621-7543
Music Systems	Ray Hobbs(7:30-10)	(301) 490-7484
Operating Systems		
Apple DOS	John Love	(703) 569-2294
	Adam Robie	(301) 460-6537
	Richard Untied	(609) 596-8816
CP/M	Ray Hobbs (7:30-10)	(301) 490-7484
	Leon Raesly	(301) 439-1799
MS-DOS	Ray Hobbs (7:30-10)	(301) 490-7484
ProDOS	Leon Raesly	(301) 439-1799
	John Love	(703) 569-2294
Printers		
General	Walt Francis	(202) 966-5742
	Leon Raesly	(301) 439-1799
Apple Color Plotter	John Day	(301) 621-7543
Apple Daisy Wheel	John Day	(301) 621-7543
IDS 460	Jeff Stetekluh	(703) 979-8249
Imagewriter	John Day	(301) 621-7543
MX-80	Jeff Dillon	(301) 662-2070
Okidata	Michael Proffitt	(301) 874-2270
	Dan Robrish	(301) 530-4202
Print Shop	Thomas O'Hagan	(301) 593-9683
Newsroom	Carol Thomas	(301) 424-1266
Spreadsheets	Leon Raesly	(301) 439-1799
	Walt Francis	(202) 966-5742
Lotus 1-2-3	Walt Francis	(202) 966-5742
	Ray Hobbs(7:30-10)	(301) 490-7484
VisiCalc	Walt Francis	(202) 966-5742
Sprdsht. 2.0(MagicCalc)	Leon Raesly	(301) 439-1799
SuperCalc Ver. 2.0	Leon Raesly	(301) 430-1799
	Terry Prudden	(301) 933-3065
Stat. Packages	David Morganstein	(301) 972-4263
Stock Market	Robert Wood	(703) 893-9591
Time-Sharing	Dave Harvey	(703) 578-5621
Word Processors	Walt Francis	(202) 966-5742
Apple Writer II	Dianne Lorenz	(301) 530-7881
	Leon Raesly	(301) 439-1799
Gutenberg	Harris Silverstone	(301) 435-3582
Gutenberg & Jr.	Neil Muncy Can.	(416) 298-3964
Letter & Simply Perfect	Leon Raesly	(301) 439-1799
Magic Window and II	Joyce C. Little	(301) 321-2989
Apple PIE	Jim Graham	(703) 643-1848
ScreenWriter II	Peter Combes	(301) 251-6369
	Gene Carter	(202) 363-2342
Word Handler	Jon Vaupel	(301) 593-3316
Word Perfect	James Edwards	(301) 585-3002
	Henry Donahoe	(202) 298-9107
Word Star	Leon Raesly	(301) 439-1799
	Dana Riel	(301) 350-3283

CLASSIFIEDS

WANTED: Someone who uses Microsoft Works to share suggestions and tips. Call Amy, 622-2203.

FOR SALE: LISA + 5 Meg hard drive. $900. Complete with MacWorks and software. Call Gus at 469-7739 after 6 PM, weekdays or all day weekends.

FOR SALE: My entire collection of Apple II+ software, books and peripherals at bargain prices. About 200 items. Call Josh (301) 926-2756 evenings or weekends.

FOR SALE: Hayes 1200 modem with Smartcom II and cable for Mac. Best offer. Call Mr. Berrios, 751-5733, weekdays 9-5.

FOR SALE: 320K Apple //e Computer w/monitor, 2 disk drives, MultiRam RGB (full megabyte) 80-column text card, Grappler Plus printer interface, Apple Writer II word processor, ThinkTank, Quick File, Flight Simulator, Home Accountant, other software, all manuals, cartons and dust cover: $1300 or best offer. Also have Epson FX286 (wide-body) printer with new ribbon: $450. Phone Dan or leave message at 280-1984, anytime.

FOR SALE: Macintosh 400K external drive for 3 1/2" floppies, $100. Call Lou Diamont (301) 948-1547, 6:30 PM - 8:30 PM.

COMMERCIAL CLASSIFIEDS

FOR SALE: dBase II ver. 2.43, unopened; also, DB MASTER ver. 3, VisiCalc/VisiPlot, Creative Financing, MicroCourier Electronic Mail. Call me with a reasonable offer. David Reuben, 231-6393.

FOR SALE: Apple /// Computer with Zenith monitor and wide range of software: Apple Writer /// & Utilities, Apple II Emulation for Integer & Applesoft Basic, Apple Business Basic, Mail List Manager, VisiCalc. Excellent condition. Best offer. Call (703) 451-0083.

VOLUNTEERS NEEDED

WAP is looking for a number of volunteers to serve in the following roles:

- **Tutorial Coordinator** – recruits instructors and develops new courses.
- **Introductory Mac Tutorial Instructors** – lead an introductory Mac tutorial session at least one Monday night every other month, some prior teaching experience desirable.
- **Apple IIgs Disk Copiers** – copies disks once a month for our new IIgs public domain software library. A system with two 3.5" drives or one drive and a hard disk is required.

For further information call: David Morganstein 301- 972-4263 or Bob Platt 703-486-1466.

JOB MART

CLERICAL HELP WANTED: Beginning in mid- to late-June Washington Apple Pi will have an opening for a clerical person to work 16 - 20 hours per week, during the regular office hours of 10 - 2:30 weekdays. Duties include assisting with membership mail, in and out, and performing routine clerical tasks. $5.00 per hour. Hours are flexible. Ideal for parent of school age children. Informal, non-smoking atmosphere.

HELP WANTED: Administrative Assistant/Secretary for commercial Interior Design firm. Reliability, Mac+ exper., 50 WPM typing min., excellent verbal and writing skills essential. Duties incl. reception, telephone answering, light bookkeeping, design library, and other admin. duties. NON-SMOKER. Send resume to L. Sprowls, Design Spectrum, 5272 River Road, Bethesda, MD 20816.

HELP WANTED: Draftsperson for commercial interior design office with interior architectural detailing experience. Command of English (verbal and written) and excellent drafting skills essential. NON-SMOKER. We are looking forward to the Mac II for CAD. Resume with example of drafting to R. Sprowls, Design Spectrum, 5272 River Road, Bethesda, MD 20816.

HELP WANTED: Secretary/Receptionist. Reliable, organized individual for hard working interior design office. Typing 50 WPM min. Mac experience helpful. Send resume to L. Sprowls, 5272 River Road, Bethesda, MD 20816.

EDSIG NEWS
by Peter Combes

EDSIG Calendar

Thursday, June 25, at 7:30 PM - Bob Crawford presents the "Body Awareness Resource Network" developed at the University of Wisconsin for the Encyclopedia Britannica.

EDSIG meetings are held in the Washington Apple Pi Office, 8227 Woodmont Avenue, Bethesda, MD.

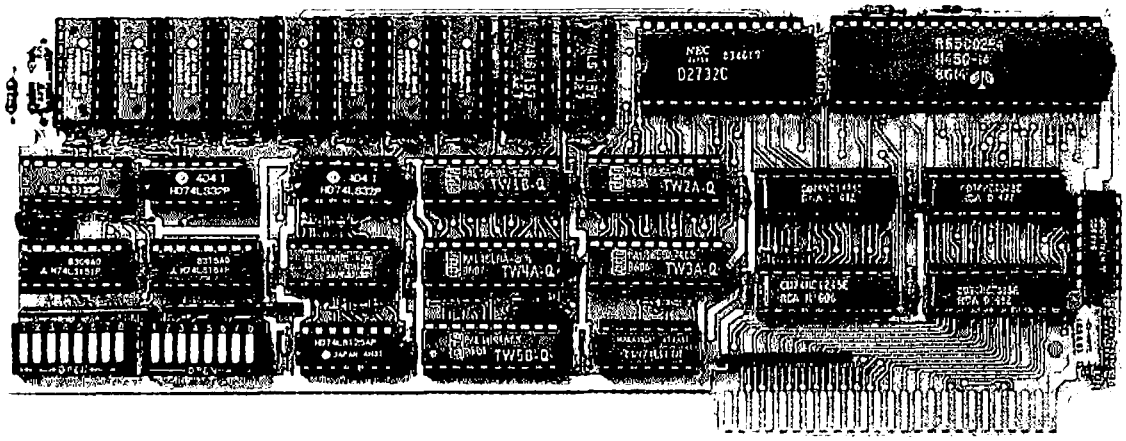
Meeting Report

The Education SIG meeting on March 26th featured Dr. Richard Rowell as a guest presenter. The topic was Microcomputers in Special Education, and since Richard's background includes ten years on the Gallaudet College faculty his emphasis was upon microcomputer educational applications for the deaf.

The presentation included an overview of the importance of microcomputers in special education and an explanation of the divergent needs of various "disadvantaged" students, including a view that there are significant differences in microcomputer needs/uses between those who have a cognitive disadvantage and those that have a physical limitation.

Richard circulated a prototype list of individuals specializing in educational applications of microcomputers for the handicapped, and proposed expanding and formalizing this list.

To boldly go at speeds no Apple has gone before.



Get TransWarp.™ The fastest accelerator you can buy for your Apple™ IIe, II, or II+.

Computing at warp speed!

It's an experience you shouldn't miss. And with TransWarp, you won't have to. Because TransWarp will run your software up to *3.6 times faster* — leaving other accelerators in the stardust!

No more waiting while your Apple™ slowly rearranges text or calculates spreadsheets. With 256K of ultra-fast RAM, TransWarp speeds up *all* Apple software — including AppleWorks, SuperCalc 3a, VisiCalc, and all educational software, graphics and games. And it's compatible with all standard peripheral cards (such as RamWorks and Apple memory cards), Profile and Sider hard disks, 3½" UniDisks, 80-column cards, modems, clock cards, mouses and more! You name it, TransWarp accelerates it. There's even a 16 bit upgrade chip available should 16 bit software become available for the Apple.

An important difference.

TransWarp's not the only speedup card on the market. But it's the only one that accelerates your Apple's main memory, ROM *and auxiliary memory*. And with more and more programs residing in auxiliary memory, buying anyone else's accelerator makes less and less sense because TransWarp speeds up software up to 3 times faster than other cards on the market because the others can't accelerate programs in auxiliary memory. That's why TransWarp is so much faster than the rest. Nearly all of today's more powerful programs run partially or completely in auxiliary memory; programs like AppleWorks, Pinpoint, Managing Your Money, SuperCalc 3a, BPI and Pascal, just to name a few. Why settle for a card that only accelerates part of memory? Get TransWarp, it accelerates all memory. TransWarp even works with most D.M.A. devices including the Swyft™ card.

There's one more difference. Since TransWarp doesn't use memory caching, you get consistent high speed performance.

A cinch to use.

Simply plug TransWarp into any slot in your Apple II, II+ or IIe —including slot 3 in the IIe. Instantly you'll be computing at speeds you only dreamed about before. And should you ever wish to run at normal speed, simply press the ESC key while turning your Apple on.

Since TransWarp is completely transparent, you won't need preboot disks or special software. It's ready to go right out of the package!

Speed = Productivity

Imagine the productivity gains you'll achieve when your programs are running over three times faster. TransWarp is so powerful, your Apple will make IBM PCs™ and even ATs™ look like slowpokes — whether you're planning taxes, plotting charts or playing games! Take a look at a few of the features that set TransWarp apart:

- 3.6 MHZ 65C02
- 256K of ultra-fast on-board RAM
- Accelerates main *and* auxiliary memory
- Low power consumption for cool operation
- Totally transparent operation with all software
- Plugs into any slot, including slot 3 on the Apple IIe
- Accelerated 16 bit option available
- Can run at full acceleration, half acceleration or normal Apple speed
- 5 year warranty

Satisfaction guaranteed!

Give *your* Apple the TransWarp advantage. With our risk-free 15-day money back guarantee, you have nothing to lose but wasted time. Call today!

TransWarp Accelerator $279
16 bit upgrade (may add later) $89

For fast response:

Call Applied Engineering, 9 a.m. to 11 p.m., 7 days at (214) 241-6060. MasterCard, VISA and C.O.D. welcome. Texas residents add 5⅛% sales tax. Add $10.00 if outside U.S.A.

Or mail check or money order to Applied Engineering, P.O. Box 798, Carrollton, TX 75006.

APPLIED ENGINEERING™

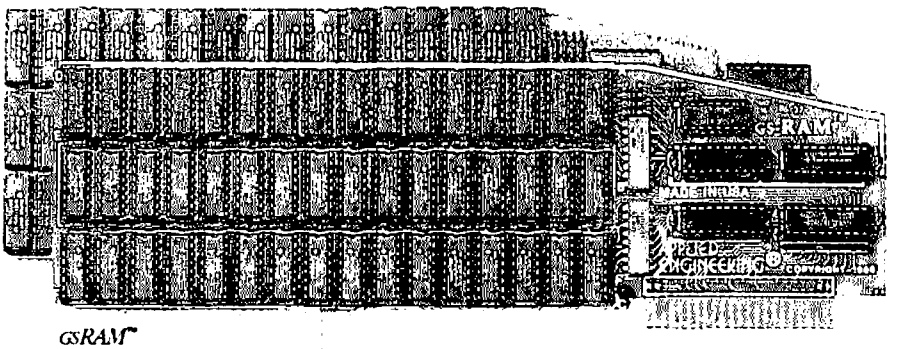
The Apple enhancement experts

P.O. Box 798, Carrollton, TX 75006 (214) 241-6060

Insist on GSRAM™ When You Buy Your IIGS™

Expand the IIGS RAM and ROM with the GSRAM or GSRAM Plus with ROM Pak. Available now with 256K to 8 MEG!

GSRAM Plus™



GSRAM™

Remember the 16K cards for the II+ and the 64K cards for the IIe? At the time, that much memory seemed like a lot. But when the owners of these memory cards came to us for more memory, many had to throw away their smaller Apple memory cards or try to sell them. Most of our customers told us that had they known about Applied Engineering's larger memory cards when they bought their Apple, they would have purchased them at the same time.

GSRAM and GSRAM Plus are available now, allowing up to 8 MEG of memory expansion. That's 8 times the memory capacity of Apple's card and just look at the benefits that only GSRAM and GSRAM Plus have over Apple's card:

- Lower cost
- Has 6 RAM banks (Apple's card has 4)
- Has memory expansion port
- Has ROM expansion port
- No configuration blocks to set
- No soldered in RAM chips
- Expandable to 8 MEG
- Expands AppleWorks internal limits
- Built-in Hi-Res self-diagnostic software
- 5 year hassle free warranty (Apple has a 90 day warranty)
- Made in USA

GSRAM for More AppleWorks Power

Only GSRAM and GSRAM Plus eliminate AppleWorks internal memory limits, increasing the maximum number of records available from 6,000 to over 25,000 and only GS RAM and GSRAM Plus increase the number of lines permitted in the word processing mode from 6,000 to over 15,000. And only GSRAM and GSRAM Plus offer a built-in printer buffer so you can continue using Appleworks while your printer is printing. GS RAM and GSRAM Plus even expand the number of lines in the clipboard from 255 to 2047 and will auto segment large files so they can be saved on two or more disks. You can even have Pinpoint or Macroworks and your favorite spelling checker in RAM for instant response. GSRAM and GSRAM Plus will even display the time and date right on the AppleWorks screen. Nothing comes close to enhancing AppleWorks so much.

Turn Your IIGS into a Giant

Simply plug GSRAM into the IIGS memory expansion slot and you've got up to *8 megabytes* of RAM at your fingertips—all of it instantly and automatically recognized by the IIGS. GSRAM is compatible with all IIGS software, including AppleWorks, as well as BASIC®, ProDos, DOS 3.3, PASCAL®, "C" and CP/M®.

Grow by Bytes or Megabytes

We offer GSRAM in two configurations so you can increase your memory 256K at a time (GSRAM) or a megabyte at a time (GS-RAM Plus). Both offer full compatibility, lower cost than other boards, and easy expandability. And both are extremely low in power consumption. A fully expanded GSRAM operates at only 375 ma, and GSRAM Plus at only 270 ma (even with 6 megabytes on board!)

GSRAM—for Normal Memory Requirements

GSRAM is available with 256K, 512K, 1 MEG or 1.5 MEG of memory already on board. If you don't need the full 1.5 MEG now, you can choose a GSRAM with less memory and expand it up to 1.5 MEG in the future—or upgrade to GSRAM Plus for a small charge.

"In quality, performance, compatibility, expandability and support, Applied Engineering's GSRAM and GSRAM Plus are number one."

Steve Wozniak, the creator of Apple Computer

With an optional piggyback card, you can expand GSRAM even higher than 1.5 MEG! (Other cards are only expandable to 1 MEG.)

GSRAM Plus—for Growing by Leaps and Bounds

GSRAM Plus is the first Apple memory card to use 1 MEG RAM chips on the main board. It's available with 1 to 6 MEG on board. If you don't need the whole 6 MEG now, you can buy a GSRAM Plus with less memory and easily expand it in the future.

GSRAM Plus can be expanded up to 8 MEG with an optional piggyback card.

Easy Expansion

Both GSRAM and GSRAM Plus use standard RAM chips that are readily available and just plug right in. So unlike other cards, you'll find expanding your GSRAM or GSRAM Plus easy, convenient and very economical. And with our optional ROM expansion module you can even increase the IIGS's ROM space and all in just one slot.

Quality and Support of the Industry Leader

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Secretary/Treasurer	- Donna Logan
Librarian	- Tony Svajlenka
SYSOP	- Scott Galbraith

The Frederick Apple Core now meets on the second Saturday of each month in the large conference room of the Frederick Library at 110 E. Patrick Street, Frederick, MD at 9:30 AM. Call Scott Galbraith at 301-865-3035 for additional details. This meeting will also feature Macintosh applications and demos.

FAC Upcoming Programs

June 13 - Designing Your Own Icons
July 9 - Program To Be Announced

HOTLINE MEMBERS

Scott Galbraith	- (301) 865-3035
Kurt Holter	- (301) 663-4199
Bruce Taylor	- (301) 371-6181
Stephen Hadley	- (301) 831-5353

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

The SIG MAC of the Frederick Apple Core will no longer meet as a separate group and will be merged with the regular FAC meeting, beginning in June. Interested Mac owners are invited to attend the FAC meeting on the second Saturday of each month. Mac owners in the local Frederick area are welcome.

ANNAPOLIS APPLE SLICE NEWS

by Nancy Stump

The April 11 meeting of the Annapolis Apple Slice in the Careers Lecture hall of Anne Arundel Community College was well-attended by both members and non-members of the Slice. Perhaps it was the doorprize from Babiges at Marley Station, or the more and more organized meetings, beginning with business and finishing with demonstrations that drew the crowd, but more likely it was the excellent demonstration of the Apple IIGS by Dan Longnecker of Clinton Computer.

Executive Committee:

In the business portion of the meeting, Steven Toth encouraged anyone interested to come to Executive Board meetings, held at the Annapolis Public Library on West Street from 7:30 PM to 9:00 PM. The next scheduled meetings of the Executive Committee are May 21 and June 18. Apple II representatives are especially encouraged to attend.

Secretary Needed:

The Slice is still in need of a secretary, although I will be able to help out until June. Please contact Steve Toth if you are interested in keeping minutes of the meetings and writing journal articles.

Mac SIG:

Paul Foer and Casey Kester encouraged all interested Mac users to attend the Mac SIG meetings held at the Annapolis Library from 7 PM to 9 PM. The next scheduled Mac SIG meetings are May 27 and June 24.

Geneology and Stock SIGS?:

Jean Tutter expressed an interest in both Geneology and Stock Special Interest Groups. If you share her interest in either or both, give her a call at 987-0779.

Telecommunications:

Lou Aymard is planning for the June 13 general membership meeting a program concerning telecommunications. Meanwhile, Barry Conner is still generously offering his bulletin board for Slice use in the evenings after 4:30, on weekends and on holidays. (Phone Annapolis 267-2209).

Group Purchases:

Mans Bruso announced that disks, Imagewriter ribbons and re-inking were available to the Slice at special prices. Call for details, or attend the next general meeting.

An Invitation:

The Executive Committee invites suggestions, ideas and volunteers for demonstrations or programs to be presented at future meetings. Please bring them to a meeting, or call Casey Kester or Steve Toth.

The next scheduled general membership meetings are:

May 9: Mac - Desktop Publishing
Apple II in Education
June 13: Telecommunications

Meetings are at 10:00 AM in the Careers Building of Anne Arundel Community College. See you there!

THE NATIONAL APPLEWORKS USERS GROUP
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A seminar for AppleWorks users
Featuring Dr. Warren Williams

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Take the Capital Beltway (I-95) to Exit 20A, turn left on the Princess Garden Parkway.

Dr. Warren Williams, a nationally recognized AppleWorks authority, offers tips and techniques that benefit all AppleWorks users. He describes many short-cuts, examples, and uses for this powerful program. The half-day seminar provides an opportunity for you to ask your AppleWorks questions. Attendees receive a written summary of the ideas presented in this informative meeting.

Seminar Program...

9:30	- 10:00	On-site Registration
10:00	- 11:00	General Problems, Disk and Space Management
11:00	- 12:00	Word Processing: Tips, techniques and suggestions
12:00	- 1:00	Break
1:00	- 2:00	Data Base: Tips, techniques and suggestions
2:00	- 3:00	Spreadsheets: Tips, techniques and suggestions

Fee...

	NAUG Members	Non-members
Postmarked thru June 18	$55	$70
Postmarked after June 18	$65	$80

About the speaker...

Dr. Williams recent presentations include:

"Advanced AppleWorks: Tricks and Techniques" *Michigan Association of Computer User's in Learning– Kalamazoo, MI. March, 1986.*

"AppleWorks: Doing What the Program Can't Do." *Association of Educational Data Systems– New Orleans, LA. April 1986.*

"AppleWorks: Undocumented Features." *National Educational Computer Conference– San Diego, CA. June, 1986.*

Dr. Williams has presented AppleWorks seminars in Chicago, Denver, Detroit, St. Louis, Philadelphia, and other major cities.

Comments from previous seminars...

"Excellent! Gave the information I need!" *Ron Grooter, St. Louis, Mo*

"Learned a lot of tips to speed up operations." *W. Bayer, Detroit, Mi*

"I am just a beginner, but now I know what [AppleWorks] can do." *Donna Zingleman, Aurora, Co*

"The presentation was easy to follow and the printed examples were good aids." *P.N.C., Ann Arbor, Mi.*

"Very helpful advice, pleasantly presented." *S. Crane, Westminster, Co*

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The AppleWorks Forum

This 20+ page monthly newsletter is one of the many benefits of your membership in the **National AppleWorks Users Group.**

Here are some of the articles that appeared in our 24 page June issue:

- Printer codes for over 25 popular printers.
- How to print three line headers at the top of each page.
- A review of SchoolWorks.
- How to use the protection feature in spreadsheets.
- How to improve your spreadsheets with the @IF function.
- Three ways to enter repeated data into the data base.
- There's a bug in ProDOS 8 version 1.3.
- An update on the Pinpoint desk accesories.

NAUG maintains a library of public domain disks and members share an electronic bulletin board. A one-year membership costs $24 for twelve months of the ***AppleWorks Forum***.

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Amount enclosed _____

ON THE TRAIL OF THE APPLE ///

by David Ottalini, /// SIG Co-Chairman

A Little Trouble Shooting

If your Apple /// ever starts acting strangely, one of the first things you will want to do is check the chips on your ///'s motherboard. The chip problem is relatively easy to deal with. Take out all expansion cards first, unplug the power cable, then turn your /// over with your keyboard facing you. Unscrew the big cover plate, disconnect the cables carefully (power on right, keyboard, disk drive and speaker on left—all are unique and only plug in one place). Now turn the plate over with the motherboard on top. GENTLY reseat all the chips back into their sockets (you'll hear them going back in) and you're done. Now reverse the above steps (there are complete instructions on how to open your /// in the WAP /// library).

But what if you do that and there are still problems? Another source of trouble is the power supply. It could simply be wearing out and needs to be replaced. If that's the case, you can also replace the power supply yourself. Sun Systems (800-821-3221) has replacements, as do some of the vendors I've mentioned in previous Journals. Check out the Apple /// technical manual in the WAP library for full details on how to do it (which I am told is pretty much taking the old one out and plugging the new one in).

If you try to replace your original Apple /// power supply with a ///+ supply (which has a 50 watt rating vs. 35 for the original) you may think you've run into some trouble, since the connectors are slightly different. Not to worry! Steven Brineaux, a MAUGer on CompuServe has come up with the solution to make the switch-over. Steve says, "the connector on the ///+ supply has ONE LESS pin than the standard /// supply—but it doesn't present a problem—you literally can ignore it and use the standard p/s connector cable.".

```
---------|+++++|---  <-- end where the cord
|                |           attaches)
|                |
\                \
/                /
;                |
| * <------------------ transistor 'Q4'
| . <------------------ the 'extra' pin, DO
| #                |           NOT CONNECT IT
| # <------------------ connector for p/s
| #                |           cable
-------------------
```

And Brineaux says when you connect the cable to the connector, make sure that the cable's tail points TOWARD the motherboard.

Titan Card Problems

If your Titan /// + // or //e cards start acting up, /// SIG member Ed Gooding has this advice (again from CompuServe): "...Based on my own experience... when Mr.Titan starts getting contrary, completely remove the cards, clean the contacts with alcohol (don't touch them with your fingers by the way), press down on all the chips on the cards, press down on the blue jumper connector that connects to your motherboard, and then reinstall it. Also, make sure that your joystick is firmly plugged in. It might not hurt to use some Radio Shack color TV tuner cleaner on the two slots that the Titan cards are in. R.S. also sells some super Q-tips that will help with this."

I will use this juncture to once again plug Ed's ///'s Company BBS in Richmond, Virginia (804-747-8752; 7 bits, full duplex, odd parity. 300/1200 baud). It's an excellent resource for all Apple ///ers and is well worth the call (the BBS is free).

I should also mention one of my latest projects on the PD front is developing a set of "Best Of" disks, including one for MAUG from CompuServe. Edited so that only the information is available (CompuServe rules don't allow names to be used), it will include topics ranging from Pascal to hardware helps. I have also taken a PD disk with raw info from the old /// forum on The Source (which is available from other Apple /// user groups) and edited it down to include only the relevant Apple /// information. In addition I've gotten permission from the Third Apple Users group to do a "Best Of" disk from some of their early newsletters, which will be shared with them too. All should find their way into the library within a month or so.

File Compression

The /// Magazine's Frank Moore likes to dabble a bit in Business Basic on occasion and recently came up with a program (take three for MAUG) that will compress a file stored on disk. Here's how he explains it:

"The following program is very simple. All that is done is when a space is encountered the following character is set to it's high bit equivalent, i.e. ASC(value) + 128. This eliminates the spaces in the newly written file. When translated, whenever a high bit character is encountered a space and then the low bit equivalent of the character is printed.

Not much, but it does reduce the size of files up to about 20%."

```
10 REM  Data Compressor
20 REM  For Ascii files
25 REM  Remember to change "input.file" and
     "output.file"
26 REM  to the appropriate file names of your choice.
30 OPEN#1 AS INPUT,"input.file":OPEN#2 AS
     OUTPUT,"output.file"
40 ON EOF#1 CLOSE:END
50 GOSUB 200
60 IF charS=CHRS(32) THEN GOSUB
     200:charS=CHRS(ASC(charS)+128)
70 PRINT#2;charS;
80 GOTO 50
90 REM  De-Compressor Routine
100 OPEN#1 AS INPUT;"output.file"
110 ON EOF#1 CLOSE:END
120 GOSUB 200
130 IF charS>CHRS(127) THEN PRINT"
     ";CHRS(ASC(charS)-128);:GOTO 120
140 PRINT charS;
```

contd.

150 GOTO 120
200 GET#1;char$:RETURN

/// SIGer Ed Gooding commented that the program would probably have trouble if there was more than one space encountered in a row by the program, probably removing only every other space. In any case, it does work, so give it a try if you think it might be of some use to you.

Sun Systems Sale

The latest flier from Sun Systems Recycling offers a tremendous savings on a number of products, including the original Titan ///+// card and a wide variety of software. If you are not on their free mailing list, be sure to call them at (801)-752-7631 and ask to be placed on it (this number is their help line).

Communications Manager

On Three has finally released its Communications Manager program. And it's already drawing rave reviews. The program comes on disk as a stand-alone program and as a Desktop Manager Module. Here's how On Three's Bob Consorti describes it:

"You can be in the middle of /// EZP or ANY other Apple /// programs and pop into The Desktop Manager. From the TDM menu you can select the Communications Manager. From there, it's just like Access ///, upload, download text files - and transfer files with the XMODEM or Binary II protocols. They allow for error free transmission of files.

When you exit, you're back in the middle of your application—/// EZP or whatever. Your files on the /// EZP desktop will remain untouched. The programs in the background never even know that anything happened.

The Communications Manager comes complete with both a stand-alone interpreter and a version that runs as an accessory under The Desktop Manager.

To run the Communications Manager from the background of /// EZP or other Apple /// program, you will need The Desktop Manager. If you already have The Desktop Manager, the Communications Manager will use NO MORE MEMORY. The Desktop Manager will take one 32K bank of memory from the system for accessories and another 0-10K (depending on your driver configuration) for the driver which controls everything.

With TDM installed, the memory in /// EZP will go down between 32 & 42K. But each new accessory you add will not take any more memory away from the system. When the user adds a new accessory to TDM, it simply appears as a new item in the TDM menu. From the TDM menu, the user selects the accessory that is wanted ,and it is loaded from disk in a matter of a second or two."

The Communications Manager is an Access /// look-alike, so it shouldn't be too difficult to make the switch-over. For more information, you can call On Three at (800)-331-1418.

Apple /// FAN

In the February /// Magazine, author Steven Blythe describes a cooling system available for your /// that is physically installed in the machine. It pulls air through a filter in the bottom of the power supply, right under the keyboard and air flows over the expansion slots. Cost of installation and the fan is $139.95. Contact Custom Computer Co. at (714)-786-3418 if you're interested in more information.

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

Terrell Gibbs reports that Apple IIgs owners should be warned that they should not count on being able to run Activision software for the Apple IIgs if any interface cards are installed. This is particularly applicable to owners of upgraded //e's who have Apple 5.25" disk controller and mouse interface cards, since at least some Activision software will not run with these cards installed. Activision apparently has no plans to correct the problem. In fact, Activision does not even regard this unusual sensitivity to interface cards as a "bug." Gibbs reports that it doesn't matter whether the program actually uses the card. For example, *Music Studio* won't boot from the Smartport if a 5.25" disk controller is present in slot 6. Similiarly, *Tass Times* will not run if an AppleMouse card is present in slot 4. It does't help, by the way, to hide the card using the control panel—you must physically remove the card to run the program. It's always a good idea to test drive software in the store before you buy, but be sure to use a IIgs which has interface cards similiar to your machine.

Q. Paul Sand's book, *Advanced Pascal Programming Techniques*, (Osborne McGraw Hill) pages 121-125 lists some assembly language routines for accessing Apple Pascal text files. Will they work with Apple Pascal Version 1.3?

A. Because the format of text files has not changed between Version 1.2 and 1.3, the routines are still valid. By the way, the book is an excellent source for programmers who have advanced beyond an introductory text.

Q. My MouseTalk communications program will work with the ProDOS /RAM disk on a IIgs, but won't work with my /RAM on my //c. What's wrong?

A. MouseTalk was not designed to work the //e or //c. Hence, it was not programmed to access RAM on the //e auxilliary slot. (The second 64K of RAM on the //c looks like the //e auxilliary slot RAM.) Bill Blue has told Dale Smith that a new version will be delivered by late summer to fix this problem. Meanwhile, MouseTalk appears to be highly regarded as a IIgs product.

Q. How many disk drives can you daisy chain to the Smartport?

A. Although the Smartport has the theoretical ability to chain 127 devices (assuming an hyperpowerful power supply), the current versions of ProDOS will only allow you to access four drives—two "slots" worth with two drives appearing on each slot. The IIgs treats the Smartport as slots 5 and 6.

Q. I have both 3.5" and 5.25" drives. In what order should they be daisy chained to my IIgs?

A. The Apple 3.5" drives should come first in any chain and all 3.5" drives should come before any 5.25" drives.

Q. How can I hook up a 5.25" Disk][to my IIgs or //c?

A. You can purchase a $16 adaptor cable which allows you to physically connect the 20 pin header conector on the end of the disk cable to a Smartport DB-19 plug. Remember that Disk]['s are "dumb" drives that must be attached at the end of the Smartport chain.

Q. Can I attach a Duodisk to my IIgs?

A. A Duodisk can be attached only with the special Duodisk control card in a conventional slot (typically Slot 6). The *Apple 3.5 Drive Owners Manual* says that the DuoDisk can be daisy chained behind two Apple 3.5 drives, but not behind a UniDisk 3.5 or a 5.25" drive. A Duodisk with a serial number below 433754 cannot be attached to the Smartport at all.

Q. Last month, you listed a patch for the famous Track 0 bug in ProDOS. I don't use 3.5" disks. Should I still patch the ProDOS on my hard disk?

A. Yes. For example, WAP's bulletin board system, which runs on a Corvus hard disk, was destroyed by the Track 0 bug.

Q. Has Apple solved the video problem on the IIgs which causes a "pink fringe" to appear around objects on the IIgs desktop?

A. Apple has not yet announced any mass swap to correct the infamous "pink fringe" problem. But reports from persons who have swapped the gs motherboard for other reasons indicated that the new board solves the pink fringe problem.

Q. What is "super hi-res" graphics on the Apple IIgs?

A. Earlier Apple II's supported hi-res (280 x 192 pixel images) and double hi-res (560 x192 pixel images when 128K of RAM was present.) The IIgs now offers an additional "super hi-res" graphics mode which is 320 or 640 x 200 pixels (with either 2 or 4 bits representing each pixel). Unlike hi-res and double hi-res graphics, which stored the image in an odd order due to the Woz's original low cost circuit design, super hi-res graphics stores images in a systematic way, starting with the upper left corner and working accross each line until the bottom right corner.

Q. What ProDOS file types store super hi-res graphic images for the IIgs?

A. Unlike DOS 3.3 which supported a few file types such as Text, Binary, Applesoft,and Integer Basic files, ProDOS can support up to 255 file types. Some ProDOS file types have been given built-in names such as TXT or BIN. The others are identified by a pair of hexadecimal digits. The Paintworks program established the convention that ProDOS file type SC1 is for files containing super hi res graphic images. These typically take up 32K on a disk, so a compressed format was developed to save disk space. File type SC0 hold such compressed images, and Paintworks will automatically decompress them. File

contd.

type SC2 is for animation files.

Q. Is there a public domain program to convert graphic images to the IIgs's super hi-res graphic format?

A. Yes. Jason Harper wrote SHRConvert, which is available on CompuServe MAUG data library 4. It runs under ProDOS 16 and will convert pictures from Macintosh MacPaint and Screenmaker files, three types of Atari ST files, and Apple II hi-res and double hi-res files and CompuServe RLE files into SC1 standard or SC0 compressed super hi-res format files. He is working on adding a routine to convert Amiga files. SHRConvert will also display the picture or convert a file between SC0 and SC1 formats. Note that although Paintworks established a *de facto* standard, Apple has not adopted this standard as it has adopted the PICT format on the Macintosh. Hence, other programs are probably going to come along with incompatible file formats.

Q. Are upgrades that will place IIgs motherboards into a //e case available yet?

A. As of the start of May, many dealers still don't have the upgrades in stock. However, people in various parts of the country are reporting that the upgrades are starting to become available.

Q. Is there an upgrade for owners of Apple's SCSI interface card for the //e and IIgs?

A. Yes. Apple has issued a new ROM to solve several problems. Check with your Apple dealer.

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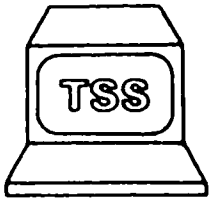

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APPLE IIGS SIG: News and Meeting Report
by Ted Meyer

The big news is that there *is* an Apple IIGS SIG. A regular meeting time and place were decided upon at April's meeting. We will normally be meeting at 8am before the monthly WAP meeting in the USUHS cafeteria. If you have any questions about the time or location, give me a call at (703) 893-6845 in the evenings. Since June's WAP meeting will be the garage sale (and not at USUHS), the next monthly IIGS SIG meeting will be in July.

Being the owner of a new computer can be quite an adventure, especially if the system is a brand new one. There are a lot of new and strange things to explore and learn about. Learning and exploring is usually more fun when done with other people. So, when I replaced my 7 year old II+ with the GS a couple of months ago, I immediately started looking for people to talk to about it. (The dealer I bought it from seemed to be getting tired of me fairly quickly.)

Fortunately, after the last two monthly WAP meetings, a group of new IIGS owners (and "Wanna be" IIGS owners) have been getting together and starting to set up a SIG. The discussions at these get-togethers has ranged from "What's the difference between a CDA and a NDA?" to "Why is my desktop pink?" and "What RAM card should I get?"

April's meeting was a little different though, as those present spent some time getting organized. Bob Platt had advertised this meeting in advance and the group decided it was time to make some decisions. Bruce Field stopped by and suggested that a chairman be elected, "Usually the one with the loudest voice," he added as an aside. As a campaign manager Mr. Field leaves a little to be desired. His comment was enough to get me elected though, with my only speech being: "This is only temporary until we *really* get organized, right?"

Having watched how pros like Tom Warrick handle meetings, I knew what my main function as chairman was. I immediately leapt into action:

"Do I have any volunteers?"

Thankfully, I got them.

Sherman Lewis volunteered to be our Disk Librarian. All present agreed that the 3.5 inch disks were the media of choice for the IIGS, and Sherman has been collecting software from WAP members into this format for the disketeria. Sherman received some hefty donations of software downloaded from Compuserve from Greg King at the meeting and from David Todd later. The software includes demos from Apple, utilities, desk accessories, and some graphics programs. Hopefully, these can be organized into disks and made available through the disketeria by the next meeting.

Peg Matzen volunteered to take the names of everyone at the meeting and the lists of names from previous meetings and organize them into a database. The list has 29 names so far, but I'm sure it will grow fast. If you were at one of the earlier meetings and left a phone number we'll give you a call about the new meeting time. Peg plans on getting information about the configurations of SIG member's IIGSs so that "older" users can help new members with similar hardware setups and problems. Bring a card with your name, address, phone number, WAP number, and a list of your equipment, and we'll add your name to our "help" list at the next meeting.

Bill Cambell volunteered to help round up an "expert" to help put together a Q&A session for the 8am May meeting. If we get organized enough, we may also bring a GS in to demonstrate a few programs. Possible demonstrations include: Multiscribe GS, Top Draw, Deluxe Paint II, and the Music Construction Set.

It should also be noted that PI-SIG (Program Interface-SIG) is also concentrating on the IIGS these days. Those interested in software development on the GS should check out one of their meetings on the first Monday evening of every month at the WAP offices. Also, Ray Hobbs has put together a tutorial for those moving from a //e to a IIGS. Call the office to sign up.

Our SIG will be what the members want it to be and what the members make it. If you are interested in Apple's new "II" please join us at one of our meetings. It'll be fun.

MUSIC SIG is a special-interest group dedicated to music lovers. We use all software and synthesizers, and run on Apples, Ataris, Commodores, IBMs and Macs. Our meetings are held on the second Saturday of each month, in the early afternoon. Call Gary Larson (337-4267) for meeting place and time information, or check the MusicTech BBS bulletin at 490-7484.

Our April meeting was held at the Public Library at White Oak, Maryland. The performing team made a dry run of the April 25 WAP main meeting program.

The performing team, with the help of Gary Larson's best imitation of Donohue, managed to blitz the WAP April general meeting attendees with a program of Bach, Debussy, Moussorgsky, Faure, Barghman, Erikson, Adler, Hobbs and Bittle. The highlight was the selection from the Faure Requiem performed by five synthesists on who-knows-how-many synthesizers and computers.

The next Music SIG meeting will be held on June 13 at 1:00 P.M. at the Dolly Madison Public Library in McLean, Virginia. Call for directions.

PI SIG NEWS
by Robert Golden

PI SIG met Monday evening, May 5, in the WAP conference room. Three areas of interest were covered: a Q & A session, expression of interest in the WAP acquisition of an Apple IIgs, and short informal turorials by some of the members who are more advanced in programming the IIgs.

During the Q & A session we touched upon some of the unique features of the IIgs and methods to deal with the Control Panel, memory location of a given program, problems of linking files, subjective views on the quality of musical sounds generated, and technical reasons for some lack of sound fidelity. Your correspondant, with two tin ears and tinitus in between them, had more sympathy than appreciation for these fine points of music reproduction.

An interest was expressed in having an Apple IIgs, in the future, among the WAP computers for all the good reasons; i.e. tutorials, additions to the Disketeria, means for our experts to become familiar with the new machine and to provide answers to the growing numbers of IIgs users.

A lively discussion developed about the use of ProDOS in the IIgs and several members recounted their various experiences with the many versions and their peculiarities. Readers are reminded that a recent WAP Journal article "ProDOS Bug Squashed" by Tom Vier (Vol 9, Jan '87) is very well worth reviewing.

Kim Brennan spoke about the IIgs toolbox and noted that some tools are exclusively located in ROM and that some other tool sets are exclusively located in RAM. Speculation was made on the reasons and on the implications for programming.

David Todd described his experiences downloading public domain IIgs programs from one of the major bulletin boards. The consensus among attendees was that there are about 25 IIgs programs available, with only a few really good ones.

Comments on programs led to a discussion of programming languages for the IIgs such as TML Pascal and the use of ProDOS 16. This, in turn, led to a discussion of the possibility of Apple Computer Inc., licensing users' groups to use ProDOS. Having taken DOS 3.3 for granted, this came to me as a surprise, and so wondered if there were any objective articles written about that.

We came up with two questions for which no one had a ready answer! "Can Mac Fonts be converted to IIgs Fonts?", and "Is there anyone in WAP who has had the experience of converting an Apple //e to an Apple IIgs?" In the quiet spell that followed, the Chairman finally had a chance to muster a quick, unanimous vote for adjournment.

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The Musical Apple

.....by Raymond Hobbs

Last month I summarized the parts of a complete MIDI music synthesis system, and briefly covered the steps necessary to put the parts together. This month, I will discuss the making of a recording on computer, using one of the imaginary systems from last time.

The circuits should be well-protected from startup surges anyway, but I still follow the precaution of starting my system from the back forward. I turn on the amplifier, then the synthesizer, then the computer. I leave all volume controls set to the minimum setting until after everything is up and running. This is probably a needless precaution, but I sleep better at night, knowing that I am doing it. The package that I boot up will be the "sequencer"—the program that records and plays back musical events.

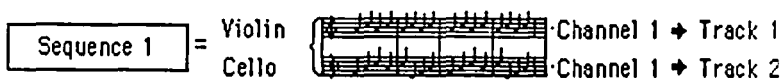
Now, there are three ways in which music may be put into a sequence. The method that you select will affect (to some extent) the way the music sounds when played back, but in general it doesn't matter which method you choose. The first procedure is to write the musical score out in the music editor, pretty much the way you would write it out on paper. Some sequencing packages do not support this type of entry, while with others it is the only method available. When this type of music entry is used, the resulting sequence, when played back, will be quite precise, but may sound a little "stilted", since virtually all human error has been eliminated from the playback.

The second method is to play the music into the sequencer from your MIDI keyboard (usually a complete synthesizer) as if you were playing into a tape recorder. If you convert what is recorded into musical notation (again, some sequencers do not support this function), you will notice that your note attacks and releases did not occur exactly on the beat. This is quite normal—even Vladimir Horowitz could not get every attack and release exactly on the beat—and it in fact lends a "natural" quality to the music when played back. The effects of imprecision in attacks and releases can be mitigated to a greater or lesser extent by asking the computer to perform an operation known as "quantizing." Quantizing is essentially a mathematical operation in which attacks and/or releases are "rounded off" to a given fraction of a beat. For example, when quantizing to an eighth note is selected, an attack which takes place 1/32 of a beat too soon will be moved forward to the nearest eighth note—the attack will automatically come on the beat when played back. When employing quantizing, most synthesists select the s value of the shortest note in the composition as the quantizing factor. In any event, using the "play-in, play-out" method pretty much results in: WYPIWYG (What You Play Is What You Get).

The last method used employs elements of the first two. It is called "Step Mode" entry, in which you play the notes in one step at a time, while the computer advances the beat by a predetermined amount. For example, if you select Step Mode with a quantizing factor of a eighth note while in 4/4 time, the first note entered will be on beat one of measure one. At that point, the sequence will advance to beat one-and-a-half. If you have another note to enter here, you may play it in, and if not you may direct the program to skip to the next point in the composition (by hitting the space bar or clicking the mouse or something), which will be beat two measure one. And so forth. It doesn't matter how much time you take to enter the notes at each point, since the program will wait for you to take some action before it advances the sequence to the next entry point. In this way, non-performers may enter quite complicated music, although it will consume a good deal of time.

Most sequencers provide additional means of getting musical data into the sequence, and users generally find some combination of methods to enter the data to suit their styles and tastes. Please keep in mind that the musical data that I am talking about is MIDI data, and may be edited in much the same way that text data (such as the article that I am now entering into my word processor) can be edited. As a matter of fact, I make quite extensive use of the editing capabilities of my sequencer when I am entering a composition. Operations such as Cut-and-Paste, Merge and Transpose give me a great deal of flexibility in composing.

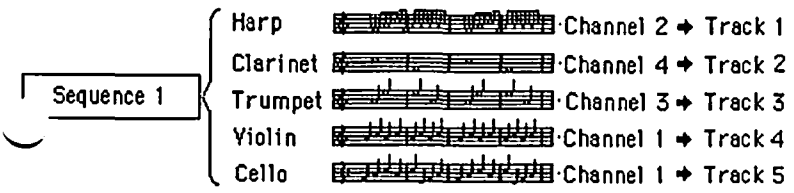
Once the sequence has been entered, it is associated with a "Track." This is an analogy to the 16-track tape recorders commonly used in recording studios. In fact, most sequencers support 16 tracks of sequences. To further complicate things, a track is assigned to a "Channel", which refers to the communication lines running between the computer and the synthesizers via the MIDI interface. Several tracks may be assigned to one channel, if desired. Therefore, a sequence may be constructed like the one pictured below:



In the figure above, the user has entered two tracks of musical data, assigned to Track 1 (violin) and Track 2 (cello), respectively. Both tracks are routed to Channel 1, which is (presumably) connected via MIDI to his or her synthesizer. When the composition is played back by selecting the program's "Play" option, the recorded MIDI data on both Track 1 and Track 2 will be sent out simultaneously over Channel 1 to the synthesizer. Upon receiving the data, the synthesizer will proceed to play it out to the amplifier. In other words, it acts just like a tape recorder.

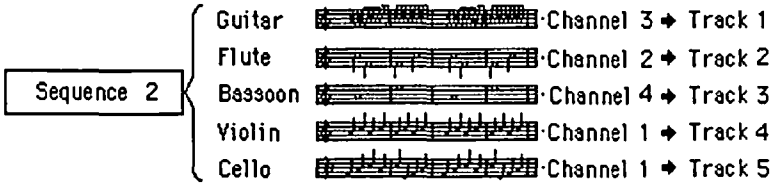
Now, suppose that the user purchases another three synthesizers. Suddenly, his or her performance capabilities have made a quantum leap upward (what happens to the family budget is another matter). In any event, new parts may be added to the old composition, and new instruments may be employed, as pictured below:

contd.

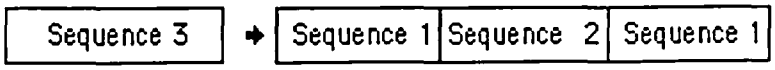


In the figure above, three new instruments have been added, each on a separate track and channel. The new channels correspond to the new synthesizers. Notice that the tracks for violin and cello have been reassigned (this was probably done by copying the data from one track to another, then re-recording the original track. Channel reassignment is done by merely changing the channel number). The new data has been added into Sequence 1, which is now performed on four synthesizers running through four MIDI channels simultaneously.

Still not satisfied, our fictional user (by this time, addict) has now decided to enter another section to his or her composition. The new section still uses violin and cello, but changes the harp, clarinet and trumpet to guitar, flute and bassoon, as pictured below:



Again, the tracks and channels have been shuffled, and the sequence name has changed from Sequence 1 to Sequence 2. This means that Sequence 2 is a whole new recording - in other words, a new file. Now, the real power of the sequencer comes into play. The user may now write a third sequence, called "Sequence 3" in our example, which consists of just three events:



The above figure depicts use of "Sequence Calling", in effect a GOSUB for musical sequences. Sequence 3 simply calls Sequence 1, then Sequence 2, then Sequence 1 again. Compositions created in this way can become quite intricate, as parts are pieced together like subroutines to form a whole piece.

How are the instrument reassignments accomplished? Almost every synthesizer supports an operation known as "Patch Changing." A patch is simply an instrument definition, named after the early days of musical synthesis, when instrument definitions were accomplished on a large oscillator board by connecting different oscillators and filters by patch cords. Now, of course, we do it all with mini-circuits and logic gates. Anyway, the synthesizer may be sent a directive to change patches (instruments) as a MIDI event at a given point in time. Thus, we can now reassign instruments on a synthesizer in a tenth of a second, just in time for the next section of music.

Now, everyone get out there and write some music!

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by Bud Stolker

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I LOVE APPLE MUSIC - SIMPLE APPLE MUSIC: Part 1

by Gary Hayman © 1987

I have just returned from a fantastic Apple musical demonstration presented by Ray Hobbs and the WAP music SIG group which blew my mind. The sounds were out of this world. The presentation inspired me to take a step—backwards.

That's right, backwards. Upon seeing all that equipment and hearing about their costs I realized that at this time I am not prepared to go to the Apple new wave music. I couldn't even afford the wires that I saw on the stage. Besides, I am not a musician. I love and appreciate music but I don't really read it nor can I adroitly play it on an instrument—other than the radio, phonograph or tape player (I don't own a CD).

When I first purchased my Apple][+, back in 1982, I was highly interested in sound. I thought that all you had to do was to sit down at the keyboard and type "PLAY MELANCHOLY BABY" and out it would come—with a picture of Hoagie Carmichael on the screen. This was not the case, but I still was interested in placing simple music in my Apple programs. The Apple is quite capable of producing simple sounds as well as fantastic sounds as was demonstrated at the monthly WAP meeting.

I believe that there are thousands of people like me that would like to place some simple sounds and music into their programs to add pizazz and to make them more interesting and entertaining. We do not have the knowledge, equipment nor the time to score a symphony. Thus for you out there who would like to begin to do this or, at least, refresh your memory, I will write a series of articles designed in a simple way to start you out.

This series is not for the musician or the hi-tech computer expert. I would suggest to those, that reading here would be boring and too mundane. Besides, what I might say may not be 100% musically or technically correct. But what I present are the results of my trials and tribulations in learning, on my own, how to get that Apple speaker to make a series of noises that would acceptably represent music and sounds.

I am dedicated to KIS (keep it simple). I will hand hold you all the way, whenever possible. If I don't, let me know and I will back up. Don't worry, I will not discuss MIDI, MINI or MAXI. I probably won't even mention Alpha Syntauri, Beta Blockers, Mountain Cards or Valley Cards. I won't talk about Casio, Yamahaw, Kawasaki, or Hyundai. And above all I will not address the subjects of Ensonic, Panasonic, or Supersonic.

What I will do is to cover how to get the sounds and music into your programs. I will show you what I have done in order to read simple sheet music and put it into a form that will produce music. I will give you a short basic course in music from the viewpoint of a non musician. (Real musicians, Go Away!) I will discuss when and where to use sounds and music. I will cover some of the more and less popular commercial music programs that may be available to you at the stores or swap meets—great place to pick them up. So many people buy them, play with them for a few weeks and then don't know what to do with them. You may pick up these programs for a song (excuse the pun). I will present you with a variety of simple programs that will allow you to create and test sounds. I will show you a variety of ways to get these sounds in your programs, working for you.

One more thing. Everything that I will do works well on DOS 3.3. It also might work well on ProDOS too. I have kept with DOS 3.3 for several reasons. I want longer file names for easier identification and clarity. My word processor is in DOS 3.3 (I sometimes use it to create music text files that are used by my programs). I want to use my GLOBAL PROGRAM LINE EDITOR (G.P.L.E.) to do editing and to quickly reproduce line statements in my program so that I can easily program the many repeats that appear in the music score. I also want to use my RENUMBER program. Both my G.P.L.E and RENUMBER program are in DOS 3.3. Knowledgeable ProDOS advocates probably need only to change file name conventions and use their word processor to create normal ASCII text files where needed. A program line editor such as G.P.L.E, A.L.E., etc. would be of great benefit.

Let's get started and get some sound going. In the May 1987 Edition of the WAP Journal, Ray Hobbs discussed two methods of getting a short machine language Sound Driver into your Apple. He presented a From the Monitor technique and a POKE routine. Both work well for producing a multitude of sounds including some long ones. However, the routine didn't meet my needs because it didn't allow me a musical rest with no sound, and durations of notes were too dependent on frequency. I returned to my old standby Sound Driver, which appears to service my "musical" purpose better. Someday I hope someone will write a better driver and will allow it to be shared as public domain.

Type and run this program to develop and save the sound driver that we will be using during this series.

```
NEW
10 REM SOUND DRIVER GENERATOR
20 FOR X = 770 TO 790: READ Y: POKE X,Y:
    NEXT: END
30 DATA 173, 48, 192, 136, 208, 5, 206,
    1, 3, 240, 9, 202, 208, 245, 174, 0,
    3, 76, 2, 3, 96
SAVE SOUND DRIVER GENERATOR
RUN
BSAVE SOUND DRIVER,A770,L21
```

Listing 1

Listing 1 (SOUND DRIVER GENERATOR) produces an Applesoft program which in turn produces a machine language driver program (SOUND DRIVER) which is highly important and will be used by you many times in your programs to produce music and sounds. Note: there are some other ways to produce sounds that I will discuss in a future installment. Please note that this program is SAVEd first as an Applesoft

contd.

program, RUN, and then the resultant is BSAVEd as indicated.

I believe in starting you off hearing something. I will explain things later. Type in the following program:

```
NEW
10 REM HEAR ALL NOTES
20 PRINT CHR$(4);"BLOAD SOUND DRIVER"
30 TEXT: HOME
40 INPUT "SELECT A DURATION (0-255)";D
50 FOR X= 1 TO 255: POKE 768,X: POKE 769,D
60 CALL 770: NEXT: GOTO 30
SAVE HEAR ALL NOTES
RUN
```

Listing 2

Listing 2 (HEAR ALL NOTES) gives you a small program that uses your SOUND DRIVER program and plays all possible notes, 255 of them, for the individual duration you have selected. Let me suggest that you start off with a short duration range of between 7 and 32. Real long durations will take forever but feel free to experiment. There are more than 65,000 combinations of notes (frequency/pitch/tone) and durations that you might produce. That's quite a lot. You won't be able to hear some of them because the pitch will be too high for your ears. Ask your dog if he/she can hear the ones that you miss.

You will note that I will probably not engage in good screen management or provide you with error trapping in order to save you some typing. I will trust you to input what is appropriate when asked, to press the correct keys, etc. I may not even supply escape or exit statements in the program. You may have to do a <CONTROL C>, <CONTROL-RESET>, or whatever, to halt the program. Please feel free to alter the programs to include the above. When I finally produce a disk with all the programs collected, each program will contain the extras which will reflect improved programming and a more attractive screen management.

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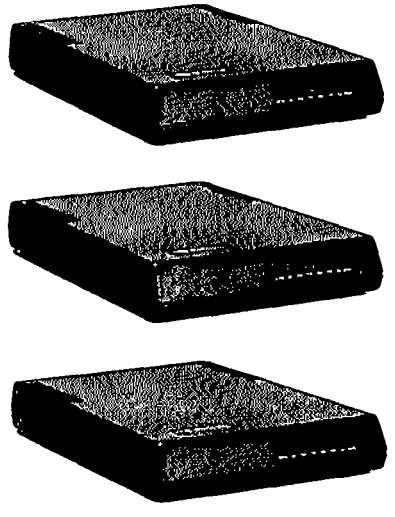

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LETTER TO THE EDITOR

APPLEWORKS 2.0 on APPLE][+

In the February 1987 issue of the Pi Journal, on page 35, there's a report of a conversation in which Lou Pastura said, "It looks like the RamFactor on a][+ may or may not work." I've had a recent experience of this situation, which leads me to believe that a bit of publicity might be in the interests of the Apple fraternity.

If we look at page 39 of *inCider* for April 1987 we see a familiar advertisement for "RamFactor" by Applied Engineering. The ad contains statements like, "All this performance is available to anyone with an Apple ...][+ with an 80-column card. 'RamFactor', no other standard slot card comes close to enhancing AppleWorks so much." (The underlinings are AE's)... "Allows Apple][+ and //e to run your AppleWorks without buying additional software.... With our 5 year no hassle warranty and outstanding technical support you're assured of the most trouble free product you can buy."

Similar words are used in literature that comes with the RamFactor card. So I bought a RamFactor card with 256K of memory, and AppleWorks version 2.0, for my old, but devoted 1979 Apple][+. The RamFactor came with two free Expander disks which were designed to modify the Start-Up disk to suit the Apple][+ and its configuration. The one labeled, "RamFactor Expand Version 1.2.1", booted OK but shortly ran out of steam when it discovered that the AppleWorks program which I had used it on was an old one which had already been modified for a //e—it said the disk was unrecognizable, and that I accepted.

Then I bought the Version 2.0 update of AppleWorks and tried the expand disk labeled, "AppleWorks 2 Expander Version 1.01." On attempting to boot this disk, all I got was, "Requires 80 column Apple //e", and it would cooperate no futher. So much for the most trouble-free product you can buy!

After several attempts to boot the Expand 2 disk, I called my dealer, but he was unable to assist, so I tried to call Applied Engineering at the technical service number (not an 800 one) which was plastered all over the literature which came with the RamFactor card. I called all day for two days but the line was busy everytime I called. So I wrote the letter, which is printed below. This letter was written on February 2, 1987—it's now March 21 and I haven't heard a word from Applied Engineering. With no telephone lines available and no reply to correspondence, I say, "So much for the 'outstanding technical support' ."

Letter of February 2 to Applied Engineering, P.O. Box 798, Carrolton, TX 75006:

"Gentlemen: Subj. RamFactor Card in Apple][+

Having been unable to find an available technical support telephone line for two days, I'm writing for advice on the RamFactor card in relation to AppleWorks.

I recently purchased the RamFactor card with 256K for my Apple][+, which now has the Microsoft 16K RAM in slot 0, MX-80 FT printer interface in slot 1, Apple Super Serial Card in slot 2 (for a modem which hasn't been connected up yet), Videx 80-column card in slot 3 (installed some years ago for CP/M and operating OK at this moment), Z80 CPU in slot 4, 2 disk drives in slot 6, and the RamFactor extender card in slot 7. I tried the RamFactor in slot 5, but it made no difference.

With the RamFactor I received 2 expander cards. One is RamFactor Expand Serial 143006 which requires AppleWorks 1.2 or 1.3. The other is AppleWorks 2 Expander Version 1.01 Serial 184830. I wish to use the new AppleWorks version 2.0 and so need to use the AppleWorks 2 Expander.

Whereas the Expander serial 143006 boots in good order, the AppleWorks 2 Expand will only do the following: It first gives the message:

Apple II
PRODOS 1.1.1 18 Sep 84
COPYRIGHT APPLE COMPUTER INC., 1983-84
and then changes to:
REQUIRES 80 COLUMN APPLE IIE
and refuses to operate further.

Will you please advise what I should do next to get the AppleWorks 2 Expander to operate on the Apple][+. I'm normally on the above telephone number all day and in the evening, and there is an answering machine on it.

With many thanks, Your Sincerely, (signed) Derek R. Scorer."

I'm not saying that Applied Engineering is deliberately trying to sell the RamFactor card and expand disk for use in the Apple][+, when they know damned well that it won't work, but they're coming close to it by not modifying their advertising after it has been made obsolete by the introduction of the Version 2.0 of AppleWorks. That version came out in June 1986 according to the date on my copy, so they've had nearly a year to produce a warning not to try to use Expand 2 on the Apple][+.

If Expand 2 will work on the][+, I feel sure that they would have gotten in touch with me, but their heads are well hidden in the sand while they continue to sell RamFactor cards to people with AppleWorks version 2.0 and the Apple][+. Remember their words which I have quoted above, "Allows Apple][+ to run your AppleWorks without buying additional software." This statement has been falsified by the introduction of Version 2.0, but they neither withdraw nor modify it, so far as my experience goes.

To move to a happier subject, I then called Davka Corporation of 845 N. Michican, Chicago, IL 60611, on 800-621-8227, and asked whether their "Super Itworks" program would "run on the latest version of AppleWorks (2.0) on Apple][+ computers", as stated in their ads in *inCider*, and the gentleman who picked up the telephone on the first ring assured me that it would.

So I ordered one. It came, it copied with the ProDos copy program, it booted without delay, it modified the AppleWorks Start-Up disk, and up came AppleWorks on my 1979 Apple][+ without further ado. Oh boy, am I happy.

Derek R. Scorer

PASCAL NEWS
by Robert C. Platt

P-system on the IIgs. Two alternative implementations of the UCSD p-System are available on the IIgs. First, Apple Pascal, version 1.3 will run in 6502 emulation mode and will support 3.5" disk drives. Apple Pascal is based on Version II of the p-System. Second, Pecan Software is offering a ProDOS 16-hosted p-System which supports 65816 native mode. These comments are based upon my playing with a beta test copy of the new system and conversations with Eli Wilner and Chris Jewel of Pecan.

Interface to IIgs. Pecan is planning two releases of its p-System. The first release will offer a library of "glue" routines for some of the more common gs ROM toolkit routines. A *clockunit* will allow access to the gs's internal clock. A ProDOS bridge will be toggled on or off by the user or under program control. If the bridge is on, then the standard Pascal input/output routines, such as *reset* and *rewrite* will refer to ProDOS file or pathnames. However, if the bridge is turned off, then such procedures will be deemed to refer to p-System files which are located on virtual volumes. A virtual volume is a large ProDOS file which has been formatted to include a p-System directory. The p-System treats each such "volume" as if it were a separate p-System disk. A ProDOS filer program can be used to "mount" a virtual volume or to transfer individual files between a virtual volume and a standard ProDOS file.

Regarding graphics, the first release will not support the standard *turtlegraphics* unit. However, a library supporting glue routine access to all Quickdraw II calls (and all other ROM routines) will be included in the second release. The 65816 native code generator is also deferred until the second release.

Modula-2. The Pecan Modula-2 compiler is an overhaul of the Volition Systems Modula-2 compiler. However, the compiler now generates the same p-codes as all the other compilers, so Pascal, Fortran and Basic routines can be linked with Modula-2. I put the compiler through my standard set of abusive tests, and it passed with the following caveats: First, the compiler supports the pre-1985 version of Modula. Pecan says that it is waiting for MODUS to complete their standardization, and that if MODUS does not act within the next few months, Pecan will implement Wirth's changes reported in the third edition of his Modula-2 book. Second, I bombed my Mac when continuing after 5 syntax errors. Pecan reports that this error is fixed and will send me the latest version of the compiler. (Apparently, Pecan is updating the Modula-2 compiler biweekly.) I was pleased to see that Pecan fully supports case-sensitivity in module names. So, even though all file names are automatically converted to all capital letters, Pecan's loader will require an exact match on the capitalization of modules and procedure names.

Benchmarks. WAP member Ben Zuhl and I ran the prime number sieve benchmark to compare the performance of the two p-Systems. The Pecan Pascal compiled the 23 line program in 20.58 sec. and executed in 14.06 sec. The Pecan Modula-2 compiled the 26 line benchmark in 20.51 sec and executed in 19.46 sec. In contrast, Apple Pascal 1.2 compiled in 13.50 sec and executed in 28.60. Apple Pascal's times were the same regardless of whether the control panel was set on fast or slow!

In summary, the Pecan p-System will offer several significant performance advantages over Apple Pascal 1.3 on the //gs. The system should be available at about the time this issue goes to press.

TML News. TML's latest ads list a cross compiler for the Mac that will generate IIgs code. This contradicts the earlier statement Tom Lenard made in Call-A.P.P.L.E., which I reported here last month. TML also lists a Modula-2. I've yet to hear of anyone who has these products, so check for availability before you order.

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BEST OF THE APPLE ITEMS FROM THE TCS
by Alexander Barnes

Macros
JOHN MASSEY ON 03/31
Could someone add an auto dial macro for an internal modem, like the Micromodem? This 'ATDT' is noise to me, but then the AE Pro macro process looks like Sanskrit anyway.

ALLAN LEVY ON 03/31
I never thought the AE macros were as easy as Sanskrit; I usually view them as the last untranslated writings of the Mayans.

RICHARD ROWELL ON 04/01
I think that AE PRO macros are logical, simple and clear—they just have a funny visual impact because of the use of odd punctuation characters—but a language with only about 20 characters in the alphabet is almost as simple (and melodic) as Hawaiian (with twelve letters). I don't know Sanskrit, but did learn Arabic script for Malay when I lived in Malaysia —maybe that's why I like Bill Blue's AE PRO "language."

STEPHEN WYATT ON 04/09
Here is an Example:
#1 ATDT 986 8085'~2A1%#PASSWORD
#2 %&C%&4
#3 %&R%&C\r<add message y/n/x thingy>\h
that will put you into WAP, go to Conf. 4 and R)ead ALL, then continous. To get it to hang-up, you'll have to do something like this: (I didn't see anything here either—Ed.) and then Turns Buffer On, and put that Add message, message in the <> and when it gets that, do 'O'ff, that current one just hangs-up, which you should not do, since Sometimes WAP will not re-cover. Just do a %&O%&Y, and that will do it..

DAN HUGHES ON 04/09
That's enough to make anybody run out and buy Mousetalk!

RICHARD ROWELL ON 04/12
(a) ASCII Express ain't that difficult—those directions are just written by someone who doesn't realize that the English language can be used for effective transfer of information (via such innovative techniques as paragraphs).
(b) you are probably right—MouseTalk provides simpler and equally as functional approaches to macro application.
(c) I have both MouseTalk and ASCII Express and am going to continue to use ASCII Express as my primary telecomm software.

RICHARD ROWELL ON 04/23
(Ed. Note: For Richard Rowell's "Auto Logon ASCII Express Macro", see his article elsewhere in this issue.)

//e Mouse
ERIC RALL ON 04/22
Yesterday, I bought a //e mousecard and mouse. It came with MousePaint. That seemed ok, since it wasn't copy protected and I could put it on the HD. But it seems that MousePaint will NOT run on my //e. I tried the original disk and it bombs into the monitor somehere in page 1. I tried the same disk in my //c and it worked just fine! Does that mean I have a hardware problem with my new mousecard? Or does it mean that I have a bad copy of MousePaint. Does anyone have a mouse in a //e and a copy of MousePaint that works?

KIM BRENNAN ON 04/22
Eric, I suspect the problem is one that I encountered when I first got the mouse. Seems that Mousepaint doesn't like to work with a clock installed. I got a patch from Applied Engineering—just a sec—here we go. In the startup Basic program add this line.
5 POKE 48902,96
This turns off access to the clock. Supposedly (according to AE) this was a bug only in early versions of the program. I should note that this problem occurred only with a Timemaster II clock and not a Thunderclock or a Proclock.

ERIC RALL ON 04/23
Bingo, Kimbo! That did the trick. Thanks.

Monitor Shakes
SAM SWERSKY ON 04/27
This is a message that I have been wanting to leave for a LONGGGG time. It concerns a problem I had been having for many months with my USI Pi3 amber screen monitor. The problem was, occasionally the screen would just act VERY strange, a-movin' and a-shakin' so that it was darned near impossible to read. Also, the vertical hold would similarly just act flaky. Well, several months ago I was working with VisiCalc and was cursing at the Pi3 for having the status line a half-inch above the top of the screen. Things came to a head as I made plans for taking the monitor to the mountains and plugging it with rifle shots—And then—I started fooling with the two screws "V.Size" and "V.Lin" on the front panel. These require a small, eyeglass-fixer-style screwdriver to access. I just turned them until the picture was the same level of clarity (and stability) that the monitor had when I bought it—and have had no problems since. I really hope this helps other USI monitor owners. The problem really got infuriating after a while...

LEGALTECH
PHIL LEBER ON 03/27
There is a new telecom service on line that answers a lot of questions about computers and the law—LEGALTECH, 448-3864. The service is FREE and is run by a large Northern Virginia lawfirm, McGuire, Woods, Battle & Boothe. You are connected directly to their offices and can leave messages (private or public), read files about computer law topics (such as trademarks, contracts, warranties, etc.), exchange ideas/ problems with others, or converse with the MWBB lawyers. The system was originally online last year and is now back

contd.

with more information and more lawyers at your disposal. Call 448-3864, Legal Technologies Telecomm. Service™.

Credit Cards
BOB RUSK ON 04/21
Note that when you refuse payment on an item or items on your credit card bill the magic incantation "customer disputes" goes a long way to getting the legalities sorted out. Parts of the 1977 Truth In Lending act have expired, and other parts haven't, but the magic incantation leaves the credit card folks with no recourse other than to bounce a debit back to the vendor, who can eat the debit, make you happy and reload, or cease doing business with that credit supplier—this last a tough choice for a mail order house.

Quicken
PAUL SCHLOSSER ON 04/04
Anybody have any info on Quicken? I purchased the program from Eastcoast Software (in Hershey, Pa.). The Quicken ad's say 'not copy-protected', and the outside of the box also said 'not copy-protected', but the user's manual said the program disk was protected. And Copy II+ could not catalog the disk. A call to Eastcoast Software helped. they are currently out of stock, but offered to check when some more come in to see if they can copy the disk, and send it to me if they can. Or take back the protected version. Nice company.

HENRY DONAHOE ON 04/05
Seems to me I saw an ad which included the old "Now! Not Copy Protected!!"

PAUL SCHLOSSER ON 04/05
Yes, and even the box said 'Now! Not Copy Protected!', but maybe they meant the box wasn't copy protected—because the program disk surely was!

HENRY DONAHOE ON 04/05
So? Copy the box.

Auto Answerback
RICHARD ROWELL ON 04/22
Could you explain more clearly than the ASCII Express manual what Auto AnswerBack (') does in remote? Also: I used to have my ASCII Express answer with my own HERE IS message. While the HERE IS message is still in my set up, I cannot remember how I got it to answer.

DAVE HARVEY ON 04/23
Auto answerback is an established convention of leaving messages on an unattended system. Before microcomputers there were systems dedicated only to answer back function. The way it's supposed to work is that both sides send messages unattended at early hours of morning when telephone rates are low. Some mainframe computer terminals have "here is" capablitity built in and have burned into ROM a ID number unique to that terminal.

Modem Choice
BRETT PARKS ON 04/21
Frank, if you're gonna get a new one now, might as well go for 2400 speed as well while your at it. I have a US Robotics courier 2400 here that has been a 0 hassle machine for the last 8 months or so. And, all the switches on it that you might have to diddle with for some funky 'custom' setup are all clearly marked and on the outside of the modem. Also, costs less than the current price for 1200 speed Hayes modem (which is what this one replaced).

FRANK PURSEL ON 04/25
Go to 2400 baud if you have no problem with cost. Doubling that speed will cost you over twice as many fun coupons. I'm very pleased with a U.S.Robotics DIRECT 1200 that was mail ordered for 125. I would love to have 2400 baud but I can't justify the $350+ price tag for a mere doubling in speed. I could understand the price jump a few years ago when the rage was for the shift from 300 to 1200 baud. But thats a more significant speed improvement.

Free Music Software
GARY HAYMAN ON 04/17
********* FREE SHARE WARE ********* MUSIC MUSIC MUSIC MUSIC MUSIC MUSIC. I have just completed writing a new program titled MODULE MUSIC PLAYER which I would like to share with WAP members. It is jammed packed with songs and pieces and you will find it highly entertaining for both young and old. It should play on the any of the Apple II family. If you are interested just send me a SELF ADDRESSED STAMPED MAILER AND A 5-1/4 DISK and I will copy it to your disk and send it to you by return mail. (Not a requirement—but if you would be so kind, put a couple of your programs on the disk that you think that I may be interested in—music, graphics, utilities, entertainment, games etc. and I will include other interesting programs that may be of interest to you when I return the disk.) Send SELF ADDRESS STAMPED MAILER and disk to: Gary Hayman, 8255 Canning Terrace, Greenbelt, MD 20770, phone information: 345-3230.

RICHARD SALEN ON 04/19
I checked out your Module song player on my //c and it works just fine. the sound was also real good too. Thanks for the program (and the lawn mower)...

What Is... (a good price for a used C-64 system - Ed.)
BILL BALDRIDGE ON 04/27
This...a joke? Wrong board. I will give it a shot, though...
C64 w/nothing : $9.95
" w/drive : $19.95
" w/d & m : $24.95
" w/monitor: $11.95
Honestly, though, I haven't the foggiest. Catch a fish!

DAN YURMAN ON 04/28
Bill, one of the great experiences in terms of learning humility is to be called UP to the top management suite to discuss "a computer problem," only to find the manager has his ten-year old's C-64 spread out on the credenza and he's asking you to fix it. I have tactfully recommended "replacing the system unit since the technology refreshment cycle has overtaken the hardware." Translated, "It ain't worth fixing or having, at least not anymore." The manager took the hint and got his boy a //c.

The Ultimate Apple Trivia Test

by Ellen Tom Woz

1. Q. Name the first store where the Woz and Steve Jobs sold the first Apple I—and the city it was in.
   A. The Byte Shop, in Palo Alto.

2. Q. In what three countries does Apple manufacture its CPUs?
   A. Singapore, Ireland, and the United States.

3. Q. What was the price of Apple stock at the first public offering?
   A. $22 per share.

4. Q. What were the smallest and largest random access memory sizes available on the first Apple II?
   A. 4K and 48K.

5. Q. In January 1985, sports fans across the country were warned, "If you go to the bathroom in the fourth quarter, you'll be sorry." Why?
   A. They'd miss Apple's Superbowl commercial.

5a. Q. According to most who saw this commercial, *were* they sorry)?
   A. No! (This was the "Lemmings" commercial.)

6. Q. Name another processor that could run on the Apple I.
   A. 6501 [or 6800!]

7. Q. What type of insect was the original computer "bug"?
   A. A moth.

8. Q. What model of Cray Supercomputer resides on the Apple Campus?
   A. A Cray X-MP/48.

9. Q. Cray is a more colorful company than you might think. In fact, they're willing to paint their supercomputer any one of 52 bright, soothing, or boring colors per their customer's specifications. What color, not on Cray's palette, did Apple choose in creating the first custom color ever painted onto a Cray?
   A. Purple.

10. Q. On what significant spring day do old timers recall the official formation date for Apple Computer, Inc.? Hint: It is *not* Ground Hog's Day.
   A. April Fool's Day.

11. Q. Name the high school and city where Jobs and Woz went to school.
   A. Homestead High, in good old Cupertino.

12. Q. What was the name of Apple's first private-label printer?
   A. The Silentype.

13. Q. What everyday office function were Apple employees once forbidden to do while standing up?
   A. *(Pause . . . pause . . . pause . . .)* Talk. It got too noisy, as offices were separated only by five-foot cubicle walls.

14. Q. The Cray's home is a locked, guarded, dust free room staffed 24 hours a day by as many as four people. Furthermore, it also requires two huge air conditioners to keep things cool. Within five tons, what is the size of each of these two air conditioners?
   A. Twenty tons each.

15. Q. What was Mike Markkula doing for a living immediately before he came to Apple?
   A. Nothing. He was retired.

16. Q. How much did the 6502 cost when it was first introduced?
   A. Twenty-five dollars. The 6501 compteted with it at $20.

17. Q. What is the "Caps Lock" key on an Apple III called?
   A. Alpha Lock.

18. Q. Who first introduced Woz to Jobs?
   A. Bill Fernandez, one of the first Apple employees.

19. Q. In April 1986, Apple announced a program offering educators special rebates on computers for their personal use. What was the name of this program?
   A. An Apple for the Teacher.

20. Q. True or False: Apple had to get permission from the Beatles to use the name "Apple."
   A. True—but only in one European country.

21. Q. What color was the case of the Apple I?
   A. Invisible—it didn't come in a case!

22. Q. What was the name of the world's first functional electronic computer, completed in 1946?
   A. ENIAC.

23. Q. What "standard issue" office equipment was banned from Apple by President Mike Scott in 1981? (Hint: IBM was dismayed!)
   A. The typewriter.

24. Q. What well-known computer company passed up the chance to make the Apple I?
   A. Hewlett-Packard (Woz was employed there at the time he designed it.)

contd.

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25. Q. Name the graphics and duplication company that distributes low-priced, university-developed Macintosh and Apple II software through shops serving colleges and universities across the country.
A. Kinko's.

26. Q. What was the first Apple program that would start up with the same disk on an Apple II and the Apple II Plus?
A. Apple Writer.

27. Q. As of December 1986, approximately how many AppleTalk networks were in place (within 30,000 units)?
A. 200,000.

28. Q. What was the name of the music festival put on by a well-known Apple founder?
A. The "US" Festival.

29. Q. Who told the Wall Street Journal "We believe this will be a two-horse race between Apple and IBM"?
A. John Sculley.

30. Q. Name of the Apple III data base program that evolved into the integrated Apple II software package known as AppleWorks?
A. Quick File.

31. Q. Name the best-selling dot matrix printer in America.
A. The Imagewriter.

32. Q. "BIT" is a contraction of which two words?
A. "Binary" and "Digit."

33. Q. Name the four colors that were available in hi-res graphics on the first Apple II.
A. Black, white, purple, and green.

34. Q. What was the name of the 1983 educational program that gave an Apple II computer to 9000 grade schools in California?
A. Kids Can't Wait.

35. Q. What is the name of the Japanese operating system for Macintosh?
A. KanjiTalk.

36. Q. What computer language was distributed by Apple on tape cassette?
A. Applesoft BASIC.

37. Q. What was the IBM PCjr's internal code name that was leaked to the press prior to the product's announcement?
A. "Peanut."

38. Q. In what year in Apple's history did it manufacture its one-millionth computer?
A. 1983.

39. Q. What was the slogan for the Apple II extravaganza held in San Francisco at which the Apple IIc was announced?
A. Apple II Forever.

40. Q. Within 500, what was the all-time high for Apple's employee count? Hint: Apple arrived at this number in March, 1985.
A. 5,700.

41. Q. Where was the Apple II introduced?
A. At the first West Coast Computer Faire, in San Francisco in 1977.

42. Q. Name four of the six categories of "Apple Family Members" that AppleLink ties together.
A. Dealers, User Groups, Apple Employees, Developers, Consultants, Vendors

43. Q. What city and state is the famous Apple garage in?
A. Los Altos, California.

44. Q. What was the final name of the computer originally code-named "the Apple IIx"?
A. The Apple IIx. This project was dropped almost two years before the gs project began. Following the IIx's demise on April 6, 1984, a lavish funeral was held, complete with coffin, pall-bearers, and eulogizers.

45. Q. Which company did Mike Scott, a president of Apple come from immediately before joining Apple?
A. National Semiconductor.

46. Q. The president of what corporation sent a letter to Apple upon the introduction of the Macintosh?
A. McDonalds. (He wanted to make sure that Apple didn't shorten the Macintosh name so that people would confuse it with two-all-beef-patties-special-sauce-lettuce-cheese-pickles-onions-on-a-sesame-seed-bun.)

47. Q. Name two Apple computers that were announced on the same day—not including the Macintosh II and SE.
A. Lisa and the Apple IIe *or* Macintosh and the Lisa 2.

48. Q. How much faster does MouseText scroll on an Apple IIe than on a Macintosh?
A. An Apple IIe scrolls MouseText 20% faster.

49. Q. Name the video game Woz wrote for Atari in 1974.
A. Breakout for Atari!

50. Name the first show that Woz and Jobs traveled to on behalf of Apple.
A. PC '76, in Atlantic City.

51. Q. Who created the "rabbit" and the "gnome"?
A. Bruce Tognazzini and J.D. Eisenberg for the program "Apple Presents Apple".

contd.

52. Q. What did Uncle Duke of Doonesbury keep track of with his Apple II?
    A. Drug shipments.

53. Q. What product marked the first hardware attempt to make an Apple product MS-DOS compatible?
    A. The Rana Box.

54. Q. What memorable slogan—boldly emblazoned on 100% cotton pull-over T-shirts—became the battle cry of the Macintosh division?
    A. "90 hours a week and loving it".

55. Q. What breakthrough product did the developers Bricklin and Frankston bring to market?
    A. VisiCalc.

56. Q. What new, competitive product did Apple, in a full-page Wall Street Journal ad, "seriously" welcome to the industry it had established?
    A. The IBM PC.

57. Q. Who once told Rolling Stone magazine, "You should be able to carry your Dynabook and two bags of groceries comfortably"?
    A. Alan Kay.

58. Q. What kind of car does Bruce Tognazinni drive?
    A. A DeLorean

59. Q. What's the slogan on Woz's license plate?
    A. Apple II.

60. Q. The mouse, or "rodentiometer", as it is known technically, was invented by whom—Doug Engelbart, Steve Jobs, Alan Kay, Jef Raskin, or Larry Tesler?
    A. Doug Engelbart, 20 years ago at the Stanford Research Institute. Note that Larry Tesler of Apple discovered a software trick that would allow a one-button mouse to achieve the accuracy of a two-button mouse, while eliminating the errors that occur when people get the buttons mixed up.

61. Q. What number, proposed as the retail price for the Apple I in 1976, was changed upon the objections of religious groups?
    A. $666.

THE CAST OF CHARACTERS!

The May 1987 Membership Directory, "The Cast of Characters," has been printed. Hopefully, by the time you read this, members who pre-ordered their directory will have received theirs. The last membership number in the directory is 10026. If you joined after that or have renewed an elapsed membership recently, and have released your information for the next directory on the membership form, you may buy a copy for $3.00 at the office or monthly meeting, or if you wish to order by mail send $4.50 to cover the directory plus shipping and handling. Supplies are limited.

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TimeMaster H.O.	84.00
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PORTABLE SYSTEM

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C-VUE LCD for Laser 128	338.00
Prairie Power System, Battery Pack (8 Hr. UPS) & Carrying Case	139.00
//c Power Cigarette Lighter Adapter	24.95
//c Power Extension Cable	16.95
//c Power Y Adapter	18.95

SOFTWARE

AppleWorks 1.3	$179.00
Locksmith 6.0 (Reduced!)	59.00
Pinpoint StarterPak	139.00
Bag of Tricks 2	49.95

HARDWARE

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Promodem 300C	119.00
L.A. 30 Meg SCSI Hard Drive (MacPlus)	770.00
L.A. 20 Meg SCSI Hard Drive (MacPlus)	650.00
L.A. 10 MB Hard Disk (Plus,//e,//c,GS)	650.00
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THE GROWING TCS!
by Lee Raesly, LCSW

The WAP Board of Directors has approved a second line for the download SYSTEM, and by the time you read this it should be up and running. So now the TCS consists of TWO download Systems (two separate telephone lines), and four message base lines! And in the self-financed budget approved by the TCS committee and submitted to the BOD is—but wait, I can't spoil your anticipation—you'll see it next month!

Other ways in which the TCS is growing is with a number of new and popular Boards for your use. Here are just a few of them:

1. The INVESTOR. A popular Board for sharing hot tips, news and techniques for organizing your efforts in the stock market. We have several spreadsheets for AppleWorks and Excel available for you. Check it out! SYSOP - Mark Sheftell.

2. The ~Patowmack Basin~. No, it is not misspelled, just spelled the way it was in George Washington's time! It is another Board of growing popularity concerning all types of outdoors activity and history in and around the Potomac. Canoeing, boating, backpacking, etc. And with an extensive Library of lists of many items. Would you like to be SYSOP of this Board? Just drop me a line on Conference 1, Board13 (The TCS Comments & SUGGs Board), and it could be you!

3. Lou's Lair and The **MAC** Union (alias David's Den). Both are very popular chat Boards. SYSOPs Lou Pastura and David Gursky, respectively (but not respectfully!).

I could go on with a total of eight new Boards, but instead, let me present you with a list of all the Boards and their SYSOPs. If you see a Board without a SYSOP, and you are interested, drop me a note on the TCS!

C#	Conf./Board # & Title	WIZOP/SYSOP
1	PI & GENERAL INFO Conf.	WIZOP-Leon Raesly
	1 Pi Club _NEWS_ Only	Nancy Sefarian
	2 Pi Journal	Bernie Urban
	3 Pi Journal Indexes	Harvey Kaye
	4 Heard Any Good Jokes?	
	5 Apple ///	Dave Ottalini
	6 World Events	Robert Langston
	7 The Scene—Reviews	
	8 Other Computers	Mark Sheftell
	9 Music Groups & Performers	Dan Mahaffey
	10 Eric's Room	Eric Rall
	11 Apple Link	Bernie Urban
	12 Micro Indusry Report	Joe Chelena
	13 TCS Comments & Sug.	Lee Raesly
	14 The 'Gourmet'	Fred Puhan
	15 The World of Chess	Bill Hughes
	16 Lawyers' SIG	Harvey Kaye
	17 The Redskins Line	Paul Schlosser
	18 Historical War Gamers	John Massey
	19 Micro-Genealogy	
	20 IBM PC & Clones	Euclid Coukouma
	21 Computer Music	Ray Hobbs
	22 The Senior Net	Robin Hopes
	23 The Lists Board	Richard Rowell
	24 Guest SYSOP	
	25 The Investor	Mark Sheftell
	26 Pi DOV's	Leon H. Raesly, LCSW
2	APPLE][Conference	WIZOP-Lou Pastura
	1][Telecommunications	
	2 AppleWorks	Ken DeVito
	3 Pascal Programming	Karen Rall
	4 Other Languages	
	5 II Programming	Tom Vier
	6 CP/M	
	7 dBase II/WordStar	Nick Veloz
	8 Apple II Tech Notes	Tom Vier
	9 Apple Writer & WPL	Richard Rowell
	10 Word Processors	Kim Brennan
	11 Data Bases	Kim Brennan
	12 Graphics & Related	B. B. Stanfield
	13 II Software	
	14 II Hardware	Tom Vier
	15 Digitizing & OCR	
	16 IIgs Software	
	17 IIgs Hardware	
	18 IIgs Misc.	
	19 PI SIG	Kim Brennan
	20 Lou's Lair	Lou Pastura
3	MACINTOSH Conference	WIZOP-David Gursky
	1 Accessories	
	2 Business Accounting	
	3 C Programming	
	4 Data Bases	
	5 Desk Accessories	
	6 Desktop Publishing	
	7 Educational Software	
	8 The **Mac** Union	David Gursky
	9 Graphics & Design Software	Bill Baldridge
	10 Hard Disks	
	11 Other Hardware	
	12 Misc. Programming	
	13 Organizational Tools	
	14 Pascal Programming	
	15 Printers	
	16 Rumor Manager	
	17 Software Misc.	
	18 Spreadsheets	
	19 Tech Notes	
	20 Telecommunications	
	21 Utilities	
	22 Word Processors	Bill Qualls
4	CLASSIFIED Conference	WIZOP-Allan Levy
	1 Auto-Motorcycle Etc.	*
	2 Household Furnishings	*

contd.

3 Household Misc. *
4 Apple II Software *
5 Apple II Hardware *
6 Apple II Misc. *
7 Mac Software *
8 Mac Hardware *
9 Mac Misc. *
10 Vacations & Resorts *
11 Employment Wanted *
12 Employment Offered *
13 Tutoring - Offered/Wanted *
14 Not Otherwise Listed *
15 Boats & Boating *
16 Yard-Lawn-Farm Implements *
17 Pets & Animals Etc.
18 The ~Patowmack Basin~
19 Eastern Shore - Western Wind
20 **Micro-gamers**
21 Travel - INN & Campground
22 The FED SIG Jerry Walz

* These Boards covered by the Conference WIZOP.

VIVARIUM DESCRIPTION

In a phone call from England last week, Adrien Youell referenced Tom Warrick's article, "AppleWorld '87—A Special Report," in which he talked about Alan Kay's Vivarium. For those of you who are interested in a description of Vivarium, see the meeting report of his visit to Washington Apple Pi, in the April 1986 Journal, pages 9 and 10.

MORE ABOUT WEBSTER'S NEW WORLD SPELLING CHECKER

by Stuart Goldman

I read with interest Ken Bishop's review of Webster's New World Spelling Checker. He outlined many of the pluses and minuses of the program that I have encountered. I just wanted to add my two cents.

I was pleasantly surprised when I discovered that most first names and abbreviations are included in the dictionary (i.e. Gerald, Thomas, IBM, HUD, etc.). Essentially I look forward to using Webster's. I like to see what suggested spellings the program offers. My favorite was when the program stopped at the word "Nikon," referring of course to the camera company. One of the suggested spellings was "Nixon." Were the programmers Republicans?

AUTO LOGON ASCII EXPRESS MACRO

by Richard M. Rowell

I like obscure languages. I speak Sea Dyak (a Borneo hill tribe language) and Malay. I graduated from Boston Latin School (Schola Latina Bostoniensis, founded 1635). And I enjoy Bill Blue's macro language for the ASCII Express telecommunications program. Maybe MouseTalk is making Apple users' telecommunicating lives easier, but for me—I am going to continue writing and using the Sanskrit-like text of ASCII Express macros. Here is the ASCII Express macro that I use to auto-logon to the Washington Apple Pi TeleCommunication System, and to read all new messages in any one conference. I use this with a Novation AppleCat 1200 baud internal modem (non Hayes compatible). Lines 1 and 2 below are the two macro elements (lines); following these is an explanation of how each macro element works.

```
1: ?!%#nnnn.xxxx'!</*/?>B!</C/?>C!</Q/?>1\R!</L/C/?
     >R\L2!
2: %_N'\L2!
```

Macro Element 1

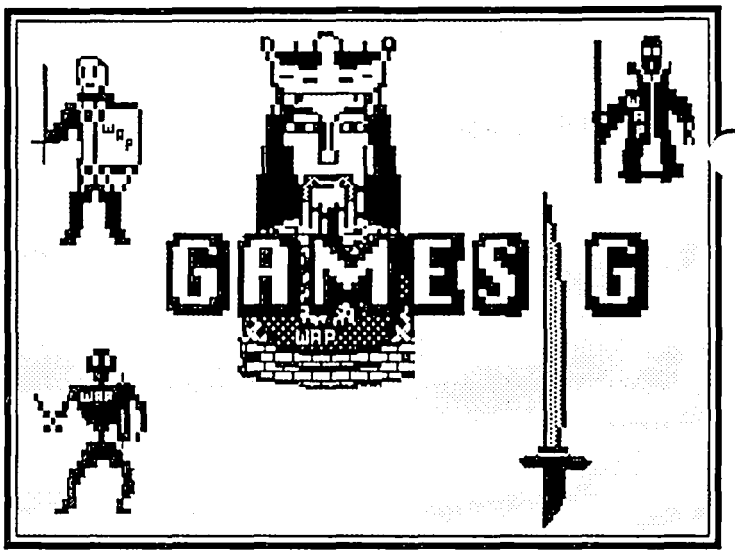
\?!	executes the macro at a slower rate
%#nnnn.xxxx'!	wait for "#" then send password (nnnn.xxxx)
</*/?>B!	wait for TCS prompt then select (B)ulletin Board
</C/?>C!	wait for TCS prompt then select (C)hoose Conference
</Q/?>1\R!	wait for TCS prompt then select Conference 1, and turn on copy buffer; change the number here to autoread any conference
</L/C/?>R	wait for TCS prompt then select (R)ead All
\L2!	go to Macro Element 2

Macro Element 2

%_N'!	wait for MY PROMPT then send a N and <RETURN>; my prompt is an underline character
\L2!	repeat Macro Element 2

I have (almost) learned a lesson about Life: "To every question, answer with a word or phrase beginning with 'N', such as No thank you, Not right now, No, Never, No way, None of your business, or Nine hundred dollars." Because the answer to almost every question that the TCS ever asks me is appropriately "N", recycling macro element #2 works until it is time to logoff. My ending is not very efficient. As it is now, after all new messages have been read the TCS gets tired of my continual (N)egativism and I get "timed out"; after two minutes of electronic silence the TCS hangs up by itself. I would appreciate any suggestions for a conditional macro that would either logoff at the appropriate time, or change conferences and repeat.

GAMESIG NEWS
by Steven Payne



The regular meeting on May 7 began with renewed plans for a GameSIG Party at Paul Moore's house later in the month. Then Ray and Davy Hakim arrived with their IIgs, and Chairman Thomas Johnston used this temporary distraction (while Ron Wartow's attention was diverted) to announce the release of new flight-simulator books, including FLYING ON INSTRUMENTS WITH FLIGHT SIMULATOR by Jonathan M. Stern (Compute! Books, 1987). In his monthly report, our illustrious Chairman Emeritus noted (again?) that it's a slow period for new gaming software for the Apple, but that SSI is promising QUESTRON II by Christmas, and has obtained permission to transfer the classic "Advanced Dungeons and Dragons" to computer. Ron talked about the upcoming Computer Electronics Show in June, and hopes to be able to entice some game designers down from the "Origins" convention (for board and computer fantasy/role-playing and war gamers, at the Baltimore Convention Center, July 2-5) for our July meeting. As for the general WAP meeting in August, sponsored by GameSIG, we expect once again to have several luminaries from the gaming world on hand (plus fun and surprises)! Watch this space for details.

Bruce Field dropped in to solicit volunteers for various projects and demos at the general meeting. Tom passed out the new software for review, which included:

STARGLIDER (Rainbird, Apple II series): space flight simulator;

TASS TIMES IN TONE TOWN (Activision, IIGS): "truly bizarro" graphics adventure;

MUSIC WORKS PLUS (Activision, IIGS): music composition program;

PAINTWORKS PLUS (Activision, IIGS): graphics program;

MAC PRO FOOTBALL (Avalon Hill, 512K Mac): football simulation; and

SHADOWGATE (Mindscape, Mac 512K with single drive, also plays on the Mac II and SE): the eagerly awaited successor to DEJA VU and UNINVITED, two of the best graphics adventure games ever for the Mac.

The meeting ended with an impressive demo of TASS TIMES IN TONE TOWN on the IIgs, along with demos of STARGLIDER and MAC PRO FOOTBALL (in which first-time player Ron scored a touchdown after completing a 45 yard pass). Our next regular meeting will be on June 4 at 7:30 PM at the WAP Office. In the meantime, while you're waiting impatiently, you can read GameSIG reviews of PHANTASIE III, BATTLECRUISER, BUREAUCRACY, REALMS OF DARKNESS, and INDIANA JONES IN REVENGE OF THE ANCIENTS which are presented below.

PHANTASIE III: A Review
by Charles Don Hall

Phantasie III: The Wrath of Nikademus (SSI, $39.95, Apple II family) is the climactic game in the Phantasie trilogy. The story so far: The evil wizard Nikademus is trying to take over the world. As the series opened, he had conquered the islands of Gelnor and Ferronrah and made much progress on the continent of Scandor. In **Phantasie I**, you controlled a party of six adventurers who freed Gelnor from Nikademus' evil lieutenant, the nameless Dark Lord. In **Phantasie II**, these adventurers lifted the terrible curse on Ferronrah by destroying the magic crystal which maintained the spell. Now, in **Phantasie III**, they must track down and destroy Nikademus himself: a quest that will take them through the continent of Scandor, the Planes of Light and Dark, and the Third Level of the Netherworld.

If you have either of the first two games, you can transfer over your characters, but they will lose most of their gold and experience. If you don't have any characters to transfer, then you can simply create a new party.

THE PLOT: The game opens near the headquarters of Filmon the Sage, whose help proved so invaluable in Phantasie I and II. When you reach him, he'll send you on the first of a series of quests; you must return to him after completing each one, and he will give you further instructions. Along the way, you'll have a few run-ins with Nikademus, who threatens a terrible fate to everyone who doesn't join him in the service of Evil.

Your quests will take you through to such diverse places as the Castle of Light, the dwarven burial grounds, and a battlefield surrounding the tent of the legendary Lord Wood.

The dungeons are done in the usual Phantasie style— i.e., when you enter them, you are looking at a large white space from above. As you walk through the dungeon, doors and corridors are drawn on the white space as they become visible, until finally you have a blueprint of the whole area. If you've avoided fantasy role-playing games because you hate to map, then the Phantasie series is definitely worth looking into.

A NEW SYSTEM: Although the first two games in the series used almost the same playing system, several major

contd.

changes have been made in the new version. The most important is the new combat system. Damage is now done to specific areas of the body. Each character has six body parts (head, torso, arms, and legs) and a total number of hit points. Any body part can be OK, injured, broken, or gone. Whenever a character is hit, he loses hit points, and there is a chance that part of his body will be damaged. The probability seems to depend on how many hit points the character lost, compared to how many he has left. Injured body parts can be used normally, but broken and removed ones cause various problems. For example, a character with a removed head is more or less dead, and a character with a broken right arm is unable to fight or cast spells. This will prove upsetting to people who have seen "Monty Python and the Holy Grail," and think that they should be able to fight with all their arms and legs removed ("Come back, coward! I'll bite your kneecaps off!").

Monsters are also susceptible to body part damage, although their anatomies sometimes differ. For example, snakes don't have arms or legs. The other major addition to combat is the presence of bows, which allow characters to hit monsters in any rank, and are much more damaging than the "Throw Rock" option in **Phantasie II**.

You'll be glad to know that a "Transfer Item" option has been added to the town menu. This lets you transfer or sell items without resorting to the hated "Distribute and Sell" option which slowed play so much in the first two games.

There are several minor changes, but the only other major one is that, when a character goes up a level, you are given the option of training him in any three of his ten skills. These skills are the same as in the previous two games: attack, defend, swim, find traps, etc. So you can let fighters concentrate on getting their attack skills high, wizards on defending, and thieves on unlocking early in the game, and let them learn the less important skills later on.

GRIPES: My biggest complaint with this game has to be all the advertising and packaging crowing about how you get to explore a whole continent instead of a little island. While Scandor is a continent, it is drawn with a very small scale. Its map takes up 25 sectors, which is comparable to the sizes of the maps of Gelnor and Ferronrah.

This game has fewer puzzles and special features than the other two. This is probably because of the overhead required by the new combat system. I would have prefered easier combat and more puzzles.

Finally, the endgame just about drove me crazy. Getting from the last town to the last dungeon involves walking across vast stretches of monster-infested wasteland and lava fields. When you get to the last dungeon, you spend the whole time searching vast stretches of monster-infested corridors for the single interesting location. About the nicest thing I can say is that it's much easier than the **Phantasie II** endgame. Before you start this section, make sure you have a dozen "Restore Magic" potions, and be prepared to use the "Beg for Mercy" option every chance you get (bad for morale!).

THE FINAL CONFLICT: . . . makes it all worthwhile. You'll remember that Nikademus has asked you to join him in the service of Evil. When you finally meet him, the program gives you a choice of allying with him or fighting him. I of course immediatly chose the former option —I had a sudden vision of helping him conquer the rest of the world, and then being given a few sectors in Gelnor where I could set up a techno-fascist state, where computer programmers would be worshipped as gods and allowed to do pretty much anything they want. I didn't get to do this, because my party was obliterated in combat with the forces of Good. I must've spent a week, fighting that battle over and over again, trying to win it. I don't think it's possible. Growl, mutter.

If you choose a different option, it's a little easier to win the last battle, and, once it's all over, you're treated to a spectacular sound-and-light show, which tells you in exquisite detail about just exactly what a great gamer you are. This is the best ending I've seen since **Questron**. It more than makes up for the long walk from the last town to Nikademus.

CONCLUSIONS: By way of comparison, **Phantasie I** was easily the best game in the series. **Phantasie II** was a weaker game, due to the toughness of the monsters and the time you had to spend wandering around in the wilderness until you found some key items. **Phantasie III** is comparable to **Phantasie II** in enjoyability, and its major flaw is that its plot is not as complex as that of the other two. All three of them are good, solid, playable fantasy RPG's, but the first is the only one that's really outstanding.

So . . . If you're not familiar with the series, then **Phantasie I** is the one to start with. If you've played the others, and you're not completely Phantasied out, then you'll find this an enjoyable, but not a spectacular conclusion.

BATTLECRUISER: A Review

by Chris Hancock

BATTLECRUISER continues with the game system introduced by SSI in WARSHIP. Gary Grigsby has adapted the system to the Atlantic theatre. It recreates naval surface engagements in either the First or Second World Wars, with a wide selection of ships available.

I found this game to be the most fun I've had in a long time. Now I certainly recognize that it is not for all gamers. The graphics are non-existent and it takes some imagination to get involved, but it certainly allows a pretty good portrayal of naval warfare. I have played naval wargames for many years. In fact, I started out with them and have always looked for a good simulation of naval engagements such as that at Jutland in the first war. This game represents a pretty good shot at it. The game mechanics are so smooth that one can concentrate on tactics. What a treat to be done with all the bookkeeping necessary in non-computer simulations!

Although I have never had the opportunity of playing WARSHIP, the reviews I have read indicate that the game system is virtually identical. Each game turn consists of an orders phase and an action phase where all ships simultaneously carry out their orders. Players may interrupt the action phase after each two-minute period to modify orders or check status. Should the players so choose they may allow the game to proceed to subsequent action phases. This feature

contd.

greatly speeds up play, although there is generally plenty of action, particularly in the larger scenarios.

The game comes with eight scenarios included on the game disk, but it also allows for the recreation of an endless number of variations too. Custom maps may be constructed and saved to disk, as well as selecting the opposing forces. It is also possible to modify some or all of the ship data included for the 158 vessels.

Commands may be given to entire divisions or to individual ships, and this allows for general orders to be issued while there is no action, and for specific orders when action occurs. In the divisional order mode, targets are selected by the computer for each side, while ship mode allows the players to select their own. I quickly found that I did not always approve of the computer's target selection. In one instance a battleship was stubbornly ordered to continue firing on a minor ship while it was being borne down on by a whole squadron of battlecruisers!

One feature I did not like had to do with combat resolution. Especially when there are quite a number of ships about, it is next to impossible to tell who is firing; the display merely shows the target ships and the type of shells. I would have liked the firing ship to be identified also, to give it just that little extra flavor.

Really, I have to recommend this game most highly. It clearly is not for everyone, particularly those who require state of the art graphics, but I don't feel this is a serious drawback. (System requirements: Apple II with Applesoft ROM card; Apple II, //e or ///; 48K with either one or two drives; color monitor not required.)

BUREAUCRACY: A Software Review™

by Charles Don Hall

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* * *

Now that I have you all in the right mood: BUREAUCRACY is Infocom's newest text adventure. Note that it uses the Infocom Plus parser, which means that you need a 128K Apple or 512K Mac to play it. List price is $34.95.

It all started when Douglas Adams, the author of "The Hitchhiker's Guide to the Galaxy", moved to a new apartment. He filled out several change-of-address cards, including one for his bank. Much later, his credit card expired, and his bank promptly sent a replacement to his old address. It was never forwarded, and Adams spent several weeks trying to get his bank to send him a new card, and to put his new address in their files. Eventually, he got a replacement card and a letter apologizing for the inconvenience. It was forwarded to him from his old address. Afterwards, Adams decided that his adventures would make a great game, and that's how BUREAUCRACY came into being.

The game opens with a dire warning that you aren't authorized to play it because you haven't filled out the appropriate license application. It then asks you to fill out a form, giving your name, sex, address, previous employer, least favorite color, etc, etc, etc. Only then does the game actually start.

It seems that you're a computer programmer, and have just moved in order to start a job with the Happitec computer company. Your first assignment is to travel to Paris, France, to attend a two-week training seminar. As the letter included in the package states, "We've found that new employees who miss the training seminar usually aren't very happy at Happitec." Not only that, but Happitec is sending you $75 in spending money. Sounds great, huh?

There are a few problems. First of all, your bank hasn't processed your change-of-address form, and has sent your checkbook and new credit card to your old address. Also, your $75 isn't in the mailbox. All that's there is a letter addressed to a house down the street; evidently the post office has been a little careless. As the game opens, you're flat broke. It's easy enough to get your airplane ticket, but you don't have enough cash to get a taxi to the airport.

Not only that, but you have to keep an eye on your blood pressure. Whenever something infuriating happens to you, your blood pressure in the game goes up. When it gets too high, it abruptly drops to 0/0, and the game is pretty much over.

Anyway, it's obvious where the money order is. The post office accidentally delivered it to one of your new neighbors, so here's your chance to meet them all: The llama, the old lady that thinks you're a burglar and blows you apart with her elephant gun, and the "twitching paranoid" who lives in a camouflaged fortress at the end of the street. (The program describes him as looking like "a heavily-armed Woody Allen"). By the way, when you fill in the form at the beginning, the program remembers your address and uses it as the starting location for the game. Your neighbors live at different numbers on the same street.

Once you've picked up your mail, it's off to the bank to

contd.

convert it to cash, back home to call a taxi, and off to the airport. The airport is unusually realistic. It seems that the airline you want has been sold, so you have to trade in your ticket at the desk of some third-world airline, and no one anywhere has the faintest idea of what's going on. By the time everything's straightened out, your plane is taxiing down the runway. The situation looks hopeless. As the woman at the ticket desk says, "What do you expect me to do? Break into the control tower and call back the plane?" Once you've figured out how to get on board, the second half of the game starts.

INTERMISSION:

Adams didn't really intend to divide the game into two halves, but that's the way it worked out. The first half is very good; the second half is not-so-good. I'm therefore reviewing each half in turn.

BUREAUCRACY has the same strengths and weaknesses as HITCHHIKER'S GUIDE...there's a lot of funny stuff in it, but the game as a whole is incoherent. In particular, the puzzles don't make sense. Instead of using logic to solve them, you have to try one outlandish thing after another. Eventually, you'll stumble across the outlandish thing that Adams had in mind, and the puzzle will magically solve itself.

If you can manage to work out the solutions, you do get to see some awfully clever stuff. I thought this game was even funnier than HITCHHIKER'S GUIDE. For example, if you try to go into the restaurant while carrying the bag of Llama Treats, the program replies, "In many ways, bringing the llama food with you is a wise move. However, due to strict public health laws (enacted for your safety and convenience), this restaurant doesn't permit customers to bring in competing varieties of food. Better leave it outside."

THE SECOND HALF:

The second half isn't nearly as much fun. You're safely on board your plane, which soon afterwards will crash in the jungles of South America. The first half of the game mostly involved dealing with mindless bureaucracies, and the fun was reading about all the ridiculous, but all-too-familiar, things that you're put through. The puzzles in the second half are all survival-oriented: survive the plane crash, escape the cannibalistic natives, work your way through a Secret Underground Installation . . . . There's some cute stuff here, but it just isn't nearly as much fun as the first half. And not only do the puzzles not make sense, but the STORYLINE doesn't even make sense here. For example, in one scene, you get to find the address book which you lost earlier in the game, and discover that someone has changed a few lines of it. Not only was there no reason for him to have done this, but the thing that he wrote is information that can be used to destroy him. This episode is vital to the storyline; in fact, it's how you win the game.

THE PACKAGE: This game has what's easily the funniest packaging that Infocom has ever done. In addition to the letter I mentioned earlier, you get a #2 pencil, a flyer for {Popular Paranoia" magazine, and a credit card application—it's one of those three-sheet forms with carbon paper, and if you really study it, you'll discover that the questions you answer on the top sheet bear little relation to the questions written on the two copies. The manual contains a nine-page instruction booklet which attempts to tell you how to fill out a change-of-address form.

BOTTOM LINE: It's hard to give this game a flat good-or-bad rating. As an adventure game, it has some serious flaws, but as a piece of social satire, it succeeds admir- ably. You'll probably enjoy it, provided you approach it with the right attitude, and don't expect it to be the next ZORK I.

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REALMS OF DARKNESS: A Review

by David Granite

While you're waiting for Wizardry 4 or 5 to come out, I strongly recommend playing REALMS OF DARKNESS by Strategic Simulations, inc. (SSI, Apple II series). This excellent game is a series of 7 miniquests, each progressively more difficult than its predecessor. Each quest is complete unto itself with the solution to be found within its own individual dungeon. Yes, I said dungeon—time to bring out the graph paper again, and bring plenty of it. I lost count, but I think there are 25 separate levels to be mapped. I used to hate mapping, but I just love to do it now.

The final goal of the game is only hinted at in the early going, but it requires combat with hordes of monsters; if you like imaginary gore, this is the game for you. You begin by collecting the usual crew of fighters, thieves, priests, and sorcerers. There are some differences, however. Some of your fighters can use spells and one of them is a martial artist who can fight with flying leaps. The priests and sorcerers are poor at hand-to-hand combat, but they can cast some pretty impressive spells.

On the first side of this two-sided disk, the missions are fairly easy, but there are some interesting new ideas that the programmers have implemented. There is actually some humor to the early dungeon exploring. Granted it is humor on the order of pie-in-the-face, but it is noteworthy because no other "map and kill" game that I know has any humor. Unfortunately, the more difficult second side is free of comedy. Another twist is the 'adventure mode'—hit return and your lead character can interact with people, monsters, and objects you encounter by typing commands or phrases. This is a successful attempt to mix Ultima-like encounters with Wizardry-like dungeons. I suggest examining all objects you pick up.

Finally there is the infamous multiple party command. In this game, you can subdivide your party of 8 into up to 8 little groups. There are several situations in the game where you must divide your party. I strongly recommend saving the game before doing this division. There is one instance in particular where you have to give up all your weapons before entering a certain area. I cleverly elected to send only my spell casters through, reasoning that they could defend

contd. on pg 38

INDIANA JONES IN REVENGE OF THE ANCIENTS: A Review

by Steven Payne

. . . This is a vast, shadowy place. . . Riverlets of viscous slime run down the eastern wall . . . . Through a door to the south, in the center of a domed room is a golden key, radiant in a shaft of white light. To your north is an open doorway, eighteen feet high, through which a luminous glow eminates. A carved stone panel is centered in the western wall. If this is the central chamber you can't be far from the key. The legends say: He who holds the key controls the earth's pulse.

>GO SOUTH

A trapdoor opens at your feet, sending you tumbling down a seemingly endless shoot. Like a clown shot from a cannon, you are ejected from a hole in the cliff face, and descend into a pile of bones of earlier explorers.

THE END

So began (and quickly ended) my first encounter with INDIANA JONES IN REVENGE OF THE ANCIENTS (Mindscape, Mac 512K). In this new all-text adventure you play the intrepid hero of the title, and must prevent the Nazi Plebinheim and his accomplices from unleashing the power of the Mazatec Power key on an unsuspecting world. Along the way you encounter poisonous gas, bloodthirsty bats, sliding rocks, hungry alligators, greedy bandits, perilous rivers, and surprisingly helpful snakes—no doubt leading to a thrilling climax (which I've not yet reached, for reasons I'll explain).

At first blush the idea of an all-text INDIANA JONES game sounds about as promising as a *lecture* on roller-coasters. After all, what made the movies so vastly popular was not the language or intellectual challenge but watching the non-stop *action on the screen.* I can't imagine wanting to *read* RAIDERS OF THE LOST ARK, for example. Still, the plot of this game began to grow on me as I got further into it. It's fun exploring temples or slashing through the Mexican jungles with Marion Ravenwood at your side. Some of the puzzles are quite good.

What's not good is the game design. As the above sample suggests, at most points you are within two or three steps of dying if you make a wrong choice, with no opportunity simply to explore and try different options. Since (incredibly) the program does not allow use of a second disk drive, you will find yourself becoming increasingly frustrated as the game keeps killing you off every few moves and forcing you through a complicated series of commands and disk swaps to restore a saved position. (For instance, it's more than a little annoying to discover, after many fruitless attempts, that the game will spare you at one point only if you "lasso shelf with whip". Is this an example of the "advanced techniques that allow you to give commands in plain English"?) Nor can you scroll the text back and forth as in most adventures; your only options are SAVE, RESTART, PRINT, and QUIT.

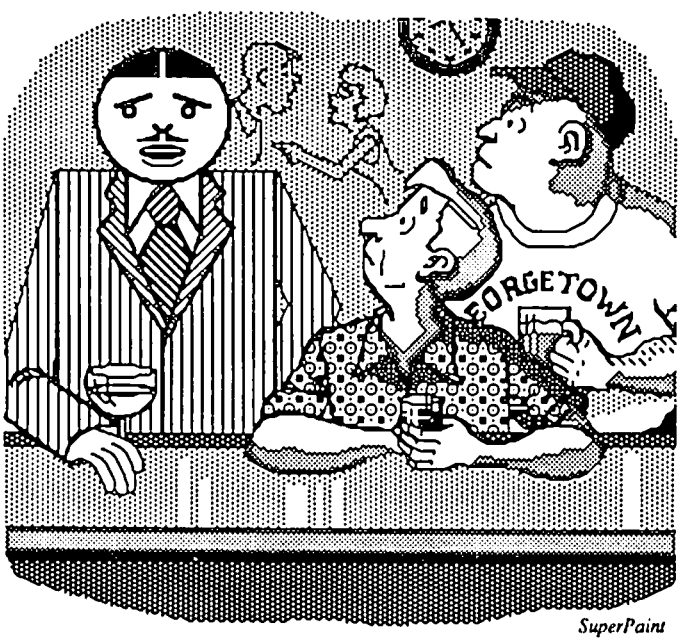
Ordinarily I try to be as generous as possible in my reviews. I've even had occasional twinges of conscience over folks who might have been burned buying games they didn't like because I overpraised them here. But in this case I have to say: good ideas, but poor execution. Certainly Mindscape puts out some fine products, as COMICWORKS, UNINVITED and other programs prove. In this case they had the plot and puzzles needed for a good adventure. If only they had invested the time and effort to add the standard features necessary to make it fun to play! As is, I don't recommend this game unless you like software that not only "challenges the mind" but also taxes your patience.

Realms of Darkness contd. from pg 37

themselves even with no weapons. Shortly thereafter, they were dead meat, but at least they were backed-up dead meat.

My only real objection to this game is that the back-up procedure is very cumbersome, but, on the plus side, one can save anywhere, even in dungeons. Other excellent features include automatic elevation of character levels at the instant they achieve enough experience points. It is unnecessary to go all the way back to town to accomplish this, or to return to identify objects. Weapons obtained in the dungeons can be identified easily while still underground. Dead characters can be revived for a fairly small amount of silver, which is very useful early in the game. Finally, on side 1 (the less difficult side) the dungeons are easy to map and, when your party has been decimated, the monsters will usually miss as they attack the remaining few trying to escape.

REALMS OF DARKNESS is a moderately difficult game and it took me about 80 hours to finish. I was forced to call Charles Don Hall four separate times for problems which baffled me, which implies (correctly) that this game is no snap. This scenario continues the excellent string of fantasy-role playing games which SSI has produced and I heartily recommend it.



SuperPaint

"My therapist feels that I'm excessively object-oriented."

STOCK SIG NEWS
by Andrew D. Thompson

1. REVIEW OF MARKET TIMING SOFTWARE

The April 9th meeting began with two members who reported their divergent reviews of "P.V. Elves," a software program for use with the Apple //c. "Elves: A Stock Market Speculation Aide," designed by Ronald Nilson of Vancouver, WA (Ed. note: a long-time Pi member), comes with an extensive instruction manual, data and analysis disks. Based on a careful reading of that manual, Pi member Newton Steers was favorably impressed with the Elves system for when to buy and sell individual stocks. The program constructs 9 variables primarily by price movement data and some volume figures. Users key in data for between 20 and 35 days.

Some Apple Pi members speculated that Elves was similar to the TLM software which uses 10-day data. Charlie Rider experimented with Elves using 4 days worth of data. On the positive side, he noted the program had helpful features. For example, it would challenge any odd-ball data by giving the user a special prompt. On the debit side, Rider could not confirm the Elves' claim of allowing experimentation by the user since he often became locked into loops, had to frequently reboot and refer to the manual. Further, Rider said he could not get the program to recognize his 80-column extended card so he could not get a printout of the excellent on-screen chart Elves had created. For further information, write or call Ron R. Nilson, 2601 N.E. 113th Street, Vancouver, WA, 98686, (206) 574-7017.

2. MUTUAL FUND SUB-GROUP REPORT

The March 19 Mutual Fund Sub-Group continued its discussion of systems for ranking the Fidelity Select funds. Harley Wilbur's performance ranking, as of March 13, identified the four front runners as American Gold, Biotechnology, Paper and Forest Products, and Health Care. When applied to non-fidelity sector funds, Wilbur's rankings identified the T. Rowe Price New Horizons, Fidelity Magellan, T. Rowe Price New Era and 20th Century Select as the leaders among 9 funds examined.

Andrew Thompson's momentum ranking of 35 Fidelity Select funds indicated that for trading purposes, as of March 18, Energy Services, Industrial Materials and Energy were the "sector funds du jour." The sub-group discussed the value of various market indicators and concluded significant volume changes in the odd lot market, in the 15% and higher range, was once again proving helpful.

3. TRENDPOINT DISKLETTER

Harley Wilbur reported to participants of the April 9th meeting the results of his trading system within Fidelity sector mutual funds. Wilbur's service, Trendpoint Diskletter, does not provide recommendations, but rather "food for thought" so investors can fashion their own mutual fund strategy. Although originally designed for investor analysis using weekly data, Wilbur has adapted his system to respond to more frequent front runner shifts within the Fidelity sector funds. By using daily rather than weekly data, and by buying the top performer and switching when it drops out of the top 3, Wilbur reconstructed results of this trading system for the 8/21/86 through 3/27/87 period. The trading method outperformed his comparison benchmarks, the S & P 500, Magellan and New Horizons funds. For the first three bullish month of 1987, results were as follows: trading system (+59.1%), S & P (+20.2%), Magellan (+22.7%), New Horizons (+24.4%). For more information, write or call Harley D. Wilbur at 9709 Elrod Road, Kensington, MD, 20895, (301) 949-8131.

4. CYCLE ANALYSIS PROJECTIONS

A. Steve Rinehart updated members on the projections which Mercari, Inc. has forecast for several markets. Rinehart and Kasper had projected in early March that the NYSE index would remain flat for several months in the 164 range. The recent market volatility which resulted in rises above the 170 range had not been forecast. Rinehart said Mercari's April 8th projection forecast the NYSE would remain relatively flat through early May, bottom out near May 27 in the 165 range and then rise steeply to the 174 range by mid-June.

As of their April 3 analysis, Rinehart provided participants with charts indicating the price of United Services Gold Shares would bottom out at the $6 range near May 12 and then rise to the $7.35 range in early June. For more information call Peter Kasper at (703) 620-4071.

B. PROJECTIONS BASED ON FOURIER ANALYSIS

Irv Lowen updated members on his system for projecting market tops and bottoms. Lowen's research found two cycles of 12 and 57 days. As of 9 April, Irv judged the 294 level which the S & P 500 reached in late March would be a market low to be followed by a rise to the next short term high to the 312 level which would be reached on April 14th. John VanHorn expressed his doubt as to the validity of cycle analysis' ability to determine phases accurately. However, he reported, ironically, that he found a 12 day cycle as did Lowen and a 57 day cycle as did Rinehart.

4. FUTURE MEETINGS

Stock SIG will continue to meet on the second Thursday of each month. Starting on July 28th, the Mutual Fund Sub-Group will meet monthly in the Apple Pi office on the 4th Tuesday. The Sub-Group's May 28 and June 24 meetings will be held in the Bethesda Library. For Stock SIG program suggestions, call Ron Grognet (296-5444) or Ben Fogle (469-5822).

Cumber's o r n e

by James F. Cumber, Jr.

Random Ramblings of an Apple Pioneer...

Now for the Good News.

First, a sidelight on the new Macintosh SE. For those of you who haven't seen it, it is DEFINITELY worth a clean shirt and a shave! It has the same 1 Meg memory as the Macintosh Plus, but because of improved circuitry and an improved I/O manager, it operates NOTICEABLY faster! The presence of the second 800K drive within the case is what Macintosh should have been in the first place! There is also a choice of keyboards: the new standard keyboard (similar to the IIgs keyboard), and the "Saratoga" keyboard ("it looks like an aircraft carrier"), which has separate function keys along the top to help those needing IBM 3270 or DEC VT 100 emulation, either as terminals on site or for telecommunications. Sorry, the Macintosh II (with its color graphics) is not due until about June.

FANTASTIC Software Support....!

Then there is one company whose software support should be used to set a standard for the industry! When Roger Wagner came through to introduce his new line of software some months ago, I got copies of his Write Choice word processor, Printographer graphics printing software (which also allows the integration of graphics with the word processing), and Wizard's Toolbox programmers aid, which allows a PRINT USING command in Applesoft. I did find a bug in my version of Write Choice, and they replaced it with an updated copy very promptly. They were more than happy to answer a couple of questions I came up with due to slight confusion about the instructions, just by a phone call.

Then I came up with a REAL problem: in January, I developed a DESPERATE need to do superscripts and subscripts in a document. It seemed that Write Choice would be the best of the three word processors I have to integrate this feature. I considered just starting all over with Roger Wagner's brand new, vastly improved, professional word processor, MouseWrite, but it requires (sad to say) an Apple //e (128K RAM) or Apple //c with a mouse: the 128K allows many improvements heretofore impossible on the Apple II series; and MouseWrite is Apple IIgs compatible, even to using the increased RAM (including RAM card) of the gs. The wide-carriage Imagewriter printer that I have came with a piece of software called "Imagewriter Tool Kit", that was supposed to contain a ProDOS-based program to download the appropriate font. Roger Wagner Software answered my phone call and patiently explained how I could use the download feature and simply call the appropriate font from within Write Choice once the font had been loaded, and even sent directions on how to download the font. Unfortunately, my copy of the disk was faulty: at first, I could not even get ProDOS to boot on my 64K Apple II+, because it refused to recognize my Apple Language Card—obviously, the ProDos System files had a bug! Not having or using ProDOS (what is the sense if all you have is the 64K Apple][+ and the original Disk II 140K drives?), I had to spend the $40 for the ProDOS System disks, then I had to replace ProDos on the Tool Kit disk. But the download program was also disfunctional! More bad news: Apple no longer supports the Imagewriter Tool Kit! Several local Apple dealers tried to help, then had to admit defeat. Even our venerable WAP Hotline came to a grinding halt over the problem.

After over a month of agonizing with this, I had run out of local options. This left me with the choice of calling Apple Computer direct (and one of the dealers I had worked with had put the question on Apple Link: Null Search), or the off chance that Roger Wagner Software just might be able to help. My reasoning in going back to Roger Wagner was that if they could send instructions on how to download fonts and work with them in word processing, they probably had a version of Tool Kit that actually worked.

Therefore, I placed a last gasp phone call to Roger Wagner Software, and got Ken Welk, one of their technical support personnel. After describing my long suffering, I asked if they had a copy of Tool Kit that worked, and if so, how much would it cost me to get a copy, because I had a crying need to be able to do superscript/subscript work. He said he thought they did, but could not guarantee it. In any case, he would have to find a working copy within their voluminous file of working disks. He assured me that I would hear from him within the week, whatever he discovered. Four days later, a disk came in the mail from Roger Wagner...just a disk, with NO bill! The disk contained a DOS 3.3 version of Tool Kit! IT WORKED!

If Washington Apple Pi ever gives an award for Year's Best Software Support, my vote goes to Roger Wagner Publishing, Inc. Their products are very good, both programming and documentation. Their software support is the best I have seen since I first got my Apple][in 1978! In this particular case, they were supporting Apple's hardware directly by supporting software that was not theirs to start with! If that isn't support "above and beyond", I would like to know what is! I wish more software houses would emulate their example! Unfortunately for the Macintosh folks, Roger Wagner (the owner is known from being a pioneer in Apple II Assembly Language programming) is, at last report, almost strictly an Apple II shop, although they publish a 6502 Assembler for the Commodore 64. For those who want to get a catalog of their products (and good software companies certainly deserve our support and patronage!), they can be reached at: Roger Wagner Publishing, Inc., Suite E, 10761 Woodside Avenue, Santee, CA 92071 (619) 562-3670.

dPubSIG NEWS
by Steven Payne

The May 6th meeting of the Desktop Publishing Special Interest Group began with the usual question and answer period. Rosemary Connelly (who handles our publicity) mentioned discovering that her previous problem with tables imported into **PageMaker** was the result of using font sizes not loaded into the system (and thus easily corrected). We also heard rumors of a forthcoming Microsoft **Word** update, due to bugs found in the released 3.0 version.

Chairman Thomas Piwowar reminded everyone that all 1987 meetings will be held on the first Wednesday of each month (just as the IBM Desktop Publishing Group, under the leadership of Mary Stanley, ordinarily meets on the third Wednesday, at STSC Auditorium, 2115 E. Jefferson, Rockville, MD). At our June meeting Ann Marie Barker will show Webster's 9th Collegiate Dictionary on CD ROM, while John Albino will demonstrate **FrameBuilder** on the Sun System (a "departmental publishing" setup which may give a hint of where things will be moving with the Mac II).

Tom also announced that Darby Graphics and CACI are now providing Linotronic output services (see ads in recent copies of the Journal), and that the five PAPER ETC. stores around the Beltway have a wide variety of interesting papers in stock at reasonable prices. He also passed out flyers for the PrintFest '87 Conference on June 3 and 4 at the Sheraton Washington Hotel, and a notice for "LaserSampler II" by Earl Douglas (of MacTography) containing samples of over 600 typefaces. After some discussion of the new IBM PS2, the forthcoming **PageMaker** 2.0 for the Macintosh, and the new 600 dpi laser printer from Varityper (the "VT-600"), John Albino gave a brief report on the TYPE-X Convention for typesetters. Volunteers were once again sought to help Hersh Cousin transport equipment back and forth from the Office for the monthly meeting.

In the demos portion, Scott Berfield of Mindscape gave an informative demonstration of **GraphicWorks** 1.1, reviewing all of its new features. Then Lee Eesley showed **PowerPoint** (Forethought), a "data-base management program for briefing slides." The next regular dPubSIG meeting will be held on June 3, at 7:30 PM in the auditorium of the PEPCO Building at Pennsylvania Avenue and 19th Street, NW.

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PRINTING COLUMNS IN APPLEWORKS

by Lou Pastura

I have been answering AppleWorks questions and helping newcomers learn to get the most out of the program since 1984. The most enjoyable part of this task has been responding to the questions about what AppleWorks "can't" do. Questions like, "Why can't AppleWorks ...?" or "Is there a way in AppleWorks to ...?" present a challenge that's hard to resist. One of the questions that comes up most often is, "How can I get AppleWorks to print in columns?" The purpose of this article is to provide the steps that will enable you to print an AppleWorks Word Processor file in two justified columns.

The following steps are designed to work at 17 characters per inch with the Apple Dot Matrix Printer, the Scribe, or the Imagewriter. Your printer may require some changes based on the character size options available, or you may want to try some changes yourself to accomodate other sizes and styles of characters, different left, right, or center margins, or three columns instead of two.

The first step is to properly prepare the Word Processor document for columnar printing. Since this method of printing in columns eliminates blank lines, paragraphs should be indented rather than identified by a double linefeed. (If extra lines between paragraphs are a must, you can ignore the last sentence and add them later in the Spreadsheet.) Any other indenting (for example, to set off a quotation, or "bullets") should be kept to the absolute minimum. Indenting too far or too much can give your document a choppy look and can result in some very strange looking lines, especially if you use larger character widths. Having prepared your document, go to the beginning of the file (OA-1) and enter the following options (OA-O):

1. CI = 17
2. LM = 0
3. RM = 0
4. PW = 5
5. JU

Next, ESCape to the Main Menu, select (5) Other Activities and then (7) Specify information about your printer. Then select (2) Add a printer, select 12 (Custom Printer) and call it COLUMNS. Having named the Custom Printer, select 7 (Print to Disk) and press ESCape until you get back to the Main Menu. (Note, you only have to set up the Custom Printer once, as it will be saved to disk for future use.)

At the Main Menu, select (2) Work with one of the files on the Desktop and use OA-P to print your file to the COLUMNS printer, which is really onto disk. AppleWorks will ask you for the Pathname you want to use. You'll need to know the name of the Volume in the Drive to which you're printing. The format for the pathname is "/Volume/Filename". Next ESCape back to the Main Menu and select (1) Add files to the Desktop. Then select (4) Make a new file for the Data Base, and then (2) From a text (ASCII) file. When AppleWorks asks, "How many categories per record?", enter a "1". When you are asked for a Pathname, give the Volume and Filename you used for your textfile using the same format as before. When asked for the name of the new Data Base file, just name it something short and easy to type. You won't be needing the name again.

Within the new Data Base file, use OA-P to enter the print mode. Select (2) Create a new "tables" format and name it whatever you like. Use OA-Right Arrow to widen the single column to the end of the last word in the column with no trailing spaces. Now use OA-P to print the file to disk as a DIF file. The menu selection will be 5, 6, 7, or 8 depending on the number of printers you have set up in your version of AppleWorks. Again, you will need to identify the Volume and Filename and use the /Volume/Filename format.

The next step is to take the DIF file you just created and make a Spreadsheet file from it. To do this, ESCape back to the Main Menu and select (1) Add files to the Desktop. Then select (5) Make a new file for the Spreadsheet and then (2) From a DIF (TM) file. When AppleWorks asks for a Pathname, give the Volume and Filename you used when you printed the DIF file to disk, using the /Volume/Filename format. Name the Spreadsheet whatever you like.

Now in the new Spreadsheet, use OA-L to change the width of Column A to the width of the text line with no trailing spaces. Next use OA-C to copy the contents of cell A1 to cell C1. Then use OA-L to widen Column C to the width of the text line you just copied (again with no trailing spaces). Next, use OA-B to clear cell C1. The Spreadsheet on the screen is now set up to print the information in columns A and C using column B as the center margin. (Note: at this point, if you want an extra line between each paragraph, use OA-I to insert an additional row at each paragraph break.)

Next, use OA-O to enter the Spreadsheet Printer Options. Set the CI to 17, the Left Margin to .8, and PH to "NO". Now look at the Lines Per Page and the Top and Bottom Margins. Adjust the Top and Bottom Margins to total 2.0 inches. This should result in the Lines Per Page totalling 54. In the following instructions, 54 lines per page is used as the standard. If you use a Top and Bottom Margin that do not total 2.0 inches or if you use a Page Length other than 11 inches, you'll have to do a little arithmetic to calculate different page breaks according to the Lines Per Page figure. Now ESCape back to your Spreadsheet file.

Position the cursor on cell A55. Use OA-C to copy the cells from A55 to A108 to C1. Then go back to A55 and use OA-D to delete A55 through A108. The contents that used to be in cell A109 will now be in cell A55. Move the cursor down to A109 and copy A109 through A162 to C55. Then delete A109 through A162. Continue this process (54 or 108 lines at a time, depending on your point of view) until all of your document is in two columns. Now simply print your document like you would any other.

To customize this process for yourself, it is only necessary to make changes in the CI and PW options in the Word Processor and the CI and left margin options in the Spreadsheet. In addition, you can make the process even easier by writing most of it (or even all of it if you're a real wiz) as a macro, using one of the many macro add-ons available for AppleWorks today. Happy Columnizing!

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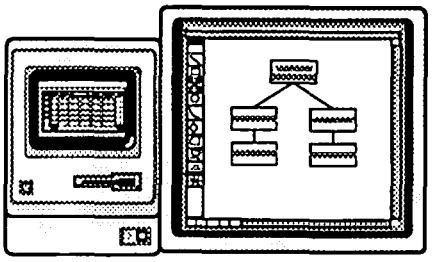

WorkStation Rental

Macintosh workstations are available starting at $10.00 per hour depending on hardware configurations. Price also includes use of the latest popular software.

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Macintosh SE with 19 inch SuperMac B&W Monitor
Macintosh II with 19 inch SuperMac 8 Bit Color Monitor

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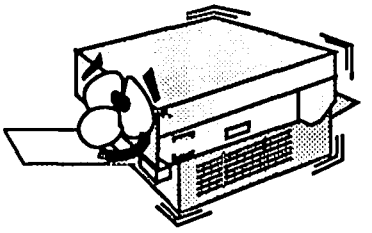
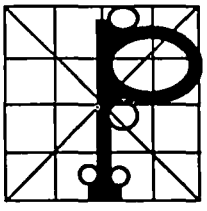
We have the largest selection of Type faces for the LaserWriter on the East Coast. Over 300 fonts are available for your use. We print on Hammermill LaserPlus paper for better camera ready copy.





LaserFonts/LaserSampler II

MacTography sells all the currenty available PostScript fonts. Call for a listing of fonts and prices. The **LaserSampler II,** published by MacTography, is a useful reference guide on all the current PostScript Fonts. Two Volume set **$39.95.**

Scanning Service and Sales

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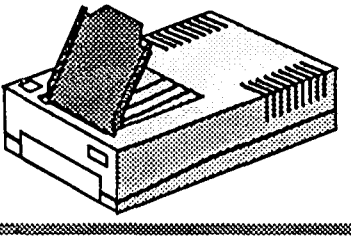
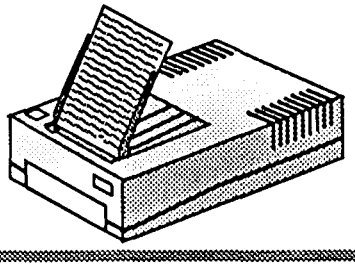
Scan your art work and photographs into the Macintosh. Fast, accurate scanning, saved in MacPaint SuperPaint, TIFF, EPSF format. Self service or Full service available.



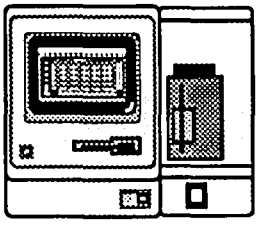


OCR Service—PC Scan Plus

With OCR software from Dest we can read typewritten pages into MacWrite or ASCII for use on the **Macintosh** or **IBM**. Self service or Full service. When Available we will have OCR from Abaton and New Image Technology.

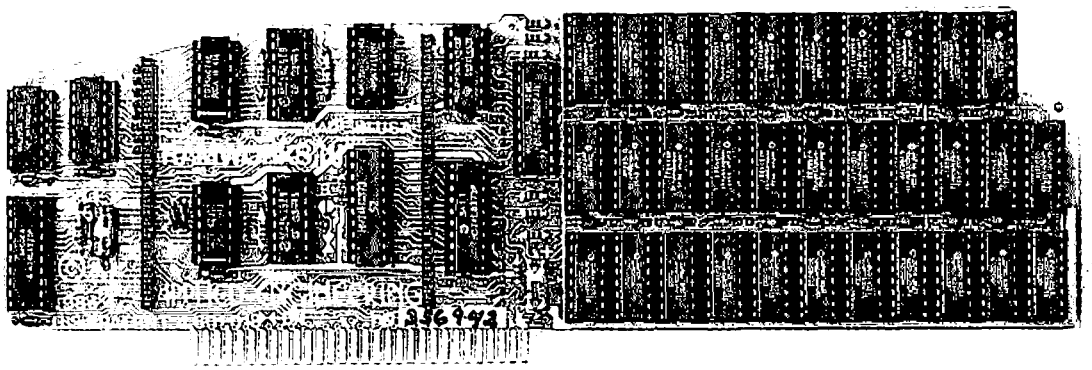
IBM to Mac File Transfer

With the Dayna FT 100 we can transfer data from the IBM 5.25" disk to the 3.5" Macintosh format. Some programs can be transfered with formating retained. Self service or Full service.



RamWorks® III

Patented Performance from the Recognized Leader



With battery backed RAM port, RGB port, increased memory capacity, full software compatibility and more compact design, RamWorks III is a generation ahead.

RamWorks III is the newest 3rd generation RAM card for the Apple IIe. It incorporates all of the technology and improvements that years of experience and over a hundred thousand sales have given us. By selling more memory cards than anyone else and listening to our customers, we were able to design a memory card that has the ultimate in performance, quality, compatibility and ease of use. A design so advanced it's patented. We call it RamWorks III, you'll call it awesome!

The AppleWorks Amplifier.

While RamWorks III is recognized by all memory intensive programs, NO other expansion card comes close to offering the multitude of enhancements to AppleWorks that RamWorks III does. Naturally, you'd expect RamWorks III to expand the available desktop, after all Applied Engineering was a year ahead of everyone else *including Apple* in offering more than 55K, and we still provide the largest AppleWorks desktops available. But a larger desktop is just part of the story. Look at all the AppleWorks enhancements that even Apple's own card does not provide and *only* RamWorks III does. With a 256K or larger RamWorks III, *all* of AppleWorks (including printer routines) will automatically load itself into RAM dramatically increasing speed by eliminating the time required to access the program disk drive. Switch from word processing to spreadsheet to database at the speed of light with no wear on disk drives.

Only RamWorks eliminates AppleWorks' internal memory limits, increasing the maximum number of records available from 1,350 to over 25,000. *Only* RamWorks increases the number of lines permitted in the word processing mode from 2,250 to over 15,000. And *only* RamWorks offers a built-in printer buffer, so you won't have to wait for your printer to stop before returning to AppleWorks. RamWorks even expands the clipboard. And auto segments large files so they can be saved on two or more disks. You can even have Pinpoint or MacroWorks and your favorite spelling checker in RAM for instant response.

RamWorks, nothing comes close to enhancing AppleWorks so much.

The Most Friendly, Most Compatible Card Available.

Using RamWorks III couldn't be easier because it's compatible with more off-the-shelf software than any other RAM card. Popular programs like AppleWorks, Pinpoint, Catalyst, MouseDesk, Howard-Soft, FlashCalc, Pro-Filer, Managing Your Money, SuperCalc 3a, and MagiCalc to name a few (and *all* hardware add on's like ProFile and Sider hard disks). RamWorks is even compatible with software written for Apple cards. But unlike other cards, RamWorks plugs into the IIe auxiliary slot providing our super sharp 80 column text (U.S. Patent #4601018) in a completely integrated system while leaving expansion slots 1 through 7 available for other peripheral cards.

RamWorks III is compatible with all Apple IIe's, enhanced, unenhanced, American or European versions.

Highest Memory Expansion.

Applied Engineering has always offered the largest memory for the IIe and RamWorks III continues that tradition by expanding to 1 full MEG on the main card using standard RAMs, more than most will ever need (1 meg is about 500 pages of text)...but if you do ever need more than 1 MEG, RamWorks III has the widest selection of expander cards available. Additional 512K, 2 MEG, or 16 MEG cards just snap directly onto RamWorks III by plugging into the industry's only low profile (no slot 1 interference) fully decoded memory expansion connector. You can also choose non-volatile, power independent expanders allowing permanent storage for up to 20 years.

It Even Corrects Mistakes.

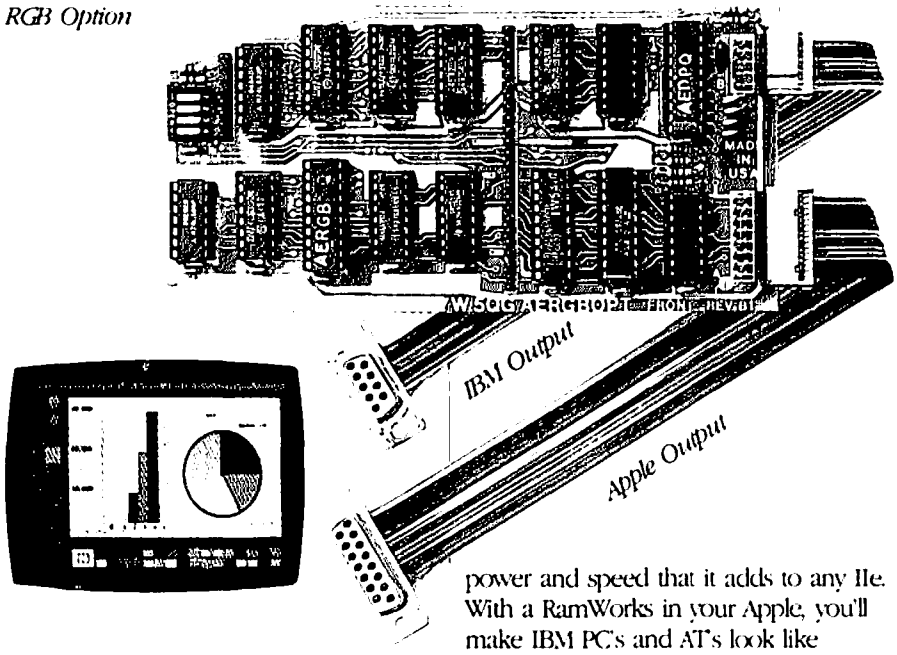
If you've got some other RAM card that's not being recognized by your programs, and you want RamWorks III, you're in luck. Because all you have to do is plug the memory chips from your current card into the expansion sockets on RamWorks to recapture most of your investment!

The Ultimate in RGB Color.

RGB color is an option on RamWorks and with good reason. Some others combine RGB color output with their memory cards, but that's unfair for those who don't need RGB *and* for those that do. Because if you don't need RGB

Applied Engineering doesn't make you buy it, but if you want RGB output you're in for a nice surprise because the RamWorks RGB option offers better color graphics plus a more readable 80 column text (that blows away any composite color monitor). For only $129 it can be added to RamWorks giving you a razor sharp, vivid brilliance that most claim is the best they have ever seen. You'll also appreciate the multiple text colors (others only have green) that come standard. But the RamWorks RGB option is more than just the ultimate in color output because unlike others, it's fully compatible with all the Apple standards for RGB output control, making it more compatible with off-the-shelf software. With its FCC certified design, you can use almost any RGB monitor because only the new RamWorks RGB option provides both Apple standard and IBM standard RGB outputs (cables included). The RGB option plugs into the back of RamWorks with no slot 1 interference and remember you can order the RGB option with your RamWorks or add it on at a later date.

RGB Option



True 65C816 16 Bit Power.

RamWorks III has a built-in 65C816 CPU port for direct connection to our optional 65C816 card. The only one capable of linearly addressing more than 1 meg of memory for power applications like running the Lotus 1-2-3™ compatible program, VIP Professional. Our 65C816 card does not use another slot but replaces the 65C02 yet maintains full 8 bit compatibility.

Endorsed by the Experts.

A+ magazine said "Applied Engineering's RamWorks is a boon to those who must use large files with AppleWorks...I like the product so much that I am buying one for my own system." inCider magazine said "RamWorks is the most

"I wanted a memory card for my Apple that was fast, easy to use, and very compatible; so I bought RamWorks."

Steve Wozniak, the creator of Apple Computer

powerful auxiliary slot memory card available for your IIe, and I rate it four stars...For my money, Applied Engineering's RamWorks is king of the hill."

Apple experts everywhere are impressed by RamWorks's expandability, versatility, ease of use, and the sheer power and speed that it adds to any IIe. With a RamWorks in your Apple, you'll make IBM PC's and AT's look like slowpokes.

Quality and Support of the Industry Leader

RamWorks III is from Applied Engineering, the largest, most well supported manufacturer of Apple peripherals and the inventor of large RAM cards for the Apple. With our 5 year no hassle warranty and outstanding technical support, you're assured of the most trouble free product you can buy.

It's Got It All

- 15 day money back guarantee
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- Built-in super sharp 80 column display, (U.S. Patent #4601018)
- Expandable to 1 MEG on main card
- Expandable to 16 meg with expander cards, with NO slot 1 interference
- Can use 64K or 256K RAMs
- Powerful linear addressing 16 bit coprocessor port
- Automatic AppleWorks expansion up to 3017K desktop
- Accelerates AppleWorks
- Built-in AppleWorks printer buffer
- The only large RAM card that's 100% compatible with all IIe software
- RamDrive™ the ultimate disk emulation software included free
- Memory is easily partitioned allowing many programs in memory at once
- Compatible, RGB option featuring ultra high resolution color graphics and multiple text colors, with cables for both Apple and IBM type monitors
- Built-in self diagnostics software
- Lowest power consumption (U.S. Patent #4601018)
- Takes only one slot (auxiliary) even when fully expanded
- Socketed and user upgradeable
- Software industry standard
- Advanced Computer Aided Design
- Used by Apple Computer, Steve Wozniak and virtually all software companies
- Displays date and time on the AppleWorks screen with any PRO-DOS compatible clock
- Much, much more!

RamWorks III with 64K	**$179**
RamWorks III with 256K	**$199**
RamWorks III with 512K	**$249**
RamWorks III with 1 MEG	**$329**
RamWorks III with 1.5 MEG	**$489**
RamWorks III with 2 to 16 MEG	**CALL**
65C816 16 Bit Card	**$159**
RGB Option	**$129**
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Pinpoint with RAM Enhancement Software	**$79**
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RamWorks III. The industry standard for memory expansion of the Apple IIe. ORDER YOUR RamWorks III TODAY. See your dealer or call (214) 241-6060, 9 a.m. to 11 p.m., 7 days, or send check or money order to Applied Engineering.

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QUICK! I NEED IT FAST!

by Jay Rohr

"High" anxiety, an irrationally blind penchant for production at the expense of care and knowledge, the insistence of uninformed corporate and management powers fresh out of the the Dark Age guild and syndicate systems for "results" at any cost, not only heap untold havoc upon their "underling" slaves, but also reap a poor harvest for the advancement of technology. In our case, it is computer technology.

On the other hand, we must eat. Dollars are earned in proportion to both productivity and the tools of labor. Both involve skilled effort, research, experience, training and knowledge. It is precisely these categories that are not being addressed by those in charge. And all the "dummied" charts, statistics and graphs in the world won't make it any better. These make management look good to other management "experts," but do nothing to help the root cause of why potentially good businesses flail and fail, teeter, topple, and crumble in the American marketplace.

For the few remaining diehards still able to use common sense as rational approaches to living and business, let us learn the invaluable lessons garnered from the cogs to growth as described above (just like Apple did) by NOT doing what they have a penchant for doing. After all, pie chart extrapolations, vu-graph stats, boardroom hummings and theorems from some musky dowager encapsulated in an ivory tower will NEVER, NEVER replace REAL WORK and experience.

Having therefore aggravated and alienated most readers thus far, and in the process, hopefully separating the chaff from the seed, the following impompous pearls of wisdom are offered to true grit personalities, and none others—heaven help us!

The bare rudiment of computerese is a certain amount of literacy—not "computer literacy"—but literate literacy. The second is common sense, and the third is integration of that knowledge into application of that knowledge. (If this sounds like Aristotle, it was intentional.)

Because, who in the world can help a know-it-all? Who in the world can help someone who does not bother taking the time to read, study and go through the tutorials in the applications manuals received with purchased programs? (Of course, since it makes my consulting work both easier and more lucrative, maybe I shouldn't knock it.)

Ninety-five percent or more of the questions I'm asked on various Macintosh programs are covered extensively in either the application manuals or in articles readily accessible to users through periodicals devoted to Macs. Questions like: What is a font? How can I tell the difference between a bit-mapped font and a LaserWriter font? What do you mean, object-oriented? Why doesn't the 27 point Old West font print out well on the LaserWriter in 92 point? What do you mean, System File? Or read some of the letters to the editor in "Publish" magazine to get an idea of the ignorance prevalent in computer graphics and desktop publishing.

But so what? These are, in truth, legitimate questions. We cannot become so computer-sophisticated that it is beneath us to answer them. And not laugh at such questions, because in fact, with the advent of the SE, the Mac II, and the new 600 dot per inch VT600 from Varityper, this equipment is itself responsible for taking us away from basics and into the realm of as-yet-unexplored bits and bytes, PostScript, DOS, color, optical disks and uninvented hardware to compensate for such power.

The VT600 laser printer is considered by AM Varityper Corp. to be a typesetting machine. This is another example of a major leaguer in the graphics arts industry becoming involved in a predominantly Macintosh environment, as shown in previous articles. The VT600 is PostScript compatible, supported by Adobe, and contains 9 resident fonts with 4 additional fonts in the bundle. The stiff price tag of $18,750 also includes a 300,000 copy lifespan, and internal 20mb drive and 6mb of RAM, according to AM Varityper. Image size for letter is 8.2 x 10.2" for letter, and 8.2 x 11.3" legal—not much different from the Apple. Speed averages 10-15 seconds for a printed document, AM said. Samples and a hands-on demonstration were promised to me in mid-May. There will be a report on that.

Although the cost may sound prohibitive to private users, to printers and businesses involved with desktop publishing, it is not. AM Varityper said that, depending on the market, prices may fluctuate upward or downward "according to inflationary trends." Even so, Compugraphic/Agfa is importing a 400 dpi laser printer only slightly less in cost. I'll take the VT600 as a better buy.

TIPS TRIPS

If you are working with graphics and type with LaserWriter output, and would like to avoid being surprised at printout, be aware that:

1) the Mac screen is only 1/4th the proximity of resolution of the LaserWriter's 300 dots per inch, and that the screen is the only guide you have for that at present;

2) use only the actual sizes on bit-mapped fonts, and use these in either MacPaint, SuperPaint or FullPaint FIRST, and THEN cut them over and paste them into other LaserWriter compatible applications that use LW fonts. Where the printing option "Smoothing" is available, do not fail to turn this option on if you want better output of these fonts;

3) if you want a truer representation on your screen and more accurate text copy placement of LW fonts, include as many of the sizes of those fonts as possible in your font menu point size selections—this is particularly true of the cheaper third-party font vendors using Fat or Heavy Helveticas, for example, as these have a tendency to clip off the page or to be off-center as opposed to what is seen on the screen;

4) using the Bold option on LW script type such as Regency Script or Calligraphy causes these fonts to come out as double images—blurred and not eye-pleasing, and therefore not advised for readability;

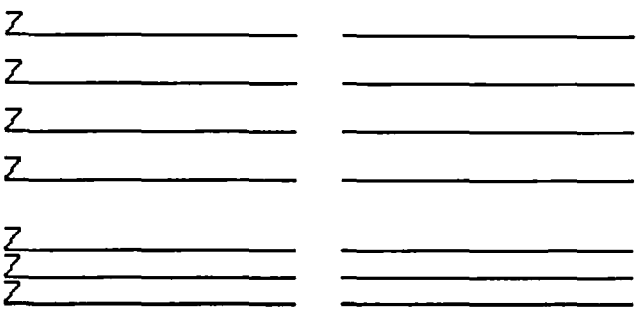
5) if you want a camera or a scanned digitized image to come out better on final printout, and the smoothing option is available, TURN IT OFF—maddening, isn't it?

In a way, what you see, therefore, is not always what you may get, particularly with some graphics images and fonts in

contd.

PageMaker, ReadySetGo3, MacPublisherII and Cricket Draw. This most often happens when all the available screen font sizes are not loaded into the system font file. In CricketDraw, it is necessary to select items, double click for the dialog box, and align as desired to correct any possible discrepancy. When you double-click on bound text, for example, the dialog box containing selections "Begin, Center, End" is particularly useful for representation of your type, and performs very well. Without selecting, you run the danger of hit-or-miss for a final printout that may take upward to 22 minutes Laser time.

When doing forms work in any of the advanced graphics programs where it is crucial that you have horizontal rules accurately spaced apart: 1) do yourself a big favor and buy a printer's line gauge (pica-and-point ruler)—because you'll never know what you are doing if you don't; 2) realize just how important the impact of POINTS are to any work of graphics (1" = 72 points PLUS!), and to the Mac screen itself, and particularly to the x and y coordinates in any PostScript device and language, and also to the other computer languages such as Basic and Pascal; 3) use the text functions in these programs (MacDraw has severe, pre-determined limits).



Z used as guides for leading (rules)

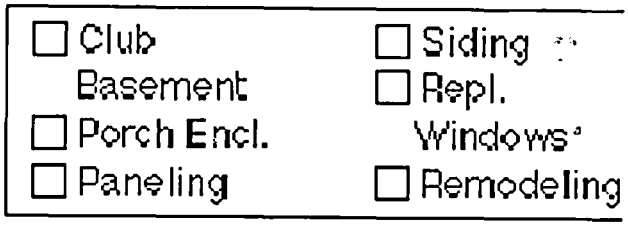
Z's are then simply removed

First describe a very narrow column of text, left aligned, and type a whole series of temporary "Z"s, hitting the Return key after each Z. When done, select your entire (or a partial) block of Zs and call up your text menu to change either the point size or the leading (line space) and NOT the automatic line space function. Give these the distances you want between lines, and hit the OK dialog box. Now you have a guide for where your rules must go. Select a rule width of your choice, and the line tool. Draw your lines exactly on the baseline where the Z rests so that it actually covers the bottom of the letter Z. When done, select the temporary Z text guides and Cut it.

When you do not want an extra line space between paragraphs, but only a fraction of the total of line space to offset paragraphs in a page layout program (M'Word already has this ability as an automatic feature), click your text cursor at the very beginning of the paragraph you wish to separate from the previous one. (If there is a tab space or an indent or an em space, you must click BEFORE that space.) Go to your text dialog box and tell it to give you 6 points, for example. Click the OK box. When the menu closes, hit your return key and you have your extra space. If you have a lot of these to perform in a long body of running text, create a macro key with Automac, Tempo, or FKey resource for this function. Automac is tops for this kind of work.

For those who use PageMaker, one of its most powerful features is White Type. It not only produces true reverses, but it can be used to line up difficult textual material without the necessity of having to go to tabs to create hanging indents, or off-center numbers that must be lined up. A simple approach to line up numbers 1 through 10 for example would be to type 01, 02, 03 - 10. Come back and select the Os in the single digit numbers (particularly useful in a center-aligned tab field) and change these Os only to White Type, which disappears, of course, against a white background. But your numbers remain lined up.

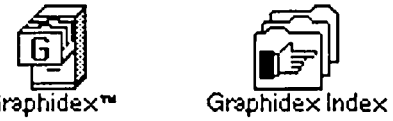
Illustration viewed at 200%



Lining up text with Zapf Dingbat box using White Type

Often you may have need for the open check box preceding or after text. Type the lower case "n", then a word space, then your text. When done inputting your text, come back and select your individual "n"s, go to the font menu and select the Zapf Dingbat font, keeping the same size, but selecting the OUTLINE. Click OK, and come back to the screen, and there is your open box. Where you have text running over onto the next line and you would like it indented the width of the box plus the word space, repeat the exact same procedure for the next line, except this time, after gaining your open box, change it to White Type. Now your text is lined up.

Graphidex is a very powerful graphics index for Paint, Full Paint, and MacDraw documents. Hopefully an upgrade will correct some peculiar gliches in this admirable program. It does not yet accept CricketDraw indexing capabilities. The only way around this is to import CricketDraw images into MacDraw—a dangerous process that may cause system crashes, simply because MacDraw does not have the sophistication of C-Draw's descriptive modes in PostScript.



Even MacDraw documents are painful to document, not so much because of Graphidex programming, but because of the MacDraw bug of changing the page description for LaserWriter output. Thus, to circumvent this, and to index MacDraw PICT files (they must be saved as PICT files), first select CHOOSER or Choose Printer under the Apple menu, and select the Imagewriter as the Printer. If it's not in your system folder, you'll have to put it there in order for Graphidex to index these PICT files. Selecting Imagewriter gives MacDraw an 8x10" image area, which Graphidex needs, and NOT the 7.50x10" image area that M'Draw changes for the LaserWriter. There's one more catch: you have to then group your Draw files, title them with 9 point Monaco, and save this as a new file under the PICT format. Only then will Graphidex be able to index object images.

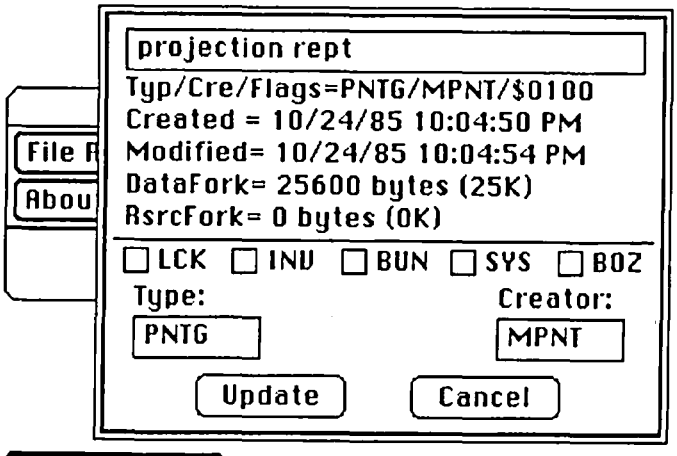
contd.

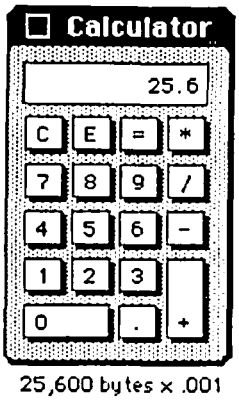
Doug Seward of Cricket told me that CricketDraw's new upgrade release coming in June will address FullPaint documents. In the meanwhile, as a patient artist, graphics designer and typographer, I have had great success in accessing my FullPaint library of art and documents for super refinement in C-Draw, using these bit-mapped images as templates over which re-creation is possible for extraordinary effects. The secret is to cut and paste through SuperPaint or Scrapbook, and NOT the clipboard. And then bring these into C-Draw to do your work.

The second secret is to select a fine line from the C-Draw line tool box located on the bottom menu by double-clicking on it and calling for a .25 line in the dialog box. This is equivalent to LaserWriter printout, because 25 is 1/4 of 100, or 300 dots vs. 72 dots. Then use the pencil (if you are an artist) or the polygon tool if you are not, and draw over the image. Outlines only, please. Do only small sections with the pencil tool because the Mac runs out of memory quickly. When done, select your newly-created refinements on the bit-mapped graphic, group them, and remove it from the host image. At this point, you can use the host image as a further guide for adding textures or special Fountain effects, or trash the bitmap, and go on a creative binge with C-Draw. It teaches patience, but the output is well worth the effort. The possibilities are endless. Now we see why we need more memory and higher upgrades to our equipment.

ComicWorks has been upgraded to version 1.1 (also called GraphicWorks), and we'll be discussing it in a future article.

To easily and simply estimate time spent on your work (and costs, if you are billing), use the JC Clock PD accessory, the Apple Alarm Clock, Get Info, DA File and Calculator. Any combination of these will do the trick, as well as keep you informed on job and file records.





25,600 bytes x .001 = $25.60

Using DA File while within an application, I can estimate my billing. Open up DA File's Get Info window and select the file you have just closed without leaving the application. The illustration shows all the information you need (and more) on your document. Jot down, or remember the number of bytes in your file. Close it, and open the Calculator. Multiply the number of bytes by .001 (used as an example only, because only you know what your overhead is), and you come up with a fair price for your work in most cases.

If you are spending several hours to produce a 23K file, obviously you would charge by the hour. If you are using OverVUE with sophisticated macros, you would then make a one-time charge for the creation of that macro (customizing a customer's job). If you are generating reports from OverVUE or Excel and merging these into other documents, appropriate time charges should be added as an item on your billing. If you are including graphics and scanned images, then these, too, should be itemized on your bill. None of these programs and the equipment that produce these results are free; we have to pay for them. And just because we have the ability to do these things within the Macintosh environment does not mean that we should give away the results of all of our knowledge and expertise.

Jay Rohr has a private practice as a Macintosh consultant and tutor, and has set up Mac systems in newspaper offices and graphics studios for 2 years. His specialty is graphics, commercial art and typography.

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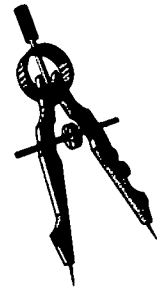

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by G Brandenberg

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- Continuous read-out of position while moving object in 3-D space
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- Measure current size of object
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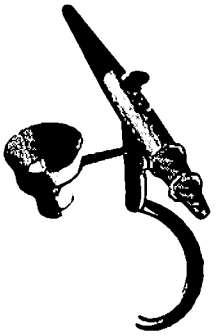
- Absolute alignment: Align centers of objects to either the vertical or horizontal axis passing through the center of the universe

Production



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Ready, Set, wait a minute...

by Alicia Angelides

Often our first impressions of software are based on its ease of use without a manual. Indeed, an enjoyable part of learning a new program is plunging in without documentation and shift-clicking your way around. What you uncover is a variety of command structures and user interfaces, some intuitive, others not quite understandable. The following review of Ready, Set, Go! 3.0 reflects a user's first experience with the program without a manual. The reviewer has a journalism degree, is experienced with graphic design and page layout, and is a fan of PageMaker. To that extent, this review includes an abbreviated comparison of RSG 3.0 and PageMaker 1.2 and looks at conventional graphic design principles in desktop publishing software.

Ready, Set, Go! 3.0 ...Not bad, but I have problems with a few features (or lack of). First, some defaults are awkward. For example, suppose you select an object then hit backspace to delete it. You'd expect it to disappear. Instead, you are asked if that's *really* what you want to do (which itself is annoying, but it gets worse). My first reaction is to ignore the inconvenience and hit return to accept the deletion. The default, however, is NO. If you spend a lot of time using select-backspace, this is frustrating, to say the least. What I find even worse is selecting an object, choosing **Clear** from the **Edit** menu, and getting the *same* dialog box. I already made the decision: **Clear** the object. Obviously someone thought that would be a frequent mistake, since **Clear** is bordered by the treacherous **Paste** and **Select All...**

There are 5 views (plus "facing pages"): size to fit (no scroll bars active), half size (vertical scroll bar only, regardless of paper orientation), 75 percent (both scroll bars), full size (both scroll bars), and double (both scroll bars). Facing pages have no scroll bars and are not interactive. A nice feature is all pages retain the same view.

Turning on/off **Rulers** and **Grid** ("column guides" in PageMaker) is awkward. There aren't any keyboard commands. In fact, it's a four-step process, if you count pulling down menus and clicking: pull down **Special** menu, select **Preferences**, turn **Rulers** or **Grid** on/off, click OK (or return). These are *constant* functions that should easily be accessible.

I couldn't find ruler guides (guides you pull from the rulers to help when placing text and graphics, like those found in PageMaker). Nor could I find a grabber hand with any click + anything sequence. A minor point, but why have two entries under the **Text** menu for Hyphenation: **Hyphenation On** and **Hyphenation Off**? It sort of diminishes the purpose of the check mark.

For reasons unknown to moi, I couldn't **Save** my text. I could **Save As...**, and subsequently **Save**, but I couldn't **Save** regardless of the page (master vs. document), the active tool, a selected object, the temperature in my parking lot...

Disclaimer?

Without a manual I'm really at a loss. All of these points may very well be lies, and I've insulted the product needlessly if so. But on with the complaints, anyway.

You define text blocks in which you either type text or "get" it. I *love* the lightning icon tool (linker), which allows you to direct and redirect the flow of your text from block to block, but I had a hard time understanding why text disappears at the end of an unlinked block. Actually, it just remains hidden until you determine another block to link it with. This means (?) you must predetermine all your text blocks, that is if you care to see your text as it is typed or placed. I care. The advantage, once linked, is text automatically flows from column to column or across pages. The exception to my backspace-dialog box dilemma is inside text mode, where I am not asked if deleting is what I planned to do.

I gave up on the Tabs (Figure 1). It's reminiscent of Mastermind, the game that tells you, "You have two correct colors, but only one is in the right place. Try again." Here's a *great* bomb: Pull up the Tabs menu. The two columns of circles on the far left are headed by the words **On** and **Off**. Presumably, these are merely column headings, but click on the word **On**, and it bombs.

There is no on-line help. Big mistake, I think.

Martin Milrod himself pointed out these shortcomings: No arrowhead lines; no rotate ability; pointer cursor doesn't activate all boxes, like the graphic block tool used to import graphics. I would like a diagonal line tool and a freehand draw tool.

I had trouble with the crop tool. It's really not fair to call it that; the tool *scrolls* your graphic across the "window" drawn for it, but it does not *crop* it. To crop, by necessity, resizes a graphic since to crop means to trim.

Believe Webster's. Which brings me to another point: Personally, I find some of the jargon sub-basic. Hairline, gutter, column width, 20 percent shade ...these are industry standard lexica. Not thin, grid, and guess-the-shade-if-you-can menu choices. But back to the graphic ...RSG does let you resize a graphic, but you do so from a dialog box. Unless your visionary bios are in synch, you're going to flip between your page and the dialog box a number of times before you're satisfied. I miss the click 'n shrink...

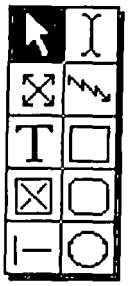
I couldn't figure out how to randomly select areas to start typing new text. When I click the text icon inside a text block, the cursor appears at the last place of insertion. Perhaps you nest text blocks inside one another? It's really the reverse of PageMaker, where you define your text block as you go. RSG starts with a size, and you fill it in.

I don't know what the Print menu looks like for the LaserWriter. I'd hope it would have interesting options such as those in PageMaker, like Max Print Area, Thumbnails, Smoothing, Substitution, etc. (yeah, I love it...)

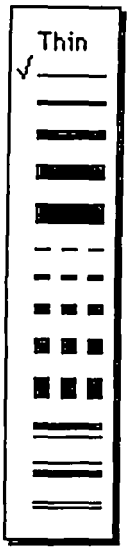
You cannot make your tool box, scroll bars, page icons, or line box disappear completely. You can *move* all but the scroll bars (command + click 'n drag) underneath your page, if they're in your way. The zoom box blows out the tool box, line box, and page icons but leaves the scroll bars.

Ahh... the floating line box. A location error, in my humble opinion. Until we can all afford fullpage displays, *please don't clutter the view.* How often do you anticipate varying your line design within one document? Within your lifetime, for crying out loud. Truly, it should have been a pulldown menu. As it is, for my viewing pleasure I hide it underneath my page and float the tool box on the page.

tool box



line box



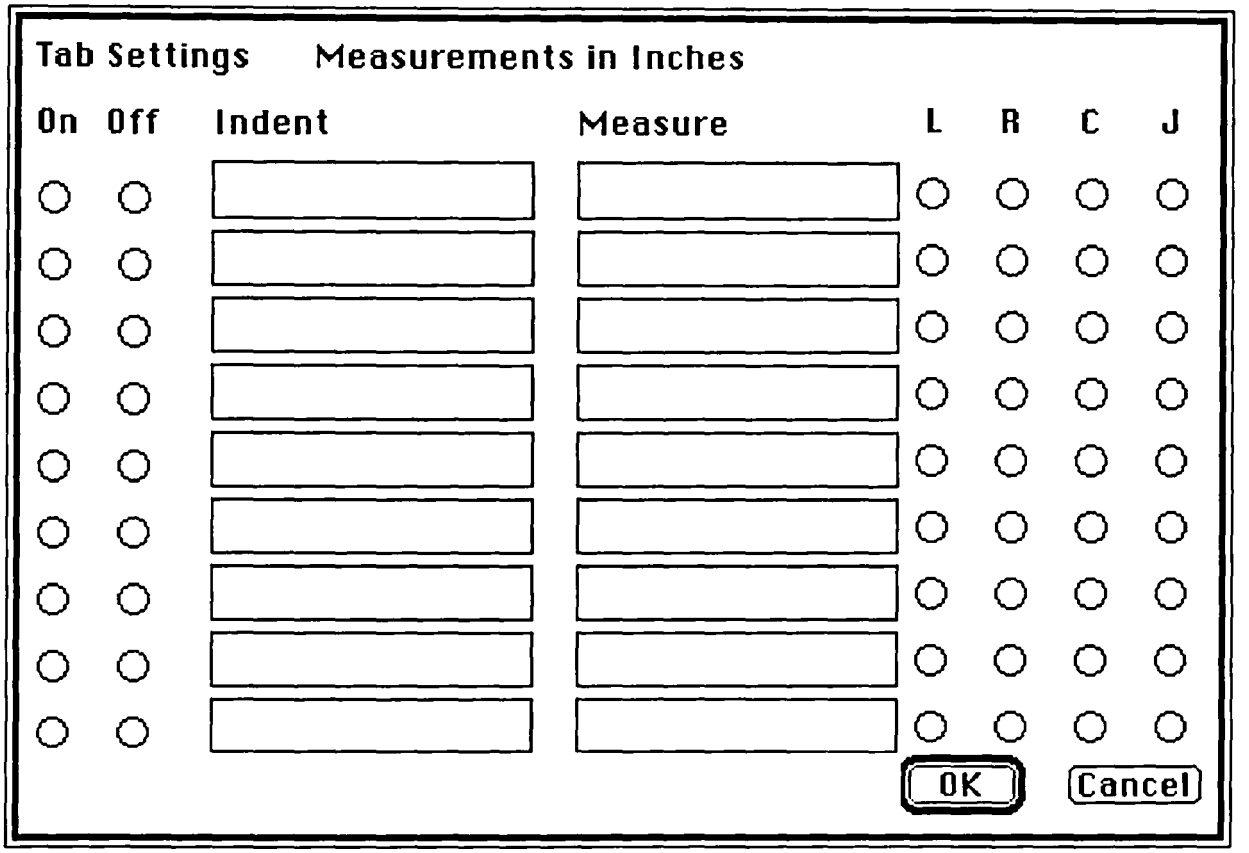


Figure 1: RSG Tabs. Pointing the cursor to the word "On" and clicking results in a system bomb.

There is no *real* pasteboard on which to play with graphics, edit objects, move pieces from page to page, etc. There is an area on each page that serves as a storage board, but that's all it's good for. You can't throw artwork on it to transfer to other pages, since each page has its own, separate storage board. Nor can you successfully manipulate objects or text on the board because it is shown only in the size to fit view. We all know how easy *that* is to work from. A nice feature in PageMaker is you can work with artwork or text on the pasteboard from size to fit to 200 percent size and transfer items across pages -- one pasteboard per document, not per page.

I never found one move that activitated the **Undo** command. I tried everything I could think of.

Okay!!! Enough complaints, the audience cries. Fine. Here are some goodies:

The ability to link text blocks so stories flow from page to page. Actually, this is *wonderful*. RSG repaginates automatically when you add or delete text.

Arrow keys active in text mode.

Extremely rapid switching between pages.

"Other" size fonts (e.g., 7 point Times).

Glossary and spell checker (although I couldn't figure out how to work the latter).

Run around text, find/replace, and shift up and shift down. Shift up and down are more than just sub and superscript commands. *You* determine by how much your text is raised or lowered. Perhaps this would be most useful in equations?

Hyphenation, kerning, letterspace, and go to page... features.

Number of pages per document is dependent on disk space.

Select all... option.

These are kinda neat. I'd never seen the time & date stamp:

4 (page number)
[command + option + shift + 3]

3/14/87
[command + option + d]

Saturday, March 14, 1987
[command + option + D]

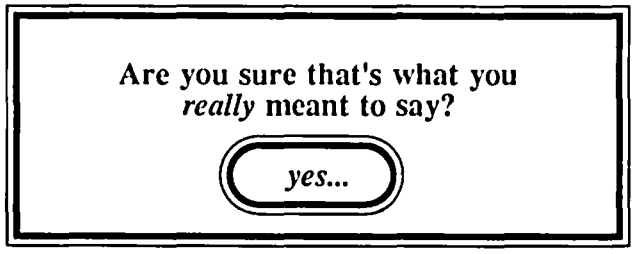
2:11 AM
[command + option + t]

Undoubtedly there are numerous points I've missed without a manual. Knowing I'm allowed to revamp my opinion after viewing the documentation (and PageMaker v. 2.0), I'll venture forth. I think it's a very useful application, but not nearly as slick as PageMaker, at least in appearance. PageMaker has a few more useful keyboard commands, such as Rulers, Guides, Hide Tool Box, and Type Specs... After three hours with RSG, the keyboard locked on me twice (in conjunction with the backspace key), and I had to reboot. I discovered, after making undesirable changes, that there is no Revert command. So I close without saving changes and reopen ...but still pondering the *two* entries for hyphenation, it makes me wonder why they missed the boat on the Revert command. But then, a programmer I'm not. Where RSG shines is in its adherence to rudimentary page layout design principles: start with a blank page and begin drawing boxes. I think that sparks creativity in a way PageMaker can't offer.

'Nuf said. Once I find the manual, I'll do this again. For $845.

Post Script

Since this review, I have experimented quite a bit with Ready, Set, Go! Acclimation to software idiosyncrasies must be a natural progression, because I don't find it nearly as ...unseasoned? as I first believed. RSG is a fine page layout program. Letra Set must agree, because the price jumped from $295 to $395 on March 22. Of course, all this might simply mean I learned how to use the program and it was perfect before I ever thought to compare it with PageMaker. Indeed, there are probably a number of folks who think I've belittled RSG, and to them I say... PageMaker is still my first choice.



Alicia Angelides is vice president of Mac Consultants, an organization of Macintosh users and educators committed to helping small businesses and individuals with Macintosh-based business systems.

(Ed. Note: This article was submitted to us in PageMaker, and we could not easily modify it. All the "white space" makes a good appearance, but unfortunately the Pi cannot afford, as a general practice, the luxury of printing in this manner. We would probably double our Journal size and increase our costs accordingly.)

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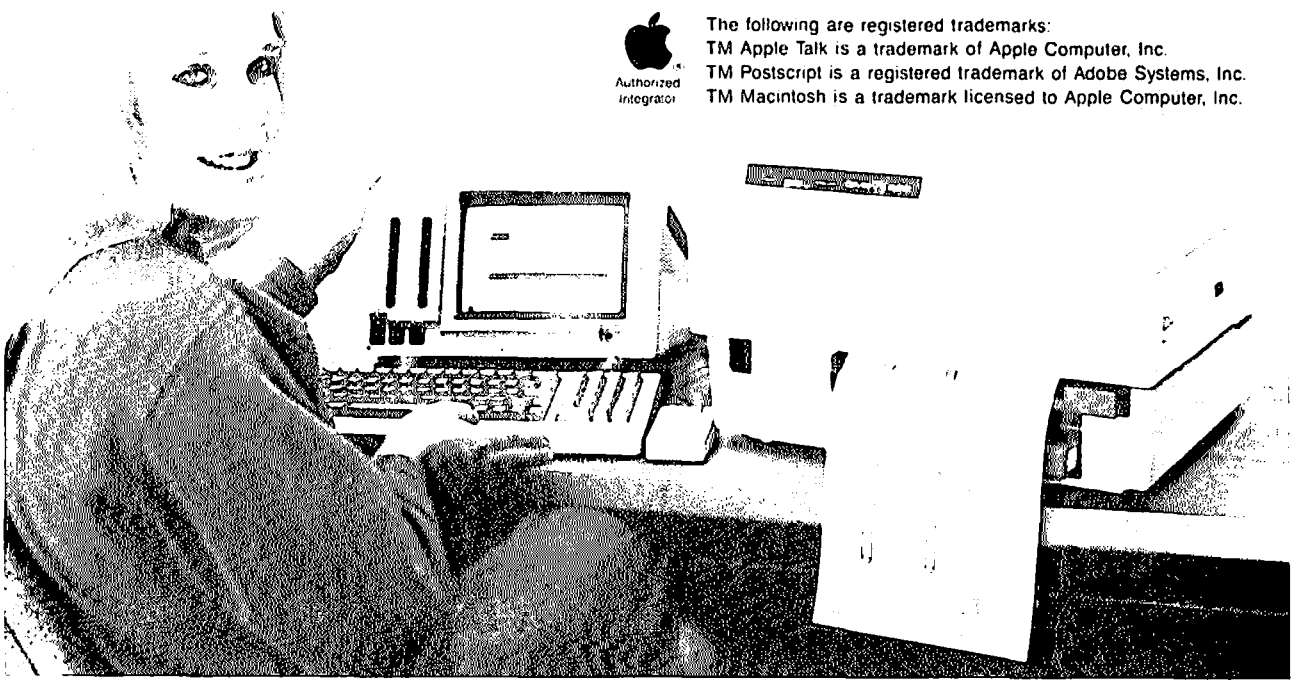

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PATENTABILITY OF SOFTWARE

by Joseph A. Hasson

It has been observed that computer software is a hybrid viewed from the perspective of intellectual property rights. This hybrid quality stems from the fact that a software program is a medium through which Ideas—intellectual concepts—are expressed, but is implemented through the physical aspects of the computer—the electronic equipage, the memory, storage registers, etc. These allow the program to be translated into meaningful, usable terms. The interaction or synthesis that occurs between the Ideational and the physical permits the attainment of some predetermined user objective—a word processing activity, a spreadsheet result, a graphic display, a musical synthesis. The expression of Ideas is that aspect of software which enables it to qualify under copyright law. With the patent, the notion of Idea is implied but, in addition, it must be useful, novel, embodied and not obvious. This interaction with the physical creates the possibility of patents and has presented the Courts with the problem of determining whether or not software does, indeed, qualify for patenting.

Given this synthesis of the hardware-software framework, it is proposed that computer software comes under the aegis of several legal and protective unbrellas, including copyright and patent law, trade secrets. In an earlier article, the relationship between computer software and copyright law was explored in a preliminary way. In this essay, the aim is to explore the relationship between computer software and patent law. Copyright laws protect modes of expression—literary works, musical scores, dramatic works, pantomimes, choreographic works, pictorial, graphic and sculptured works, motion pictures, audovisual works, and sound recordings. Patents protect the functional implementation of the Idea concept. The functional implementation of Ideas impinges on how the software is organized and how it operates. A software patent could afford protection against other software, independently developed, which yielded similar results but had a different code structure. Hence, the belief that computer software is not patentable is misplaced. This misconception probably has its genesis in the tortuous and uncertain road patent protection for software has followed. For instance, it has been observed recently "that processes that use computers may be patented but that protection does not extend to software programs themselves." And "no protection (exists) under current patent law for the large number of computer programs that are neither embodied in firmware nor related to a process of production." But there are some disadvantages to protecting software with patents. They are more costly to obtain than are copyrights. The procedure followed is more complex and time consuming. However, where considerable costs in development have been incurred and valuable concepts are involved, these added costs are negligible when compared to the greater protection received.

In general, patent law is concerned with the protection of creative achievement in the form of innovations that are utilitarian. It provides economic incentives for the effort required to attain patent protection. It accomplishes these two objectives—protection and incentives—through the grant to an inventor of control over his invention.

Section 101 of the U.S. Patent Code (Title 35 U.S.C.) observes that patentable inventions encompass "any new and useful process, machine or manufacture, or composition of matter, or any new and useful improvement thereof. . ."

In addition, patents can be issued for decorative designs (Chapter 16—U.S. Patent Code) and organic plants (Chapter 15 —U.S. Patent Code). The coverage in Section 101 stands in contrast to that in Section 102 of the U.S. Copyright Law (Title 15 , U.S.C.) which deals with the "original works of authorship fixed in any tangible medium of expression now known or later developed from which they can be perceived, reproduced, or otherwise communicated, either directly or indirectly or with aid of a machine of device." Section 102 states explicitly that copyrights do not extend to any idea, procedure, process, system, method of operation, concept, principle or discovery regardless of the form in which it is described, in such works. A test of "works of authorship" is based on "originality" and "fixation in tangible form."

Requirements for the issuance of a patent are more stringent than for a copyright. Conditions which must be met include "novelty" and "non-obviousness." Account must be taken of "prior art" so that the subject matter as a whole would not have been obvious to a person with ordinary skills in the art at the time the invention was made. (Section 103, U.S. Patent Code). Each of these terms—both those employed to delineate patentable inventions (Section 101) and those which deal with "novelty", "non-obviousness", "prior art", etc. are like black boxes, the contents of which are determinable on a case-by-case basis by patent examiners and judicial authority before whom patent litigation comes.

Regulations and litigation covering patents and copyright law are extensive and complicated. Earlier, we noted [W.A.P., Vol. 9, No.5 (May, 1987), pp. 45 ff.] that the law most applicable to computer software is that of copyright. Patent law is more commonly applied to computer technology in the form of hardware and computer applications in industrial systems such as robotics and process controls. However, the legal barriers are being surmounted so that patent law can be applied to computer software as well under certain conditions.

The reasoning of the courts for establishing a body of law dealing with the patentability of computer software has been complex and replete with legal subtleties. Considerable uncertainty has existed as to the correct application of law in a field which is inherently difficult. This uncertainty has been added to by a running conflict over the broad issue. In industry circles, computer software producers have favored extending patentability to software as a way of protecting the considerable investment required to produce software. Large hardware producers and vendors have called for less stringent protection. Their self-interests are better served by a wide availability of software to run on their computers.

A continuous battle has also been waged between the U.S. Patent Office and the U.S. Court of Customs and Patent Appeals (CCPA). The former has been against patenting software; the latter just as fervent in favor of patents for software.

While the patent claim, written in technical language, must be broad enough in its coverage to identify a subject

contd.

matter, it must be narrow enough to establish the uniqueness of the claim. Too broad a claim risks being obvious to persons skilled in the art, anticipated as "prior art" by patents issued earlier or other technical developments. "Narrowness" is desired since it establishes a claim that is technically unique and non-obvious.

A patent application must discuss preexisting technology, include specifications (i.e. disclosure) and be accompanied by drawings and a fee. The preexisting technology comes under the heading of "prior art". This must be ascertained to establish whether or not a claim meets the statutory criteria of "novelty" and "non-obviousness". "Prior art" shall comprise any information, known by, or made available to the public by means of disclosure in tangible form or by its being placed on sale anywhere in the world, prior to the effective filing date of the application. (Recommendation I, Report of the President's Commission on the Patent System, p. 5.) "Prior art" does not include disclosure of an invention (i) in a display in an internatonal exhibition, or (ii) unauthorized public divulgence of information.

"Disclosure" is required when a patent claim is filed as laid down in Section 112—Specification—of the Patent Code. A potential source of conflict arises. Strong commercial interests require the maintenance of secrecy of valuable systems and processes. A patent, on the other hand, requires detailed disclosure. In order to maintain secrecy one may have to consider alternative available methods of protection. Hence, patent protection is neither the only nor the required nor the optimal form of protection for innovation in the useful arts.

The first case on software patentability ruled on by the Patent Office Board of Appeals occurred in 1964 in Ex Parte King and Barton [146 U.S.P.Q. 590, September 10, 1964]. The Board ruled against the claimant and supported the patent examiners who had rejected King's application on grounds that no novel structure was involved when a program with data in Polish notation was stored in a computer. Then, in 1965, a Presidential Commission, appinted to study the patent system, concluded that computer software should not be patentable. It recommended legislation to that effect. In its recommendation, the Commission distinguished between (i) direct and (ii) indirect attempts to patent programs. "Direct" attempts are rejected on grounds of non-statutory subject matter, i.e. the subject matter does not come within the scope of Section 101 of the Patent Code. "Indirect" attempts have involved "drafting claims as processes or a machine or components of thereof programmed in a given manner rather than as a program itself." Recommended legislation in the form of the Patent Reform Act of 1967 [S. 1042, 1st Session, 90th Cngress, Feb. 21, 1967] would have added Section 106—Computer Programs Not Patentable—to the U.S. Patent Code; it would have stated that, "a plan of action or set of operating instructions, in whatever form presented to cause a controllable data processer or computer to perform selected operations shall not be patentable."

The legislation did not become law. However, it did inspire the French who adopted a Patents Act in 1968 which prohibited patent protection of computer programs. The upshot of all these developments was to spread considerable uncertainty regarding the patentability of software.

Next, on October 14, 1966, the Patent Office issued Guidelines for appraising program-related inventions. These were withdrawn in 1968 and replaced by narrower guidelines. In turn, these were rescinded on November 1, 1969. There is some merit to dealing briefly with these guidelines for they raise issues that are highly significant in appraising the patentability of software. The Patent Office in its first set of guidelines sought to place the question of computer patentability in something of a historical context. It referred to "Jacquard card belt, a player piano, a plug board, or a magnetic tape." The respective, accompanying programs were called "a weaving design", "a musical composition", "a switching scheme", or a "document listing a series of instructions which a machine will execute." In these instances, patentability depended on the "presence or lack of statutory subject matter." The Guidelines, despite these antecedent instances, were "not intended to indicate that there are no special unresolved problems in the field of 'programs' for electronic computers."

The Guidelines also note that "special problems of patentability arise in the computer, data processing and automatic control field" because of the presence of mathematical processes and equations. They establish, first, that mathematical formulae and procedures along with the discovery of basic laws of nature may not be patented, irrespective of their signficance. Mathematical formulae and procedures do not come within the category of statutory matters enumerated in Section 101 of the Patent Code. They are "not a treatment of 'materials or substances'"; nor are they a process, a machine, a manufacture, a component of matter, or useful improvements thereof. Hence, they are not patentable. There are two kinds of processes: an algorithm process and a utility process. An algorithm process is "a series of steps for the manipulation or evaluation of data." It may be necessary to carry out these steps with a programmed computer. The results of this are transformed data. On the other hand, a utility process defines a series of steps which induce changes in the state of the components of the computer. The sequence of steps may be governed by an algorithm, may affect the functioning of the computer and induce changes in the state of affairs within the computer. Some processes may combine the algorithm and utility steps—that is, they manipulate or evaluate data and, at the same time, induce changes in the status of components within the computer. Under such conditions, the patentability involves viewing the process as a whole and against the background of "prior art."

The mere presence of an algorithm does not render the process unpatentable or non-statutory, i.e not coming under Section 101. The algorithm may permit the utility step. A process with utility steps may or may not be old in and of itself; it may include an algorithm which when solved, may produce a new and unobvious result as prescribed under Sections 102 and 103 of the Patent Code. Hence, it may be patentable over "prior art." This discussion is summarized in the following terms: (1) A process carried out by a programmed apparatus is (a) non-statutory when the process claimed refers merely to the algorithm and (b) may be unpatentable over prior art. (2) If an algorithm in the process yields a new utility function which is a statutory claim and is not in prior art, then, the presence of the algorithm does not affect the patentability of the process. This is a crucial element when considering the patentability of software.

From this discussion, some broad principles should be noted for determing what may or may not be patentable. First, natural laws are not in and of themselves patentable. This differs from the separate processes invoked to implement

contd.

the laws. Similarly, (i) abstract ideas and (ii) mental processes are unpatentable.

In the patent field, an Idea can be defined as "an intellectual notion that a thing can be done." If that which was do-able were, in fact, done and if were covered by Section 101 and met the criteria of Sections 102 and 103, then it might be patentable provided it satisfied the conditions of "prior art." However, theories or intellectual plans of action (abstract ideas) do not qualify as patentable. An Idea or theory leaves only a state of mind in the one to whom it is suggested. It produces no physical effect, per se; hence, abstracts ideas are not patentable. One can array sound economic arguments for such a viewpoint. Investment in human beings has value because of the real goods or services that humans can produce; investment enhances that potential. Abstract ideas have intellectual appeal; but from an economic point of view they derive value only if embodied in tangible form as prescribed in Section 101. They can, then, be employed per se or combined with other productive factors to increase the real output of goods and services. They are welfare-enhancing.

Two added observations on conditions of patentability in the United States should be mentioned. We have noted that a fundamental concept in patent law is that laws of nature are non-patentable. However, processes which operate on these laws in order to obtain some end result may be eligible for a patent. A leading case where the distinction between "law" and end result was involved dealt with invention of the telegraph and the telephone. In the case of the telegraph, Samuel F.B. Morse was granted a patent for the use of electromagnetism to produce telegraph signals. However, he was denied a patent for the use of electro-magnetism to print material at distances on grounds that the patent would preempt a natural process. By preempting a natural process— electromagnetism—others would be denied its use and scientific progress which is socially desireable would be thwarted. The general principle, then, is that the discovery of a natural law does not imply that the discoverer can preempt its exclusive use. This condition is intended to avoid discouraging use of a natural law in a creative way, resulting in a patentable process. Usurpations of the usage of these laws would inhibit rather than promote the development of science and technology.

Similarly, the judicial process has excluded "mental steps" and "methods of doing business" from the scope of patent law. The basic idea of the "mental steps" doctrine is that if an essential component of a process consists of a mental step, i.e. could be carried out in one's mind, the invention which employed the process could not be patented. There are no purely chemical or mechanical steps but only significant human involvement. Mental acts may involve simple logic such as computing, measuring, dividing, etc. Any process which merely performs these and similar acts are unpatentable. The exclusion of mental steps from patentability,therefore, has the broad effect of preventing preemption which would impede creative activities.

"Methods of doing business" are non-statutory. Hence, inventions that claim to contain an "idea" of transacting business are not patentable. We have observed the distinction between the idea and the means of carrying it out. The latter—implementing an idea or theory—is patentable subject matter. In the case of Paine, Webber, Jackson and Curtis vs. Merrill, Lynch, Pierce, Fenner and Smith, Inc. the issue was whether or not a non-statutory manner of doing business was patentable if it were implanted in a computer. The invention by Merrill Lynch contained several financial subroutines which that firm claimed yielded a synergistic effect when combined into a single account. Implanted in a computer, it yielded an invention which was patented. The patent, challenged by Paine, Webber, was upheld by the Court. [564 F.Supp. 1358 (1983)] The Court rejected the claim that a computer program was nothing more than an algorithm.

Another limiting condition on patentability was initially stated in the Supreme Court case, McKay Radio and Telegraph Co., Inc. vs. Radio Corporation of America [40 USPQ 199, Jan 30, 1939]. A mathematical formula employed to insure that radio waves sent out at correct angles achieved maximum effectiveness. The mathematical formula, a trigonometric function of two variables, had been published originally in a German scientific journal in 1898. The invention which employed this mathematical formula was upheld by the Supreme Court as patentable on grounds that it had gone beyond the limits of the formula: a "new and useful structure" had been created.

These general issues are relevant in determining whether or not computer software is patentable. No doubt has ever existed that computer hardware and associated manufacturing activities were patentable. However, from the 1960's through the early 1980's, considerable uncertainty had existed as to whether inventions implemented in whole or in part through computer programs qualified for computer protection. This condition originated in the diverse positions taken by the Patent and Trademark Office and the Court of Customs and Patent Appeals (CCPA). It was aggravated by uncertain guidance which emanated from several decisions handed down by the Supreme Court:

Supreme Court thinking on the patentability of software can be subdivided into stages, differentiated by several landmark cases.

Stage (1): The initial period was betweeen 1952 and the Supreme Court decision of 1972: Gottshalk vs. Benson [409 U.S. 67, 1972].

Stage (2): The second period ended with the Supreme Court decision of 1978 in the Parker vs. Flook case [437 U.S.584].

Stage (3): The third period which ended in 1980 was marked by the Supreme Court's decision in the Diamond vs.Diehr case [495 U.S. 926].

Approximately, a dozen cases on the patentability of computer software were decided on by the Court of Customs and Patents Appeals before the Supreme Court consented to hear Gottshalk vs. Benson. The case which lead to reversal of an earlier decision of the CCPA was the first dealing with computer-related inventions. It involved a method of converting binary coded decimal numbers into binary numerals for use with a general purpose computer. Mathematical procedures which could be completed with or without a computer were involved. The Court decided that the mathematical formula employed in effecting the conversion would have been wholly preempted by the patent. Granting the patent would have been tantamount to a patent on the algorithm itself. This was not acceptable. (The Court defined "algorithm" as a "procedure for solving a given type of mathematical problem.") Hence, the Court decided the process was not patentable. The mathematical process involved could be done

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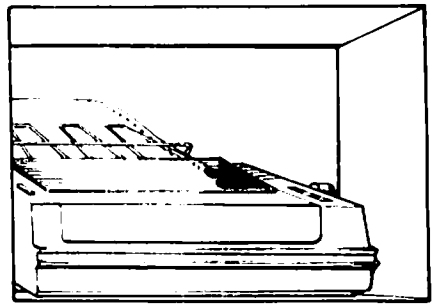

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mentally without a computer. Since mental processes are not patentable, this was an added reason for not granting the patent. Overall, several relevant rules evolved out of this Supreme Court decision:

(i) A scientific truth or mathematical expression is not a patentable invention. A novel and useful structure created with knowledge of a scientific truth is patentable.

(ii) An Idea itself is not patentable.

(iii) A abstract principle on a fundamental truth cannot be patented.

(iv) Discovery of an unknown phenomenon of nature is not patentable. Patentability requires application of a law of nature to a new and useful end.

(v) Since phenomena of nature, mental processes, abstract intellectual concepts are basic tools of science and technology, preempting them through patenting is not acceptable.

(vi) A process is a mode of treatment of certain materials to produce a given result. It is an act or a series of acts performed on transformable subject matter which is altered to a different state of being.

The second period leading up to the Parker v. Flook decision [437 U.S. 584 (1978)] by the Supreme Court was marked by another series of twelve or so cases decided by the CCPA. The most significant of these was In re Freeman [197 USPQ 464, (CCPA 1978)], commented on below. The Flook case involved a mathematical method for updating or enhancing alarm limits in a catalytic conversion case. The claim was rejected on grounds that the novel aspect of the patent was a formula or algorithm. Also, the processing activity after its solution was insufficient to justify a patent. Finally, the activity for which a patent was sought had to be viewed as a whole and not solely in terms of its components, some of which might be old and others new.

One interim case [In re Freeman] prior to Flook and decided on by the CCPA contained guidelines for determining when a patent claim preempts non-statutory, hence, unpatentable subject matter. This case is significant because it dealt with the treatment of algorithms in patent claims—an issue that has received considerable attention in Court decisions. (A much broader definition of "algorithm" was adopted by the Court, namely, "a step-by-step procedure for solving a problem or accomplishing some end.") Step One entails asking whether or not the claim, directly or indirectly, contains an algorithm (in the Benson Case sense). Step Two requires assessing the claim to determine whether or not it preempted the algorithm. A preempting algorithm could not be used by others without running the risk of patent infringement. If these issues were decided in the affirmative, the claim was deemed not patentable.

The third period ended with the Diamond vs. Diehr case [445 U.S. 926, 1980]. An industrial process for molding rubber products was involved. The Court interpreted the Congressional intent of the Patent Act of 1952 to be that statutory subject matter that was patentable should include "anything under the sun that is made by Man." This interpretation, subsumed under Section 101 of the Patent Code, was clearly a very broad interpretation. The Supreme Court defined "process" as "a mode of treatment of certain materials to produce a given result" or "an act or a series of acts performed upon a subject matter to be transformed and reduced to a different state or thing."

The Diehr claim was that the transformation of an article —raw, uncured synthetic rubber into a different state fell within Section 101 categories of patentable subject matter. The conclusion was not altered by the fact that the process included a mathematical function, programmed for a computer. "A claim drawn to subject matter otherwise statutory does not become non-statutory simply because it uses a mathematical formula and a computer program on a digital computer." Also, a claim cannot be subdivided between (i) new and (ii) old elements; it must be considered as a whole. In a process claim a "new combination of steps. . . may be patentable even if all constituents of a combination were known and in common usage before the combination was made." Hence, the doctrine of "novelty" was determined to be wholly apart from whether or not an invention falls into the category of statutory subject matter. Diehr's process was "nothing more than a process for molding rubber products, not an attempt to patent a mathematical formula."

The main significance of the Diehr case is that the Supreme Court finally accepted the granting of patents in computer-related inventions. The case confirmed the narrower definition of "algorithm" contained in the Benson case. The Court accepted a concept of "invention" as an activity which transformed materials to a different state of being. The principles of the Diehr case received added support from the case, Diamond vs.Bradley and Franklin [209 USPQ 97, (Supreme Court, 1981]. A minority view in the Diehr case held that no program-related invention should be patentable under Section 101 of the Patent Code unless it contributes to art, independent of the presence of a computer. (Note: Justice Stevens, in a minority opinion, implied that if patentability were upheld in the Diehr case a similar decision should have been reached in the Flook case. His view underscores the evolutionary process in the Court's judgement on matters pertaining to the patentability of computer software.)

The final, important conclusion from this brief, tortuous history of significant Court decisions on the patentability of software is that all software claims are eligible for such protection. They must pass tests laid down by the Patent Code, especially Sections 101, 102, 103—like any other patentable invention. Novelty in a mathematical formula or algorithm which merely calculates or displays some numbers does not meet the criteria of patentability. To establish novelty, patent claims must be viewed as a whole. They cannot be appraised in terms of components—some may be new; others, old. De facto, the Patent and Trademark Office has been issuing patents for software protection. These include patents to cover a process for a management control system in multiprogrammed data processing, a program that checks for spelling errors, one that converts one programming language to another. The Ideational aspect of software qualifies under copyright law. It is interaction with the physical that presents the possibility of patents and confronted the Courts with problems of determining whether or not software qualifies for patenting.

Patent protection is difficult to obtain when compared to copyright protection. If valuable software concepts are involved, the added costs of patenting are negligible and offset by greater protection. Practically, the widespread belief that computer software was not patentable should have been dispelled. The choice of how to protect one's intellectual property rights in computer software can be based on benefit/cost analysis.

MAC Q & A
by Jonathan E. Hardis

Leftovers: See the letters to the Editor, elsewhere in this Journal, for elaboration on April's Q&A Column.

Q: On the Mac II, where do the numbers 256 colors from a pallet of 16 million colors come from?

A: Each dot on the screen can be one of 256 different things. That's the number of combinations you get with 8 bits, and each dot on the screen is given 8 bits of memory to store its description. But each combination of these bits doesn't directly correspond to a color. To make a color out of it, you also need to have a corresponding list of colors, a list 256 entries long. (This is called the Color Lookup Table.) There are 16 million specifications of colors that can be put into the list. It's the same thing as in a paint store. Each card of color samples may have only ten colors on it. But as you look around the rack, you'll see that thousands of colors are possible.

It's also possible to create the illusion of more than 256 colors. Just as small, closely spaced black and white dots can be alternated to produce the illusion of shades of gray, small, closely spaced color dots can be alternated to produce the illusion of more hues. This is called "dithering'.

Q: What's the latest version of System and Finder?

A: System 4.1, Finder 5.5, and an additional disk containing lots of other new files have been released by Apple. They will show up at your dealer soon, and you can make copies. There are lots of new things in this release, and so it's especially important that you don't mix-and-match parts of the old system software with the new. The official release comes on two disks. Please make sure you get the contents of all of them. Information and installation instructions are included.

The new software is recommended for the Mac II, the Mac SE, the Mac Plus, and to a lesser extent the Mac 512E. It should not be used with the older ROMs on the Mac 512 and the Mac 128. The problem is that the new stuff takes up lots of RAM on the Plus and the 512E, since it gives these machines some of the same new features that the SE has.

You should change to this new software if you (1) use the AppleShare file server, (2) use an SE or a Mac II, (3) use new software that requires it, (4) share a LaserWriter with someone in one of these catagories, or (5) have a hard disk larger than 32 Meg. Otherwise, there is no requirement to change until you are satisfied that the new causes less problems for you than the old. In all cases, make sure you back up your old System Folder so you can go back to it if you aren't happy.

Yes, there are several software packages that don't work with the new system software. (I won't give a list, since the reports to date are unconfirmed, and I have my doubts on some of the claims.) For example, Excel owners should upgrade to version 1.04 since Excel will fail with Desk Accessories that have their own menus. One thing to try if you have problems is to remove the "Easy Access" file from the System Folder. That is an INIT, a small program that runs at boot time, which changes the way the keyboard works for the benefit of the handicapped. After you reboot (without Easy Acesss), they keyboard is back to normal.

On the positive side, there are many bug fixes, speed improvements, and feature additions that should make the update worthwhile, eventually.

Q: I have a large hard disk. What should I do?

A: It is very important that anyone with a hard disk larger than 32 MB upgrade quickly. There is bug in prior versions of System that makes data on large disks vunerable to loss. There are long, detailed instructions on what to do if your disk is over 32 MB, over 134 MB, on AppleShare, or not. They are too long to repeat here. Your dealer can get them from AppleLink, or you can call me.

Q: I think the System file on my hard disk may have been corrupted, and I'd like to replace it with a backup copy. How can I do this?

A: Either (1) Insert a floppy (with a System and Finder on it) before turning on the machine. The floppy will then become the "startup disk". Or, (2), double click on the Finder icon on a floppy disk while holding down the "Command" and "Option" keys. That will also cause the floppy to become the "startup disk". As long as the hard disk isn't the "startup disk", you can trash the System and Finder on it and replace them. By the way, if you would rather not use the Installer program to install the new System and Finder, you can copy them yourself with this method. Reinstall your favorite fonts, desk assessories, and so on, afterwards.

Q: What new features of the SE are backpatched to the Mac Plus with System 4.1?

A: The new heirarchical menus, pop-up menus, the new Text Edit, the new Script Manager, the rewritten SCSI manager, RGB color mapping, the Shutdown manager, and more.

Q: What takes up the extra space in the new 256K ROMs used on the SE and the Mac II?

A: On the Mac II, Color QuickDraw takes up much of the space. On both machines, the new features listed above take up some. However, on the SE, much of the new space is empty. To fill some of it, they put in a slideshow of the SE project team. To see it, close all documents, get into the debugger, and type G 41D89A. You have to reboot to quit.

Q: Will my old SCSI hard disk work on a Mac II or a Mac SE?

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A: Sometimes not, until you get replacement software (a new device driver) from the disk drive company. Note that since the SCSI manager is rewritten in System 4.1, some drives may have the same reaction with it, too. Call your disk drive company to check things out, particularly if you have a DataFrame or HyperDrive.

Q: Is the sound chip in the Mac II the same one as in the IIgs?

A: No. The IIgs has a synthesizer chip, the Mac II does not.

Q: How do I connect a third-party color monitor to the Mac II?

A: Jim Langford provides the pinouts:

Mac II	Sony Multisync	NEC Multiscan	(Function)
1	1	6	Ground
2	3	1	Red
5	4	2	Green/Sync
9	5	3	Blue

Set the Sony to "Analog", and the NEC to "Analog" and "Manual". Before going the route of a third party monitor, though, take a look at the Apple one. The people at Apple claim it will be much better.

Q: Why does the mouse feel so jerky on the SE?

A: On the older Macs, during disk use the mouse was ignored and would appear to pause, giving a sluggish feeling. On the SE, after the disk use is done, the cursor can catch up with the mouse.

Q: What is the downside of the SE, compared with the Mac Plus?

A: It's a lot louder, annoyingly so for some people. There is more of a problem with screen "blooming" as the brightness and content of the picture changes. I've heard complaints of picture distortion at the sides as well. The internal hard disk is not nearly as fast as the better external SCSI hard disks. The mouse and keyboard have different feels than before, which may appeal to different tastes. And a circuit board on the back end of the picture tube makes it easy to break the picture tube if someone opens the case carelessly.

Q: On old Macs, Command-Shift-1 ejects the internal floppy disk, and Comand-Shift-2 ejects the external. On the SE, how do you eject the second internal floppy?

A: Command-Shift-0, unless you have an FKEY of your own installed there.

Q: What does the big button on the SE keyboard do?

A: On the IIgs it's "reset". On the Mac II, it's "power on". But on the SE, it does nothing.

Q: On the SE and the Mac II, how do you remove the battery to reset Parameter RAM?

A: The battery is soldered in. Holding down Option, Command, and Shift while invoking the Control Panel will have the same effect except that the date and time aren't changed.

Q: What do I have to do to use TMON with System 4.1?

A: There is a bug in the General file, part of the new Control Panel, that everyone should fix by patching it with FEdit (or a similar program). Among other things, it causes TMON to fail. Search for 4278 00BA 4278 00BC, and change it to 4268 00BA 4268 00BC. If you don't do this, after using the Control Panel, certain control areas in low memory will be corrupted, causing software to fail.

Q: How can I run Studio Session on the SE?

A: Their "copy protection" is not compatible with the newer Sony drives. Call Bogus about a replacement disk.

Q: Does AppleShare, Apple's file server, require a dedicated Mac?

A: In general, yes. But there is a third-party product that allows that Mac to do other, limited tasks, as well.

Q: What's new with Jasmine hard disks?

A: The price of the 20 Meg disk goes up on June 15. They got a bad batch of 40 Meg drives, so their shipment will be delayed. However, they will be selling a faster, 50 Meg drive for only a little more than the 40.

Q: What's the latest on Micah hard disks?

A: A totally new company, MICAH Storage Systems, has aquired the product rights from the old company. They are introducing new products, and repairing the old ones. The bad news is that the old warranties were thrown out by the bankruptcy court. They are at 56 Worral Drive, Newark, DE 19711, (302) 731-1583.

Q: How can I get the HFS file system on my XLisa?

A: Contact Sun Systems Remarketing, at (800) 821-3221. Some folks at Apple came up with this on their own, and Sun got the rights to it. It requires booting from a floppy, though.

Q: What is "Juggler"?

A: It's Apple's upcomming "multitasking Finder", similar in purpose to Andy Hertzfeld's Servant. Anyone who is in a position to know the true details about the program is restricted from talking about it by a non-disclosure agreement. It will run on the Mac Plus, the SE, and the II, and it will not require the memory management chip on the II. No copies are legitimately available to the public.

Q: What's the future of Apple's MDS assembler?

A: After one more update is made available through ADPA, rights will revert back to Consulaire. People who ordered the 2.0 update will get the 2.1 update directly from Apple.

Q: How can I get FullPaint to run on an SE?

A: On a Mac SE, FullPaint thinks it's on an XLisa. The company will send a free replacement disk, with this problem fixed, if you mail in proof of purchase.

Q: Is there special insurance I can buy for my

contd.

computer equipment and software?

A: Ask the agent who sold you your homeowner's policy about a "rider" for additional coverage. Mike Umberger left a very bitter message on MAUG describing his bad experience with Data Security Insurance, which at one time was promoted through handouts at dealers.

Q: What version of Ready Set Go 3.0 is current?

A: If your copy is dated before December 15, 1986 (use Get Info from the Finder to check it), you can get a free update by sending the master program disk (with nothing else but your cover letter) to Letraset USA, 40 Eisenhower Drive, Paramus, NJ 07653, Attn: Product Replacement.

Q: To upgrade to PageMaker 2.0, I have to return the manual. But Letraset is offering a copy of ReadySetGo 3 for a good price if I enclose the front cover of my PageMaker manual. Will Aldus accept the manual back without its front cover?

A: Joff Morgan of Aldus says yes, they will.

Q: How do I move a graphic from SuperPaint to Ready Set Go?

A: Save it in PICT format, not the default SuperPaint format.

Q: How can I import Adobe Illustrator files to ReadySetGo?

A: In Illustrator, select the whole picture, hold down Option and Copy it to the clipboard, and finally paste it into the Scrapbook. Then, in RSG, copy (or cut) the picture from the Scrapbook, and Paste it into a RSG picture block.

Q: How do I use the Boston font in Word 3.0?

A: I understand that it's not easy to find in the manual, but look in "Learning MS Word", Chapter 11, page 140, bottom of the page, and also in the big manual, page 206.

Q: On the new IBM television commercials, why doesn't Alan Alda appear?

A: He's been a spokesman for Atari or Commodore, and thus had contract conflicts.

Q: Everybody seems to assume that we've all got MacWrite, MacDraw, and MacPaint. T'aint so. When Apple stopped bundling software, some of us skipped over the basics and moved on to other programs. Increasingly, however, I notice that other software advertises that it can either "grab and use graphics from" MacDraw or MacPaint, or else "save output as" MacDraw or MacPaint does. Do I have to go back and buy these? Am I the only Macintosh owner in the world who does not own MacDraw and MacPaint?

A: No. Since the very beginning, Apple defined standard document formats that are to be recognized by all similar programs. These include PICT format files, which are used by MacDraw and similar programs, and TEXT format files which contain unformatted word processing text. Since then, MacWrite formatted text documents and especially MacPaint documents have become secondary standards. All the ads are doing is putting this in a form people can relate to. When a program says that it can read or write MacDraw documents, it usually refers to PICTs. SuperPaint, which you mentioned, works this way. It can read and write in PICT format. SuperPaint and FullPaint can both read and write MacPaint format documents, too.

Q: A few months ago, I bought by mail WAP Mac disk 48, which contains some Japanese fonts. I find I'm unable to locate (even by various combinations of Shift/Option) certain characters. How can I get to them?

A: On the same disk, check out Font Display, which comes with documentation. Using its "Keycaps..." menu selection, select the second or third option. You'll see each character in the font, and what you have to type to get it. The trick is that not everything is just Shift/Option and a single keystroke. The characters which in the European fonts look like letters with diacritical marks are produced by first typing the key combination for the diacritic and then by typing the letter that goes with it. For the Japanese characters, this doesn't make much sense, but it's still the only way to get to the corresponding symbol in the font.

I'd answer the questions in your letter in more detail, but I honestly don't know a *kana* from a *hiragana*.

Quickies: The Mac II is now shipping, but there is a long backlog of orders, and shortages especially of the extended keyboard and color monitors ... MacMoney 2.02b is a free upgrade to correct a bug for SCSI hard disk owners ... DA junkies: Do Not shoehorn DAs into slots 40 or 41. These are reserved for AppleShare, and DAs there cause problems with the new System and Finder ... The //gs keyboard will work on the Mac SE ... GraphicWorks is the new name for the program ComicWorks ... A debugging card for the SE is made by Atron, (408) 741-5900 ... In Word 3.0, hold down Shift and Option when selecting Page Setup and Print to get back the stand- ard dialogs, with their special options. You can't print with them, but you can set the options ... FullWrite is scheduled for release in June, and will list at $295. The company is ticked at certain mail order houses that have been accepting money for it already, and have quoting incorrect prices of about $60 ... MicroPhone 1.1 is scheduled for release on June 1 ... Most of the MacLion development team came from and returned to Ashton Tate. I have no word on a release date for dBase Mac ... 1st Base filed for bankruptcy, was bought out by another firm, and is being resurrected at (800) 522-2286 ... The Tangent Technologies keyboard will not work yet with System 4.1; they are developing a fix ... You can buy the same fan that Levco sells from Edmund Scientific, for a whole lot less.

LETTER TO THE EDITOR
David Smith / Hardis Responds

Dear Editor,

In the April issue of the Washington Apple Pi Journal, there are several inaccurate statements regarding the Macintosh II in your Q & A column by Jonathan Hardis.

1. Compatibility

At the Spring Developer's Conference, Apple made it clear that the Macintosh Plus was the baseline for the new Mac technology and that the Universal System File will bring the Plus, the SE, and II into line with the new ROM features wherever possible so that new software can run on all three machines. The 512KE and 64K ROMS are another story however, and probably will fall by the wayside with time.

2. Color Quickdraw

Inside Macintosh volume 5 makes it clear that Color Quickdraw is based on 16 bits per each of the three RGB colors, giving the color graphics kernal a 48 bit resolution, not 32 as you mentioned. It is up to the video board to implement a subset in a color table dependent only on the amount of memory you can stuff on a Nubus card. As an example, an 8 bit index into a color table of 24 bit entries would support 256 colors at one time from a selection of 16 million, but this is only the current video card implementation, not the limit of quickdraw. In this way, applications can work with any new video technology well into the future, as 48 bit deep color cards are not likely for some time...

3. Sound Chip

The sound chip samples at 44 KHz, not 22 KHz as you reported. The only thing keeping it from CD quality is a low pass filter on the output stage that starts rolling off at 7.5 KHz, but that will be replaced by a switched capacitory filter in a future version that will improve the high end audio response. The chip is socketed for that purpose.

4. Nubus

Your description of the NuBus memory is a bit misleading. In 24 bit mode, which is provided for software compatibility, up to 1 meg of memory can be addressable by both the NuBus card and the 68020 on the Mac II bus. But the NuBus cards can support up to 16 megs on each card in standard slot mode and even up to 256 megs using a "super slot" scheme. The Mac II bus supports up to 8 meg in 24 bit mode, but this is an artificial limitation and Apple said they were committed to supporting full 32-bit mode for the Mac II operating system in the future, which would allow up to a gigabyte of main memory if I read the hardware memory maps correctly. The practical limit in 32 bit mode would be 128 megs on the motherboard using 16 megabyte memory chips forecasted for the future.

David E. Smith
Editor & Publisher
MacTutor, "The Macintosh Programming Journal"

Jonathan Hardis Reponds:

MacTutor magazine is a highly regarded source of information among programmers and serious Macintosh hobbyists. It is a pleasant surprise and an honor to see that David Smith reads our Journal. On the other hand, it makes it even more remarkable that some assertions in this letter are so far from reality.

As I said at the start of the Q & A column, it was based on the best information then available to me. This was before ADPA shipped the Mac II documentation, and before the Developers' Conference. Even though I made it clear in the lead paragraph that the available information was "contradictory" and had "major gaps" in it, it was by and large correct.

1) Compatability

While I am very pleased that Apple has now committed to software compatibility throughout the Macintosh line, within the limits of hardware, available memory and ROM revision, that was not the situation when I wrote the column. In fact, I raised the issue repeatedly, on CompuServe as well as in the Journal, to add pressure to Apple to make that commitment. All I reported in the Journal was that, at press time, they had "declined to publically commit themselves to this sort of compatibility".

The background behind that news is as follows. In the public discussion about the SE on CompuServe, Jean-Louis Gassée (Apple's Vice President for Product Development, and the one who would be expected to make such a decision) took exception to remarks some of us were making about the SE. We were voicing opinions along the lines that it wasn't much different than the Plus, and that it was too bad that there were no upgrade paths, either hardware or for software compatibility. He argued that such considerations would "hold back progress", and that we were overlooking the improvements in the design.

I replied, "I am encouraged by the progress that you made in the design—it reaffirms Apple's original premise that a computer on the scale of the Mac Plus is a useful tool. However, the changes and additions that you made to the Toolbox in ROM do not all depend on the changes in the hardware. I'm thinking of enhanced TextEdit and the Hierarchical Menus in particular. There would be no holding back progress if the Plus could get this new software, and I'm surprised by that suggestion.

"Over the past week I've heard different voices on this subject. Some have been more optimistic than others. But the Deja Vu is of the discussions of the Mac XL when the Plus came out. Would it get a new MacWorks? Would it get HFS? So I'm left to conclude that in the absence of a definitive, authoritative statement from Apple that the Plus *will* be tweeked (either though replacement ROMs or System file patches) that it likely won't happen. Please set the record straight."

He replied, "I won't—tonight. But I will still say that comparing the Plus and the XL is not exactly putting thing in the most workable perspective. We will look at all suggestions of course. And we offered a Mac XL conversion as we felt this was the best way to get our customers in the mainstream of improvements."

contd.

System 4.1, recently released by Apple, does indeed bring the Mac Plus up to the software level of the SE.

2) Color QuickDraw

The column said, "In the future, video cards will be sold that have many more bits per pixel (dot). The Mac II software can handle up to 32." This was in reference to the number of bits per pixel, 4 or 8, the Apple video cards offer. The ADPA draft of Inside Macintosh V confirms, on the first page of the Color QuickDraw Specification, "Color QuickDraw is able to support up to 32 bits per pixel."

David is confusing this issue with that of RGB space. Color QuickDraw allows 16 bit integers to be used to specify each of R (red), G (green), and B (blue, the primary color) values, which is useful when constructing the Color Lookup Table and when comparing colors mathematically. This leads to a maximum palette size of 2^48 different (descriptions of) colors. For an "n"-bit video card, you can use, at most, 2^n of these. The limit is still 2^32 different colors that can appear as part of a single image. Put another way, just as the Apple video card gives you 256 (2^8) colors out of a palette of 16 million (2^24) possible colors, the maximum limit is 2^32 colors out of a palette of 2^48.

On a video card, the bulk of the memory is not used in constructing the color table, which associates one of the 2^n pixel values to one of the 2^48 colors, but rather in constructing the video image. The "depth" of the video card refers to "n", the number of bits per pixel in the video image, and has nothing to do with the color table.

There are three reasons why this discussion is silly. First, it doesn't make any sense to allow for more, different colors than there are pixels in the image. What's considered a good picture by today's standards is about a million (only 2^20) pixels in a screen. A page from the LaserWriter has under 7 million (2^23) pixels on it. Secondly, I defy any of you to tell apart two colors that differ by only a part in a thousand (one part in 2^10, as opposed to one part in 2^16) in any one of R, G, or B. By that argument, only 30 bits per pixel are needed to produce a perfect reproduction of any picture. Finally, when you talk about such large numbers of bits per pixel, the Color Lookup Table becomes an unnecessary crutch. It's purpose is to specify colors precisely when there isn't enough memory for the video image to do so. But once there is enough memory, there is little use for a lookup table, other than for special effects.

3) Sound Chip

David is correct that the sound chip samples at 44 kHz. That means, as I said, that (roughly) the highest frequency it can produce is 22 kHz. Ray Hobbs has discussed this repeatedly in the Journal, most recently last December.

The "other" thing that prevents the Mac II from sounding as good as a compact disk has nothing to do with frequency response. It has to do with dynamic range. (Another thing might be noise, but I have no information on that.) This is what I said in the column, but I'll be happy to explain further.

Dynamic range, usually expressed in decibels, is a ratio of the loudest to softest tones that can be generated (the largest amplitude the waveform can be, to the smallest amplitude the waveform can be). For digital audio, it's easy to determine, since it comes from the number of bits going into the "Digital to Analog Converter". The lowest amplitude waveform is one, an alternation between 1 and 0 . The highest amplitude is an alternation between MAXINT and MININT. On all Macs, sound is generated with an 8 bit integer, so the ratio, the dynamic range, is 255 (which is 24 dB). Kevin Nealon, whose CD player graces the WAP office, tells me that they use 32 bit integers. That is, they have a dynamic range of 96 dB.

("Bel" means LOG10 of a dimensionless number, usually a ratio. A "Decibel" is a tenth of a bel. So in this discussion, Dynamic Range (dB)=10*LOG10(2^bits). This is different than describing the absolute loudness of a sound in decibels. In this case, the ratio is with respect to the loudness at the "threshold of human hearing".)

Finally, while I have no idea what a "switched capacitory filter" is, the audio improvements that would be necessary involve more than simply changing one chip.

4) NuBus

David's elaboration on address spaces is basically correct, but does not contradict what I said in the column. I think that he was taking offense that I said parenthetically that the Mac II could hold up to 8 megs of memory on the motherboard. That is the situation today when using the best components (1 Meg SIMMs) now starting to appear on the market. Apple is building the Mac II using the older and more common 256K SIMMs. Yes, you can put more memory on the motherboard if you install memory chips that don't exist today, install the memory management chip which isn't mass produced today, and don't use the Memory Manager part of the current ROM.

My description of NuBus came from the proposed IEEE standard (1196), as the Cards and Drivers manual was not in print at the time. My comments came after a careful reading of the December 1986 draft; Ron Hochsprung (chief Mac II designer) is on the standards committee. The notion of "super slot space" was not in the standard. Whether it will ever become a part of standard NuBus, I don't know. "Slot space" and "super slot space" refer to the ranges of addresses that each NuBus card considers its own, and to which it can respond.

The point being made had nothing to do with memory sizes, however, but whether NuBus cards could initiate DMA transfers to the "fast" memory on the motherboard, or not. (In order for the 68020 to access NuBus memory, it may have to hold an arbitration contest and wait for access to the bus. This is not the case with RAM on the motherboard. The microVAX II and competing 68020 workstations have the same architecture element.) The information came from the Technical CO on MAUG, moderated by folk from Apple, who said that NuBus cards could not "steal processor cycles".

It was bad information or a wrong conclusion on my part. More recent and more authoritative sources have led me to believe that NuBus cards can indeed demand access to the RAM (and ROM and I/O devices such as the IWM) on the Mac II motherboard. The Mac II has the ability to block access while it is doing uninterruptable things, such as disk I/O, but in general, DMA is possible. It is unclear, though, whether from the standpoint of the engineer it's worth the hassles.

MacNovice Column

by Ralph J. Begleiter

Growing Pains

You say you've been reading some Macintosh publications lately and feel as though there's a whole new vocabulary developing which you don't understand? You say you're hearing about "SE's" and "One-megs" and "HFS"and it's all Greek to you?

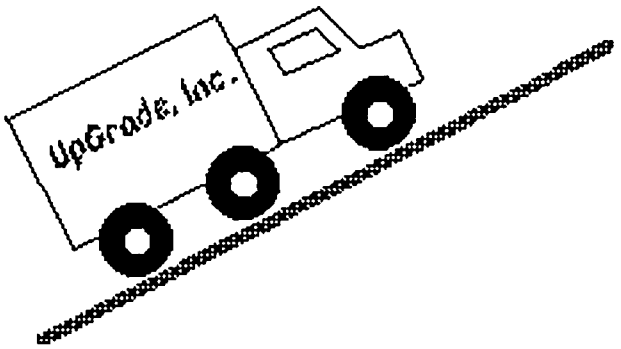
Have no fear, there are plenty of MacNovices around who are still working on original Macintosh computers with just 128K of memory. And there are still more of us with machines once called "Fat Macs," with 512K of memory. (Times have changed, though. They're no longer considered "fat.")

Here's a word to the wise: **It's time to grow up.** Our early Macintoshes are becoming dinosaurs, believe it or not, after just three years or less! Sad, but true. That doesn't mean they're useless. Far from it. But it does mean they're becoming less useful, because it's only possible to take advantage of some of the best Macintosh software being published these days by using it on a more recent Macintosh machine.

Nevermind the sense of frustration you may feel about being "outdated" so soon. You've gained a lot of valuable experience with your 128K or 512K Mac. You're light-years ahead of people who are just discovering the ease of use and power of the Macintosh system of computing.

Reasons to Upgrade

But, MacNovices, it's time to think seriously about



"upgrading" to a more recent Mac. Here's why:

• New software, better than anything you've seen in the past three years, is now here. Desktop publishing. Spreadsheets. Databases. Even word processing. And much of it requires more than 128K to run well.

• Apple has virtually abandoned the "primitive" system software it designed for the original Mac. New system software is available now which works better, faster, and more easily. But it's not compatible with the original Macs. (System 2.0 and Finder 4.1 have been superseded by Systems and Finders already numbered in the 5.3 and 5.4 range, and they're much more than just cosmetic changes or small bug fixes.)

• Storage space on disk drives has doubled (in the case of floppy disks) and has increased exponentially (in the case of large "hard" disk drives). The older machines just can't handle it. They can't handle the tougher filing and retrieving job necessary in keeping track of so much storage.

• Improvements across the board in Macintosh hardware, software and compatibility with other computer systems makes it worthwhile to step up now. It'll be harder to do so later, when upgrade components may be harder to find.

• The price of upgrading has declined now to the point where cost should be a much smaller factor in your decision than it's been.

There are many upgrade options, ranging from super-glitzy and expensive to the basics. Unless you've graduated from a MacNovice to an expert, you'll probably be interested in the least expensive worthwhile upgrade right now.

Glitz

If you're ready to go the top-of-the-line route, then consider scrapping (or selling) your Mac 128 or 512K machine in favor of either of Apple's newest Macs: the "SE" or the Macintosh II. Plenty's been written about these new machines, so there's no need for detail here. In brief, the "SE" is a MacPlus with an extra disk drive, some additional internal permanent (ROM) memory, and an expansion connection for future use. The Macintosh II is what programmers and computer developers have dreamed about for three years. There's very little it hasn't got or can't have added.

More likely, you're interested in the "next step" upgrades from your 128K or 512K Macs. If you're still working with a "thin" (128K) Mac, you should definitely buy the upgrade to 512. Its cost these days is about $175 or less. All you get is additional RAM memory. It's worth the price, no question. 512K runs more of the newest software, runs it faster, and makes your disk-swapping life a lot easier.

But going from 128K to 512K really isn't enough.

Go the Extra Mile

At the minimum, you should upgrade directly to the so-called 512 "Enhanced" Mac, or 512e. This upgrade, in the Washington area, costs less than $250. In addition to the increased ROM memory, this upgrade gives you three important features:

• Apple's newest system software (System 5.5 and Finder 4.1).

• A new internal disk drive capable of recording data on both sides of a disk, for a total of 800K storage per disk.

• Apple's new permanent internal (ROM) memory chips.

The improvement in system software and the ROM chips afford Mac users speed and filing flexibility not available on the older machines. They include the new "HFS", or "hierarchical," filing system. It's a detail, but an important one. It allows you to file and find your documents much more quickly and efficiently, even with the increased number of documents you can store on an 800K disk or a hard disk drive.

The new Apple Finder contains a few nice features not available on older machines. While these are not, in them-

contd.

selves, critical, they are worthwhile components of the upgrade.

The new, double-sided disk drive, aside from being a vast storage space improvement over the single-sided drives, are also the drives of the future. All Macintoshes are being made with double-sided drives now. Soon, software will be published only on double-sided disks (some programs, like Microsoft Word 3.0, already arrives on double-sided disks, though single-sided versions are available to users who need them).

The upgrade to 512e is a simple procedure. Local dealers have kits in stock, and can install them while you wait. You notice no physical changes in your Mac, but you'll notice the software and disk drive improvements immediately.

Going 'All The Way'?

Should you upgrade beyond 512e? That's harder to say. If you want greater ease of switching among various programs, such as a word processor and a graphics program, then upgrading to "1 meg" (one million bytes, or 1024K memory) is definitely desirable. With this much memory, it's possible to load several large Macintosh programs into the machine's RAM memory (using the Apple program called "Switcher") and use your disk drive to store the documents you create and modify. Keeping the programs in RAM while you work speeds things up noticeably. Doubling the RAM memory from 512K to 1024K can cost as little as about $175 these days for do-it-yourselfers. A bit more to have the RAM chips installed by a dealer.

If you routinely work with large desktop publishing projects (which use lots of program, font, graphics and document space) involving complex operations, then you should consider adding even more RAM to your Mac. Options are available to go from 512e to 1 megabyte and then to two, three or even four megabytes of RAM. The extra memory gets expensive beyond two megabytes, but if you need it, it's worth the money.

Because the price increases quickly after 512e upgrades, you might consider selling your older machine and buying a MacPlus instead of upgrading. The advantage is that the new system software, double-sided drive and one megabyte of memory all come in the new computer. But there's an additional benefit not easily obtainable with the 512e upgrade: a new type of connecting device on the back of the MacPlus called a "SCSI port." It's a gadget which enables quicker exchange of data with external storage devices such as hard disk drives. The more rapid exchange isn't really noticeable to a novice, but here again, it's the wave of the future. SCSI is the preferred method of exchange, and manufacturers are already abandoning the older technology used on the earliest Macs. It's possible to add-on a SCSI plug to the Mac without buying a MacPlus. Some dealers and mail order houses sell them for around $100. If you don't plan to buy a hard disk drive or attach your computer to other SCSI devices, you don't really need this upgrade.

MacNovices can live without the MacPlus. We can live without the "SE" and the Macintosh II. But it's getting harder to live without at least 512K of memory and the Macintosh's new system software and double-sided disk drives. To keep your Mac compatible with current software and with the majority of newer Macs now in use, an ugrade has definitely become a worthwhile investment by now.

Levco

High performance Macintosh products

MonsterMac $780	2 Megabyte upgrade to 128 or 512k Mac includes SCSI and MacBreeze fan
One Plus One $295	Doubles MacPlus memory to 2 Megabytes includes MacBreeze fan
Prodigy Prime $1695	16Mz 32-bit 68020 micro 1 Megabyte Ram, fan power supply, recoverable Ram Disk,optional 68881...
Prodigy 4 $4245	68020 processor,68881 coprocessor, 4 Megabyte Ram, power supply,fan
Overdrive $1200	20 Megabyte Internal Hard Disk

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SIX MacMAGAZINES: Pick One From Column A, Column B, etc.

by Bonnie Walker

There is a flood of magazines on the market dedicated to the Macintosh and its users. Keeping up with all the new products, finding out more about using the old, even keeping apprised of the best prices for supplies is not an easy task. Every time I think I've found a bargain on disks or paper or ribbons, I see a new ad that offers an even better price. I can tell that I'm getting too many magazines already because they are stacking up with the daily paper in the "get to that later" corner. For that reason I've decided to do some mini-reviews and to make myself choose.

MacUser and MacWorld and The MACazine

I'm lumping these three magazines together because they are each slick publications with glossy paper and color graphics. They are each aimed at the same audience—the range of users from beginner to experienced. They include some information for the programmer or the technically oriented user, but not much. They do have a lot of ads. I like the ads, and often find them as useful as the articles. For one thing, ordering through the discount mail order houses can save you a bundle over the retail store prices and save you from driving around looking for what you want. Secondly, reading the ads is an easy way to keep in touch with what new products have been developed. So I want to keep at least one of these publications on my list.

MacUser aims at the whole population of Macintosh users, including those interested in business applications, home uses, and programming. My favorite part of this magazine is the "MiniFinders" section which briefly describes and rates programs (over 250 in the March issue). It reminds me of the same useful section in the old Softalk Magazine. For slightly longer reviews of new products, you can read the "Quick Clicks" section which gives you a half page review. Each month, the editors select a few products or types of products for about ten in-depth reviews or articles. MacUser is edited by Neil Shapiro of MAUG which is a plus. It includes a monthly column by John C. Dvorak, which to me is a minus. I already get enough of him in InfoWorld.

MacWorld was the first Macintosh publication I subscribed to and I've found some help from "Get Info," a question and answer column. If graphics is your thing, you'll like the MacWorld Gallery Department which publishes winners of their monthly art contest. MacWorld has only a few articles each month (maybe 5). At least one article each month has the type of indepth information about a product, a group of products, or a particular type of application that I find helpful, but the bulk of this magazine is advertising and gimmicks. Overall, it's become a disappointment despite its strong start.

The MACazine has been around a while, but I've been reading it for just about a year. Like MacUser and MacWorld, this one has plenty of ads, the same ones appear in all three, and makes ample use of graphics and color. It has the usual features, letters to the editor, mini-reviews, indepth reviews, and feature articles. In the December 1985 issue, I particularly enjoyed an article which compared a number of communications packages.

Which One from Column A?

I'm picking MacUser for two reasons: First, it seems to have more meat, more articles about applications, and less fluff. Second, the "MiniFinders" section provides the best capsule review department I've seen in any magazine since Softalk. I'm also keeping The MACazine. Its tutorial articles on various software keep coming in handy.

Now to Column B

I am placing in Column B all of those newsletters and non-slick, non-color magazines that rely on subscribers rather than advertisers to pay their bills. I subscribe to Washington Apple Pi, of course, and now am looking at MacInTouch and MacBriefs to see which, if either, should be added to my monthly reading.

MacInTouch is printed on grey paper, 3 hole punched, with graphics developed with MacDraw or MacPaint. There are no color photographs and there are no ads. What you get is a lot of information, clearly written, nicely layed out, and illustrated appropriately. MacInTouch will be useful to programmers but also to home and business users. The December issue led off with a lengthy review of TML Pascal and some other software development tools. The issue covered topics such as music, hard disks (general information and specific product reviews), news from the industry, product announcements, and capsule reviews of books, magazines and newsletters. The two sections called "bugs & fixes" and "tips" are well-worth reading. This is a really useful publication, but $48 a year is a rather high price. Still, it seems to offer some substance for the money.

MacBriefs is "resource digest" and a must for Macintosh users. At $12 a year, it's such a bargain that I am including it on my subscription list. Each issue contains summaries of Mac literature from magazines, trade journals, vendor information and users' group publications organized alphabetically and chronologically. For example, just about every book that's been published about the Macintosh, Mac software, and application programs are listed, described, and rated. There are great sections on communications, database, desk accessories, and on through the alphabet to Video and the XL. I couldn't think of a subject of interest that didn't have a corresponding brief. MacBriefs does more than list articles and bibliographic data. Each brief includes the key points and "hard facts" in the article. As a former abstractor myself, I was very impressed with the editors' skill in getting to the heart of an article in a very few words.

MacBriefs also has feature sections such as "Hot Lists" which identifies the top selling programs for the Mac under the subheadings of business, recreational, home, educational, and system & utility. On the subject of accuracy, I noticed one little "bug." The review of spellers cited from InfoWorld claims Hayden's Speller only works with MacWrite 2.2 and Word 1.0. I have Word 1.05 and it works for me. Oh, well.

MacBriefs reviews publications such as BMUG Newsletter, The MacStreet Journal, San Diego Mac News, A+, MACazine, Macintosh Connection, Micro Marketworld,

contd.

Computer Retail News, The Washington Post, InfoWorld, MacWorld, MacInTouch, MacUser, MacNexus, MacTutor, NIBBLE, Computer Systems News, Home Computer Magazine, and others, but NOT The Washington Apple Pi Journal!

MacBriefs is an entirely Mac-produced publication using File, Word, PageMaker, MacPaint, MacDraw, and the LaserWriter. It contains a few advertisements, mostly other magazines but a few software packages and other items. Two things that would make this publication even better are a list of the publications reviewed with their addresses, and a quicky index of itself.

The Macintosh Connection was the first newsletter type publication I saw and, hungry for news, I subscribed. At $35 a year for 10 issues of eight pages each, it was no bargain. Articles include industry news, reviews, and other information sources. The views expressed are solely those of its Writer/Editor/Publisher. There was just not enough here to justify spending the money to renew.

Choices From Column B

Well, I've already said I've got to have MacBriefs. I want MacInTouch, but I'll have to think about this one because of its price. And I think MacConnection has already dropped me, since I haven't gotten a copy in some time now.

Other Magazines

In addition to the dedicated Macintosh magazines, I have to keep informed on what's happening to the "rest of them." My choices are the weekly publication, InfoWorld, for the quickest source of news and reviews, and Byte, for the best in-depth, technically oriented coverage of the computing world. Like many others, I got a complimentary subscription to A+ magazine when Softalk folded (I had just renewed that subscription for two years!) A+ has more to offer to the Apple II user. For me (as an Apple II and Macintosh owner and user), I find the WAP journal is sufficient.

Cutting Down the List

So, I started out with subscriptions to: The Washington Apple Pi, InfoWorld, Byte, MacWorld, MacUser, A+, and the Macintosh Connection. I'm planning now to drop a few (A+ and MacWorld) and add two: MacBriefs and MacInTouch. Hmm, I guess it's not enough to consider the list, to evaluate it, and cut back. It seems as if I need to join a group, how about Magazine Subscriber Anonymous. Apparently, that's what I need. Any subscribers out there that want to join? We could put out a newsletter!

MacBriefs, Resource Digest for Macintosh™ Enthusiasts
PO Box 2178
Huntington Beach, CA 92647
$12 for 6 issues Published bimonthly

MacUser, The Macintosh Resource
P.O. Box 1540
Neptune, NJ 07754-9990
$23 for 12 issues

The MACazine
ICON CONCEPTS Corporation
PO Box 1936
Athens, TX 75751
$18 for 12 issues

MacInTouch
Ford-LePage, Inc.
P.O. Box 786
Framingham, MA 01701
$48 a year for 12 issues

The Macintosh Connection
Hi-Tek Publications
Post Office Box 99
North Salem, NH 03073

MacWorld
Subscription Department
P.O. Box 51666
Boulder, Colorado 80321-1666

MINDWRITE REPLIES

Thank you for your review of MindWrite (Washington Apple Pi, April 1987). I'm happy you find the product significant enough to merit such a lengthy review. I appreciate this opportunity to express my concerns regarding Mr. Seelig's problems with MindWrite.

As one who disagreed with the decision to advertise MindWrite (then MultiWrite) a year ago, I sympathize with Mr. Seelig's frustration with MindWork Software's early advertising/late delivery dilemma. In reading his review, I feel that he did not put those frustrations aside as he evaluated MindWrite. Although he called frequently before the product shipped, we can find no record that he called our technical support staff to report his problems after receiving MindWrite. Indeed if he had, we would have sent him a new disk. Some of the problems he describes were symptomatic of an error in disk duplication, which compelled us to replace about 1% of our first manufacturing run. Many of his other problems were based on simple misunderstandings that we would have gladly cleared up over the phone.

I'm not saying MindWrite is perfect. We are working night and day on version 1.1, which all registered users will receive free of charge. Yes, folks, in spite of delays in shipment, performance idiosyncrasies, and Mr. Seelig's advice, MindWrite does have thousands of satisfied, registered users. Less than a handful of people have requested and received a refund on their purchase of MindWrite. The others have weighed MindWrite's inconveniences against its benefits and find themselves using MindWrite anyway or at least waiting for the update.

MindWrite offers measurable, concrete benefits for those who synthesize facts and ideas into text. No other product or combination of products enables the writer to combine, organize, and reorganize input and ideas, move seamlessly from outline to finished document and back, rewrite and manage multiple revisions of a document as easily and as powerfully as MindWrite. It has set a standard for integrated outlining by which all other word processors are being judged.

MindWork Software has recently established its independence from Icon Review and created a new advertising campaign for MindWrite—one that clearly communicates the benefits our users enjoy. I look forward to the day when many members of Washington Apple Pi also enjoy the flexibility and power of MindWrite.

Susan Raab
MindWrite Product Manager

HOME ACCOUNTING MADE EASIER WITH MACMONEY

by Charles M. Sicard

MacUser (March 87 and April 87) rated MacMoney with the "maximum" of five mice, which was enough to convince me that it was worth buying (in my long pursuit of a better home accounting system for the Macintosh). As a trial, I entered all of my 1987 checks. What began as a trial run had me up and running. I was already convinced MacMoney made more Sense than anything I had used to date and so I went ahead and opened balances for all other accounts. A few days later when I did my first bank reconcilement I was delighted; I never went back to my old application. Why did it take so long for such a fine program to surface? It apparently was developed in 1986.

MacUser (May 87) did an very good feature article on MacMoney by our own WAP member Bonnie L. Walker and she gave the program high marks. However, I noted MacMoney's mouse rating had dropped to four and half mice in the May issue for reasons unknown to me. Meanwhile, I telephoned (no toll free number) Survivors Software Ltd. in Inglewood California to learn if any updated versions are in the mill. A toll free number would have been nice. However, they were most helpful.

I was told that there are two upgrades in the making. One is due out about the time you are reading this (May 87) at no cost to recent purchasers. The other is targeted for September 87, for which there will be a charge. It wasn't clear just which new features will be included in which version but they recognized the need to allow automatic transactions more often than every month. Survivors Software plans to include an automatic bi-weekly transaction option; this enhancement will simplify entering pay checks received every two weeks. Meanwhile, you can get around this by entering in two identical automatic transactions with different due dates for the same month and then adjust the dates from the check registrar after entry.

Walker's article mentioned a need to sort the check registrar by check number in case they weren't entered in order. I'm told that this will be included in the next version. They must fix some new year extension problems which could be a problem in December 87 when creating new accounts for 1988. I'm not sure just what those problems are but you may have discovered them if you were trying to create a new year in December 86. Fixes like this are priority items and will appear in the next version. Other enhancements will follow or be included as development time permits.

Apparently Survivor Software will add some "summary" buttons for custom activity reports and a disbursement summary report as a small business feature. Also look for a credit card reconciliation enhancement.

MacMoney adheres to sound double entry accounting practices and therefore will not let you delete any entry completely, even if you have reset an adjusting entry to zero or if you voided a check. This way there always remains an audit trail of some kind for every entry made; especially important to a small business. However, you will have the option to hide such entries for reporting purposes.

There was one feature that was missing which I felt must be added to the new version. There is a beautiful after-the-fact cash flow graph, but there is no cash flow report to show you your targeted cash position at the end of each month. Your budgeted income and expense statement does not serve as a cash flow budget because funds that go to reduce a liability account (i.e. house mortgage) or increase an asset account (i.e. credit union savings or retirement account) do not appear as expense items. What the average guy wants to know first is, will I have enough cash on hand to meet my obligations for the coming months. Or, given my budget plan what is the most I can hope to save over the next year. Sound cash flow planning is the key to reducing anxiety associated with money handling and is essential in any small business. Hopefully, Survivor Software will include this feature by September 87.

I couldn't wait until September so here is one way to temporarily solve cash flow planning using existing features in MacMoney. Create an income and expense statement using your budgeted figures and showing all months. Save it as a text file and open it in your favorite spreadsheet—I used Excel. Take a few minutes to rearrange the columns by cutting and pasting, to be sure you have the months in the proper order and the rows lined up. This is necessary because January is right next to July, one row down, and so on through the months of the year. After you have cleaned up the spreadsheet and made it as tight as possible, go to the bottom of the table and to the right of the December column and put in summing formulas as you desire them.

Under the net income row, add your rows for non-expense accounts to which money flows but which are not truly expense accounts such as: retirement funds (asset), savings (asset), mortgage (liability). I used switcher to move between MacMoney and my spreadsheet to record the budgeted figures for those additional cash flow accounts into the spreadsheet. Your new net income for each month then has these additional negative cash flow items subtracted. Some months will be negative cash flow some positive (you hope). A sum of these sub-totalled figures to the right would represent your accumulated cash flow position for the year. A positive figure indicates that you have excess cash. You may want to commit that to a special savings account. A negative position indicates that you may have to reduce or adjust one or more your cash out flow items, usually an expense item, or you will have to increase income to meet your planned obligations.

This may sound like a lot of busy spreadsheet work. But until MacMoney better addresses cash flow budgeting needs it is worth it for the simple reason that better financial planning can give one a good night's sleep. Wasn't home finances one of your original justifications to your spouse for getting your home computer? With MacMoney we are finally almost there.

contd. on pg 71

MACINTOSH BITS AND BYTES

by Lynn R. Trusal

Fiber-Optic AppleTalk Network

I have seen several articles which mentioned the development of a fiber optic AppleTalk network cabling system. Recently I made contact with Mr. Robert Synder of DuPont's Connector Systems Division in New Cumberland, PA (800-932-7979), and requested literature on this new product. Mr. Synder immediately sent me a literature packet and price sheet on DuPont's AppleTalk products and a 6-minute VHS video tape explaining in more detail the advantages and components of the fiber optic AppleTalk system. The tape was provided on loan with a return envelope and was very informative. I found this an excellent way for a company to explain its product and I think other equipment manufactures should consider the feasibility of such a presentation.

Fiber optic AppleTalk consists of the following products: fiber optic cable, concentrators, converters, wall plate adapters, a termination kit, and several other accessory products. Each Macintosh requires a converter which interfaces with the AppleTalk port on the back of the Macintosh. The converter converts the electrical signal to an optical signal for transmission along the network or vice versa on the receiving end. It is supplied with an external power supply and a shielded Latch-N-Lok™ computer interconnect cable assembly. The concentrator allows intra-building fiber optic cable to be linked together at a central job or wiring closet. Thus, star-networks are possible or inter-connected point to point networks. Each concentrator unit contains eight fiber optic ports and two RS-422 electrical ports. The electrical ports permit the combining of shielded-pair conventional AppleTalk networks with the fiber optic AppleTalk network.

The network is immune to both EMI (i.e., electromagnetic) and RFI (i.e., radio frequency) emissions, which makes it ideal for network installations requiring "tempest" specifications. Cable may be strung in suspended ceilings or run through walls connecting to wall plates. Individual Macintoshes may then be interfaced to the wall plates. A mile of fiber optic cable is reported to be easily carried in one hand. Another advantage is that the total network distance possible is 4900 feet with fiber optic AppleTalk compared to 1000 feet with conventional AppleTalk networks. In actuality, 4900 feet refers to the distance between network nodes and therefore the total network distance may be much greater.

Any physics student might conclude that, since light travels at very fast speeds and fiber optic cable carries light impulses, DuPont's fiber optic AppleTalk network is very fast. Unfortunately, this is not currently true and the speed of this network is the same as the conventional AppleTalk network, or 230 kbps (i.e., kilobits per second). Dupont is addressing this issue and is developing a bridge product which will increase the speed to 3 megabits per second or 13 times more than conventional AppleTalk. For comparison Ethernet is 10 megabits per second.

Prices for the equipment are as follows: concentrator $950, converter $250, wall plate adapter $15, termination kit $850, duplex F/O cable, 2 meters $55, 3 meters $63, 5 meters $77, 10 meters $115, and 25 meters $228. Mr. Synder stated that the cost was about $1.50 a foot and that was a high estimate.

I think that those who wish to wire (network) a business environment and who use Macintosh computers may do themselves a favor by seekinging more information about this exciting new product with as yet untapped potential.

New Big Screens for the Macintosh

The "big screen" market for the Macintosh just got bigger. Two new companies have begun marketing larger monitors for the Macintosh, which brings the total to 5 companies.

Nutmeg Systems, Inc. of New Canaan, CT (203) 966-3226 has adopted a standard Xerox full-page display to the Macintosh by adding a Macintosh interface and some startup software. The monitor tilts and swivels and has a resolution of 90 dpi which is the highest of any of the monitors offered. It displays a full 8.5" x 11" page (720 x 900 pixels) which is slightly larger than the Radius (640 x 864 pixels). The company says the monitor is 3.7 times larger than the Mac screen and you can toggle between the Mac screen and the Xerox screen, unlike the Megascreen and Big Picture that disable the Macintosh screen permanently. That is a major plus when you wish to use the large screen at home but keep the portability of the Macintosh. There is no ROM upgrade and it is claimed to be installable with a clip on connector for the Macintosh 68000. The list price is $1995 with an introductory offer of $1,695 (no expiration data has been set).

The second large screen is the "Stretch Screen" by Network Specialists of San Francisco, CA (415) 681-1030. This monitor measures 19" with a resolution of 80 dpi or 1024 x 932 pixels which is slightly larger than the Megascreen (1024 x 900 pixels). The monitors adds 128K of video RAM and also has a clip-on connector. It may be user or dealer installed, does not add ROM, toggles between it and the Mac Screen, and comes with start up software. The list price is $2,095. Both monitors are shipping now according to both companies.

Although the big screen market is heating up for the Mac, they still must become cheaper before they will appeal to the personal or home market.

MacMemory TurboMax

MacMemory of San Jose, CA (408) 992-0140 has been offering Macintosh memory upgrades for some time. Recently, they have been advertising the "TurboMax" (February availability). It consists of a 68000 CPU running at 16 MHz, a faster SCSI port, an additional 1.5 Meg of RAM and an optional 68881 math co-processor port. The upgrade includes "MacSave" which is a recoverable RAM disk in memory and an Imagewriter print spooler. The "TurboMax" also has its own power supply, fan and a two year warranty. This is not a replacement motherboard for the Mac. It is an add-on board that is in addition to the existing memory in the Macintosh and the Macintosh CPU. In other words, the new 68000 CPU does not disable or replace the existing CPU on the Macintosh motherboard. MacMemory told me that the original CPU is still used for such functions as screen refreshing, while the 16 MHz CPU of the "TurboMax" is used

contd.

for computations. If you have a Macintosh Plus the "Turbo-Max" adds an additional 1.5 Meg of RAM for a total of 2.5 Meg. The 1.5M RAM uses 256K chips, but it is also expandable to 4 Mbytes with the addition of two 1024K x 8 megabit modules. The "TurboMax" retails for $1,295, while the optional 68881 math coprocessor adds an additional $399. For those users who do not want or can't afford one of the the open Macintoshes, this might be one way to improve the performance of their existing Macintosh. I hope that one of the Macintosh magazines reviews these memory and CPU upgrades in the coming months.

I Made the Switch! (Word 3.0)

I finally made the switch from MacWrite to Word 3.0. I returned from a trip to discover my copy behind a bush outside my house. Pinned to the door was a UPS note saying "behind bush." I hope the CIA and KGB have more sophisticated drop techniques than UPS!

I had not switched before, since MacWrite did all I really needed but it was finally time to move on to a more sophisticated word processor. Although I have just begun to tap the capabilities of Word, I am enthusiastic about using it. Like all Macintosh applications, the common user interface made the transition much easier. Eat your heart out ,WordStar users, as you attempt to upgrade to Word Perfect! This will not be a review of Microsoft Word 3.0, but just several comments. I am impressed by the multitude of features and the ability to control most functions from the keyboard. Like MORE, the keyboard command set is very extensive for the power user, but Word does not force you to use keyboard equivalents unless you choose to do so. Several things have impressed me. Pull-down menus may be accessed by using the "." of the key pad followed by a number which corresponds to the leftmost menu as #1. The arrow keys may then be used to move across the menu bar. Individual menu items may be selected by typing the first letter of the menu selection. It is the first Macintosh program that I am aware of that keeps the menus pulled down without holding the mouse button down. That's a nice touch.

The last feature I want to mention is the spelling checker that is built into the program. Several months ago, I mentioned several of the Macintosh spelling programs that I have used and gave my impressions. The spelling checker in Word consists of an 80,000 word dictionary. It is the most intuitive spell checker I have used, and also the most intelligent. After the spelling option is chosen and the dictionary loaded, the check is begun. It stops at any word not in the dictionary and allows you to see it in context above the check window. You have the option of "no change", "suggest", "change" or "cancel." You may also add or delete words to a user dictionary ,but you can not add words to the main dictionary. Words are added to one or more user dictionaries that may be accessed as additional dictionaries. It is possible to set up multiple user dictionaries such as a computer or medical one. I was pleasantly surprised to see that the algorithm often guessed which word was the correct word of the ones suggested, and automatically placed it in the change box. The "suggest option" often found the correct word in the dictionary. I would estimate that it correctly chose the correct word about 90% of the time. All in all, it is the most intuitive and fast spell checker I have used. For those of you who don't make spelling errors (Ha !, Ha !), it will also catch your typos.

As reported in the April WAP Journal, there are some bothersome bugs in Word 3.0 that should have been caught. One is the failure to delete Word's temp files which begin to clutter up the System folder. A Word icon for default setting is also stored in the system folder instead of the folder where Word resides. Some scrolling bugs also exist and you are always asked if you want to save the file upon quitting even if you have made no new changes. In addition, the word file icons move around in the folders when they are accessed instead of staying where you last placed them.

Big Macintosh Rumor of the Month

The biggest rumor of all is that Apple will release by the end of 1987 a 68030 version of the Macintosh II. It will be possible to unplug the 68020 and plug in a pin-compatible 68030. This upgrade will also include the 68882 floating-point coprocessor from Motorola that is the follow-up to the 68881 currently in all Macintosh II's. The current Macintosh II is already designed to use the new floating-point chip. The 68030 Mac II will run at 20 MHz, with the potential to operate later at 25 MHz. In addition to being largely compatible with the 68020, the 68030 can handle 8 million instructions per second (MIPS) compared to 2.5 for the 68020. In addition, the new 68030 motherboard may contain a new Apple custom graphics chip that will support 3-D graphics. Keep in mind that Apple has gotten very good at designing custom chips without going to third party developers. The Apple IIgs upgrade for the Apple //e is an excellent example of this. The entire //e motherboard has been reduced to just one custom chip. Apple is rumored to have cancelled its agreements with Apollo and Sun, whatever they may have been. Can it be that Apple thinks the Mac II is serious competition to both companies in the engineering work station market inspite of recent comments by Jean L. Gassée to the contrary? Sun may also be developing a so-called Macintosh II Killer which may be based on the Motorola 68030 chip that is now undergoing testing. Apple is anxious to be one of the first companies to use this new Motorola chip that is compatible with the 68020 but much faster and with additional capabilities.

Other Macintosh Rumors of the Month

Sources tell me that Bill Atkinson is working on a dynamic combination for the color Mac II using CD-ROM technology and software integration that includes combining the concepts of Business Filevision and HyperText. What results may be a super multi-layer database application that would combine text, bit-mapped objects and the ability to link concepts within the context of a multi-layer database. Details are sketchy so we will have to wait and see.....Other companies are working on color monitors for the Macintosh II in addition to Apple and SuperMac Technology. They include AST and MicroGraphics.....Kodak may have signed a value added retailer (VAR) agreement with Apple, which may deal with the superb color capabilities of the Mac II. Will we see the day that a Macintosh owner will send a disk to Kodak with MacPaint or SuperPaint graphics for color print or slide development. The possibilities are endless! .....Hughes has announced a color version of its excellent quality Light Valve projector that could project color Macintosh II images to a large screen for conference viewing.....Developers of hardware

contd.

cards for the NuBus slots in the Macintosh II may have to pay royalties to Texas Instruments who originally developed the standard that Apple modified.....IBM is paying at least $1,000 to license PostScript for its new laser printer, so Apple is probably paying as much for each LaserWriter sold.....

Playboy is even getting the Macintosh fever. Playboy is the first magazine to regularly distribute an electronic version. The electronic version will offer about 10 pages or 24 computer screens including the table of contents, Playboy Advisor, the interview and the Dear Playmates feature. It will also include two B&W computer-generated photos of the Playmate of the Month. The disks will be distributed to on-line services such as the Source and Delphi for free down-loading. Playboy of course hopes that affluent Macin- tosh owners will like what they see and go out and buy the magazine. It could give a whole new meaning to the "touch screen" computer!.....It appears that Apple is going to develop in-house its own version of Servant and not use Andy Hertzfeld' program, even though it has purchased nonexclusive rights to that program. Can it be that Apple feels that Andy's version gives too much control over system resources to the user and is afraid that users will muck up the operating system or does Apple think it can do a better job? Did they pay Andy for Servant's rights just to keep his creative juices flowing on new Apple products. I hope Andy gets his version out soon .....Well, IBM finally announced its new PCs which range from $1,500 to $11,000. I think that it is ironic that on the same day as the announcement IBM stock dropped over 3 points and Apple stock rose 5 to an all time high of over 71. Has the market place already voted?.....A glitch in the Intel 80386 chip has been discovered so that a certain 32-bit mathematics function does not produce the correct result. Over 70,000 386-based computers have been shipped but since few 32-bit programs have been written there is time to address the problem!

Lynn R. Trusal is a Major in the U.S. Army and a research physiologist with the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD.

Home Accounting with MacMoney contd. from pg 68

Bonnie Walker suggested a feature that I also think is worthy of Survivors Software's programing effort. When you create your new year accounts wouldn't you like to have a choice of using last year's budgeted figures or last year's actual expense figures? Right now you can only use last year's budget figures to extend into the next year.

Thanks to MacMoney we can all be financial survivors, thereby allowing us to plan more wisely for our next computer acquisition. What will it be—maybe a Mac SE or a Mac II? For more information contact: Survivors Software, 11222 La Cinega Blvd., Inglewood, CA 90304, (213) 338- 0155.

MICROSOFT WORD 3.0 BUG REPORT

by Robert C. Platt

In a long document using the automatic footnote numbering feature, the footnotes are displayed on the screen, but some of the footnotes are omitted from printing in "faster" mode. A call to Microsoft revealed that they are aware of the problem and it will be corrected in version 3.1, due out in June.

In the meantime, insert a section break at the page break preceding the page where the missing footnote occurs. Specify in the new section's dialog box the starting number for footnotes in the new section.

If the omitted footnote is near the bottom of the page you may have to add a manual page break to force the footnote reference onto the next page.

DEVELOPMENT TEAM FOR THE MAC SE

by Paul N. Jenner

I read with great interest Tom Warricks's comments concerning the Macintosh SE which appeared in the May issue of the WAP Journal.

You may recall that when the original Macintosh was introduced, some members of the development team had their names carved in the mold for the plastic case. One could read their names on the inside of the case whenever the Mac was taken apart. The Macintosh SE development team did not do that. To see what they **DID** do:

1. Use the programmer's switch or a non-metallic item such as a toothpick to press the switch at the left bottom rear of the computer to cause a system interrupt.
2. At the prompt, type G 41D89A. Be sure to include the space.
3. Press return. Voila! A continuous slide show of digitized photographs of the SE development team - burned into ROM!

Isn't Apple wonderful!

Let your computer earn money for you—develop mailing lists of various professions or specialties and we will rent them for you. Royalties paid for each rental. Call Professional List Services—**PLS, Inc**—for full details. Ask for Lee Racsly. (301) 439-1799.

VIEW FROM THE HILL: Apple's New Software Company

by Rich Norling

Because people need both hardware and software to get useful work done, hardware manufacturers like Apple want the newest, best, and most innovative software to be on their machines. Their reason is simple. Having the best software helps them sell hardware. Individual consumers tend to care very little about what machine has the most innovative, hottest software—as long as it is the machine they own.

This column discusses a recent announcement that will have a profound impact on the kind of software you will be able to buy for your Apple II or Macintosh, and who you buy it from. It starts with a quiz about the producers of microcomputer software. The quiz provides the factual background for the discussion that follows.

Software Industry Quiz:

1. What are the three largest microcomputer software companies?

2. If you add the total annual sales of the 4th through the 100th largest software companies together, would the total exceed the sales of any of the top three?

3. What company sells the most software for Apple II and Macintosh computers?

4. What large software company has delayed publication of its major Macintosh product to more than a year after it was announced (hint: it still has not shipped), while introducing new software for the IBM PC with much ballyhoo, and lobbied strongly to keep Apple from publishing the data base software code-named "Silver Surfer"?

5. What software company tried to keep Apple from publishing the disk-based version of MacWrite, and succeeded in keeping Apple from publishing the Macintosh BASIC Apple had spent three years developing? (Give yourself extra credit if you can explain what leverage the company used to make Apple acquiesce.)

6. What large software company so badly underestimated the capability of the Macintosh and its users that it introduced a spreadsheet-based integrated package without any macro capability? That's so easy, that to get full credit you should also name the hardware company with which this large software company recently signed a major joint development agreement.

7. What well-known desktop publishing software company got its start with a lot of help from Apple, announced a major new version of its product for the IBM PC, and has not yet shipped an upgrade with the new features to its Macintosh customers?

8. What company that published software and books mostly for Apple computers got in financial trouble and was sold within the last year?

9. What company currently provides the lowest level of customer support for the software products it publishes for Apple computers?

10. The creation of two new software companies that will emphasize software for Apple computers has been announced within the last few weeks. Can you name them and the people who are creating them?

Answers

1. The three largest microcomputer software companies, in order of annual sales, are Microsoft, Lotus, and Ashton-Tate.

2. Probably not. Those three companies so dominate microcomputer software sales that the fourth largest company is almost invisible in a bar graph scaled to show the sales of the top three.

3. Would you believe Apple sells the most software for the Apple II and Macintosh computers? Apple's software sales total around $40 million per year, plus or minus $10 million or so.

4. Just about a year ago, there were strong rumors that Ashton-Tate would soon announce not one but several Macintosh products. Ashton-Tate has still not shipped dMac, its Macintosh data base program, and has instead been expanding its product offerings on the IBM PC family.

5. According to press reports at the time, Microsoft lobbied Apple heavily to prevent Apple from publishing Macintosh BASIC and disk-based MacWrite. Microsoft wanted to protect the market for its own BASIC and Word. The leverage: Bill Gates, Chairman of Microsoft, wrote part of the Applesoft BASIC in the ROM of every Apple II, and Apple's license to continue using it was expiring. The price Microsoft received, according to the press, was $600,000 cash plus cancellation of Apple's Macintosh BASIC.

6. Lotus published Jazz without any macro capabilities. Lotus recently signed a joint software development agreement with IBM, which includes writing a version of 1-2-3 for IBM mainframes.

7. Aldus launched its PageMaker page layout program with a tremendous amount of help and promotion from Apple. Last September, Aldus announced a new version of PageMaker for the IBM PC with many enhancements, without paying even lip service to the better graphics capability of the Macintosh hardware. PageMaker 2.0 for the Macintosh is reported to be in Beta testing, but Aldus has not shipped it yet.

8. Hayden overextended itself, including paying million-dollar advances for undelivered products, and got into cash flow troubles. The book division was bought by Howard Sams, the software division by Spinnaker.

9. The company that has provided the lowest level of support to its retail software customers is Apple. Apple has spent almost nothing for marketing and support of its software products, instead relying on independent Apple dealers to carry that load.

10. A new company called Acius will publish the high-end data base known by the code name "Silver Surfer;" the key people who recently left Apple to start the company are Guy Kawasaki and Scott Knaster. You can call this a trick question if you want, but the second new company does not have a name yet—it is being formed by Apple as its software-publishing subsidiary, with the intention of becoming an independent company within a year.

contd.

Scoring

If you answered 8 or more of the 10 questions correctly, or can prove that one of my answers is wrong, then you qualify for the title of "industry pundit." Call Bernie Urban immediately and reserve the name for your very own column in this Journal, to share your knowledge and foresight with the rest of us.

Apple's New Software Company

On April 28, Apple announced that it will create a new software company. The new company will start as a subsidiary of Apple Computer, and will become independent within a year. After the new company becomes independent, Apple will retain a minority ownership position in it. As soon as Apple picks a name for the new company and gets new boxes made, all of the applications software now sold by Apple will be sold under the name of the new company. The new company will develop and market applications software for both the Macintosh and Apple II computer families.

The operating systems, software development environments, and programming languages now published by Apple will not go to the new company, and will continue to be published by Apple.

Move Over, Microsoft!

As the software industry must look to a hardware manufacturer like Apple, the software industry consists of three large companies and a bunch of little ones. All three of the large software companies have at one time or another been either a disappointment or a real pain to Apple, and two of them (Microsoft and Lotus) recently signed long-term development contracts with IBM.

Sale of Apple's hardware is clearly helped when there is a stand-out software product like Excel or PageMaker. But even when Apple sees such a stand-out product and helps promote it, the advantage for Apple seems to be only temporary until the stand-out's publisher gets a version written for IBM hardware (PageMaker has more features on the IBM than on Macintosh right now, and Excel will be on IBM machines early in 1988).

What could Apple do to reduce its dependency on the undependable big three? Seems to me there were only two alternatives: (1) distribute seed money and help to a whole lot of the innovative little companies with good Macintosh and Apple II software and let market competition determine which of them grow larger; or (2) attempt to create a new, large software company right away.

Apple has adopted the second choice. As a software developer turning myself into a publisher, I quite frankly wish Apple had chosen to provide real help to the existing small companies. But Apple has opted to try to create its own large, captive software company.

Effect on Competition

Apple's press release announcing its decision to create a new software company claims that creation of the new company will help existing software publishers by taking Apple's logo off its existing applications software products and allowing other publishers to compete on a more equal footing. I disagree. Competing with Apple's logo is difficult, but it was possible because Apple spends little money advertising and promoting its software products.

The new software company starts with some tremendous advantages: it has over a dozen established and extremely well-known products, it has distribution and shelf space in every Apple dealership, and even without the Apple logo on the box everyone will know that the software comes from Apple's company.

Add to those advantages the fact that the company will begin aggressively promoting and advertising its software, and you have a situation in which it will become more difficult for a little software publisher to gain attention and shelf space for its new products. The new company will dominate not only advertising, but also the press release/news columns (there is already a rumor that Apple's new company will publish a new version of MacWrite, and advertise it heavily to take part of the market share away from Microsoft Word).

Given those factors, I think Apple's new software company has a high probability of emerging from the pack, and becoming the fourth largest software company. As that process unfolds, there will undoubtedly be many exciting new software products. I predict that there will also be some bankruptcies of smaller companies with perfectly good products who just could not match the dollars and marketing muscle of Apple's emerging giant.

In any case, there will be more activity and excitement in the world of Apple software in the months ahead. Let's hope that the end result is a greater selection of innovative, high-performance software for the owners of Apple machines.

Rich Norling is coauthor of StatWorks™ and Cricket Graph, and the author of Pict-O-Graph™, a new Macintosh application that draws picture graphs. He wrote the book Using Macintosh BASIC, published by Osborne-McGraw/Hill. Rich is President of Language Systems Corp.

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THE BEST OF THE MAC ITEMS FROM TCS
by Bill Baldridge

Misc. Programming

FROM BILL BALDRIDGE ON 01/10

Just received Microsoft's BASIC Compiler today! Spiffy package, nifty binder (9" loose leaf), speedy compiler (400-600 lines/sec - by the compiler's count), does windows, comes with EDIT (nifty multi-window text editor), does stand-alone applications (must link basic.rl[resource library]), but gets to look more and more like C language with each new release!! Boy, this sure is a far cry from the good ol' MS BASIC I knew a few short years back. The resource library is 38K, so a 4K source will compile to 42K, or thereabout - talk about overhead! The compiler is pretty slick, with many, many options as to debugging, linking options, list building. Comes on two 400K disks, not copy protected, and you don't need the MS BASIC interpreter to program, unless you want to use the interpreter to debug. More next year...after I learn how to use the toolbox routines.

LEE DUER ON 02/03

I'm trying to locate ResEdit on Genie or Compuserve - I would appreciate anybody passing on the info (i.e., file #, library, location, etc.).

BILL BALDRIDGE ON 02/05

On GEnie go to the main software library (605,2) and look for file #894 - this is ResEdit 1.0D7 - the most recent version I have seen (at least on GEnie).

RICK STICKLE ON 02/07

You might also want to check the developers SIG on the respective boards, it seems that once a Dev Sig goes up some of the programing tools don't make it to the general download boards.

Other Hardware

LLOYD SWIFT ON 01/16

I have had diskdrive problems (since upgrading - ed.). I found a number of applications "freezing" up with a dead cursor and blank window on the screen. When I ran the same disks on another Mac, no problem. So I took old MacDoodle into my friendly neighborhood Apple dealer's place for a transplant. Under Applecare no (extra) charge. So far so good.

MARK OSTROFF ON 01/19

I upgraded my 512 Mac to an EMac back in May, '86 and have had NO trouble at all with the internal drive.

DEACON MACCUBBIN ON 01/16

(On crooked CRTs - ed.) None of the screens on my four Macs (2 Pluses, a 512E and a 512) are crooked. The guy that sold me my widecarriage Imagewriter was, though.

WILLIAM HULTGREN ON 01/17

I wonder how many Macs have gone back to the shop for this problem??? Anybody else out there putting matchbooks under the left side of their Macs? I shouldn't complain too loudly...sitting at the Wang PC at work today, I must have grabbed for the mouse five or six times.

BOB MASSO ON 01/23

Yes, NOW it CAN be revealed!!! Secret studies by Apple proved conclusively that Mac owners are overwhelmingly "left-side-brainers". That's right, they use the left side of their brain much more than the average person. So much so that with continued Mac usage, the brain tissue on that side grows larger, with a resulting continual tilt of Mac-owner's heads to one side. In a dastardly plot to conceal these facts, Apple has deliberately been installing all Mac+ screens with a matching tilt. But NOW we KNOW!!! He He He!

BILL BALDRIDGE ON 01/21

Sitting here in front of my "large screen" Mac! Actually, it's one of those "TheaterVision" gimicks using a Fresnel lens. I was at an arts supply store in Laurel and saw these things laying on the counter, and ALWAYS having wanted to own my VERY OWN Fresnel lens I bought one... When I got home I started thinking "now just what are you going to do with this thing, dummy?!" The idea of using it to enlarge the Mac's screen came almost immediately, so I set about building a frame to hold the thing (after some initial hand held trials) Anyway, it works pretty well! It's great for games and such, and just OK for graphics works, because it has a tad of distortion (but not bad). I guess with a little more R&D into frame design it could be perfected. Anyone interested in a "Bill'l Build It!" article on this goodie? For those who can't wait, the product designator is ITOYA PL-D (I never did check...is there a difference between a difraction grating and a Fresnel lens? I assume this is the latter).

WICK WICKRAMASINGHE ON 01/30

Count me in! Seems ideal for folks who don't like wearing glasses if they can help it, and sit back with the Mac at the same time.... Fresnel lenses do use the principle of diffraction contained in the formula named after Monsieur Fresnel, however, a diffraction grating is a set of fine, parallel lines usually formed by photography/vacuum deposition of thin films of metal onto glass.

DAVID GURSKY ON 02/04

Bill I'm afraid someone has already beaten you to it. One of the first products for the Mac was a fresnel lens marketed under the name of "Macnifier". However, I don't believe it is being sold anymore. But what do I know?

PAUL CHERNOFF ON 02/08

I own one of those old "screen enlargers". It fit nicely on the Mac, but the distortion it caused, plus the limitation on the angle I could view the screen led me to prefer the normal Mac screen. Bill, the lens which you are using might be of higher quality than the one which I have. By the way, the screen hooks onto the vents at the top of the Mac.

DAVID GURSKY ON 02/07

Motorola has announced the successor to the 68881 Math Co-

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Processor. The new chip (called the 68882, not surpris- ingly) and is the companion to the new 68030 processor. Both chips will be out this summer in sample quantities.

STEPHEN MEYN ON 01/23
In an attempt to raise funds to buy one of the New Macs (the SE perhaps) in March, I am contemplating selling my current Mac, one of the old 128K machines. What is the current selling price for the thin Macs? Also, would I be better off upgrading it before trying to sell it? Does Apple still sell the 512K upgrade, or is there a cheap simple way to upgrade to a 512E? Any comments or suggestions would be appreciated.

BILL BALDRIDGE ON 01/24
Depending on when you bought your 128K, you'll take a beating on selling it, so I'd recommend holding on to it. You can always use it for a back-up, if you take the plunge for the SE. The best upgrade, I would think, is the Monster Mac from Levco—simple installation, and 2MB is almost a necessity nowadays (I've been using 1MB for almost a year now, and really wish I had 2).

DAVID GURSKY ON 01/24
I'm going to disagree with Bill. I believe you should sell it, ASAP. As of today, there is no upgrade path announced to the SE and the MultiSlot Mac. There are/were rumors of a trade in policy, a la Lisa/Mac XL, but I wont believe it till I see it. It will cost you a fortune to upgrade a ThinMac to a MacPlus, and even then, your compatibility will not be ensured. Apple has told the Software Houses no longer to worry about writing software that relys on the 64K ROMs, and they can take advantage of the 128s to their hearts content. Given that, I'm sure Apple will make a similar statement in two or three years about the 128K ROMs in the EMac and Mac+, given the 256K ROMs in the MacSE and MultiMac. This is essentially the approach I will take [hold on to my EMac, and sell it about a year after MultiMac comes along.]

LLOYD SWIFT ON 02/06
David's response to Stephen is a bit discouraging to me. I have a 512E which I may eventually get a MonsterMac 2mb upgrade (with SCSI and fan) for. But I have as of now no intention of going for one of the new machines. If the 128K Rom is made obsolete, I'll be left with a powerful machine, suitable to my needs for which software people are no longer making stuff. Is that what I have to anticipate?

BILL WURZEL ON 02/09
What's the cheapest and most reliable (that's AND not OR!) place to upgrade a 512K Mac to a Mac+ ??

BILL BALDRIDGE ON 02/09
I would think the cheapest would be Clinton Computer (Clinton store); they also might be most reliable, but I have no personal experience in this area. They offer 25% discount to WAP members on Apple products (hardware/software).

DAVID GURSKY ON 02/09
Let me also add HLA Computers (out around Laurel) and Fredneck (er Frederick) Computer Products to your list. Both offer comparable pricing and service to Clinton.

KEVIN PARKER ON 02/10
I just had my Fat Mac upgraded to an Enhanced Mac at Clinton Computers (Laurel) for $255.15 with tax and have no complaints so far. Upgrading to a + is going to have to wait awhile, though.

Pascal Programming
RICK ROBINSON ON 01/14
Any thoughts on what the best Pascal compiler would be for someone who is just learning Pascal? Since I am new to Pascal, I don't want to spend Megabucks; my limit would be about $100. I've heard that Lightspeed Pascal is good and fast. Any and all comments would be greatly appreciated!

BOB MASSO ON 01/14
Rick, for the Mac, your Pascal choices are pretty much as follows.... (1) Turbo Pascal (about $95?)—just out. Good for those users also programming in Turbo Pascal on other (IE IBM) micros. (2) PECAN Software UCSD Pascal ($45?) —Full featured, like MacPascal not a "true" compiler. Good for those users also programming in Apple][Pascal, or UCSD Pascal on IBM PC, TI, DEC, etc., etc.. (3) TML Pascal ($95)—Full featured, been out a while, excellent support. Has available a "vanilla" compilation mode, so that in addition to MAC Toolbox programming, you can code programs to run in most Pascal environments. (4) Lightspeed Pascal ($95). Have not seen this, but appears to be comparable in features with TML from what I've heard. VERY new, has advantage of integration with Lightspeed C, so as to enable mixing of C & Pascal code (if you wanted to). (5) MacPascal - Not as full featured as the others above in toolbox access, but has a TREMENDOUS debugging environment, as good as anything available on the better mainframes. ($95?). Overall, if you are REALLY worried about Pascal inexperience, MacPascal is THE most friendly environment to the total neophyte. Eventually though you may wish to upgrade to a more powerful and faster Pascal. Among the others TML would be the next step up. It has a great deal of compatability with MacPascal, is out there in enuf numbers so that you have other users to talk to, and is both a mature product, and one that is constantly being upgraded by the maker. Any other comments from the peanut gallery?

MICHAEL HARTMAN ON 01/20
You left out the following: (6) Macintosh Programmers Workshop (MPW) Pascal - MPW base package (editor, linker, assembler) $100; MPW Pascal compiler - $ 75; MacApp Object Library/Application Shell - $ 50 (wholly optional) From Apple Computer; available now through APDA, through dealers later. This is the industrial-strength compiler and environment, and as such perhaps not the place to begin. The compiler is a port of Lisa Pascal, and is the most full-featured compiler for the Mac. Features type-casting, CYCLE and BREAK statements, short-circuit booleans, and conditional compilation (yeah!). Also provides complete implementation of Object Pascal (TML is getting there). In conjunction with MacApp, is a simply wonderful application-writing tool. Currently the only compiler which supports MacApp. And reasonably priced.

RICHARD BROSNAHAN ON 01/14
I am studying Pascal, amoung other things at U of M. I first

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had MacPascal and used it throughout the course. It does have a GREAT debugger. I then purchased Lightspeed Pascal, since it was made by the folks who made MacPascal. It seemed to me that they (Think Technologies) would continue on the same lines. Well, they did. I really like it. The debugger assumes you already know some pascal, and is not as full featured as MacPascal. Also, I found the text files that explained errors very useful. I could run into a bug and just pull up MockWrite and find the explanation, without leaving the application. With Lightspeed, you need to refer to the book. The book is great, by the way. Very extensive. It does assume you know something about programming, and is not a beginners book. The same goes for the MacPascal books. I have not worked with TML, but have heard their docs are pretty sparse. The program gets nothing but raves.

RICK ROBINSON ON 01/15
First of all, thanks for the info! I'll be learning Pascal on a mainframe (at GMU) this semester. Would you suggest, because of its "GREAT" debugger, purchasing Mac Pascal first, and later getting something like Lightspeed Pascal. By the way, I've been using BASIC for many years, but have never had the opportunity or need to use Pascal until now. Does MacPascal support the Toolbox fully? I'd really like to get into the "guts" of Macintosh programming. Are you required to have a Mac at U of M? Also, in your Pascal class, did you develop programs on a mainframe or on the Mac?

RICHARD BROSNAHAN ON 01/21
I never learned a programming language before Pascal. Irrelevant. No, MacPascal does not fully support the toolbox. Second, it is an Interpreted language, and the programs will run slowly because of that. No we are not required to have a Mac at U of M. We were encouraged to develop and run the programs on the mainframe, but not required. I found the debugger on the Mac great to debug and then upload the debugged program to the mainframe. There were differences in the compiler though, especially with file access. I hate to see you buy both programs and if you had to buy just one, Lightspeed is it (between the two of these anyhow). I think it would be hard to beat, but I have not tried TML. The debugger in Lightspeed is great too. Don't worry about that. It also compliles quickly, so if you like to test short sections of code, it can be done rather quickly, although not as quickly as MacPascal. Confusing? Sorry. I'm doing my best.

RICK ROBINSON ON 01/31
Thanks for your additional info. Your comments are helping to solidfy my belief that Lightspeed Pascal is the way to go.

RICHARD BROSNAHAN ON 02/04
I like it. Now that I have used it for a long while, I am more convinced. It does compile like a sonofagun and the fact that you can have more than one text indow open at once is great. It makes it very easy to cut and paste between two docs. The article did it justice. I don't know much about "clean compact machine code" yet and would not know how to determine how good that code is.That was the one drawback they stated.

WAYNE RABEND ON 02/08
Rick, take a look at Turbo Pascal before deciding on what compiler to buy. I have used all the Mac Pascal compilers except MPW Pascal, and Turbo is the best of the lot. Its FAST, compiling 6 or 7 times faster than Lightspeed Pascal. The Turbo editor is much faster than the Lightspeed editor and does not have any limits(that I have found) on source code size. I can compile, link and execute a 2400 line program in 15 seconds, thats 9500 lines per minute. I much prefer Turbo's speed over Lightspeed's fancy debugging features. Finally, Turbo is only $65 from MacConnection.

Rumor Manager
MARK OSTROFF ON 01/09
From Computer Reseller News articles on this. 1) The BIG NAME software company that bought out dMAC III is Nantucket Software, the makers of the Clipper compiler for dBASE on the IBM PC. They expect to release their product by March or April of 87. 2) Ashton-Tate is delaying release of dBase for the Mac until MID-1987 (ie, read about August) because of performance problems. Everything seems to work, but it is SLOOOOOW (according to the reports), and A-T does NOT want to release it till they can speed it up.

DAN YURMAN ON 01/10
InfoWorld reports in the issue for 1/5/87, pg. 6 that Nantucket purchased dMac III from the former owner, German Format Software. Warning to potential buyers, Infoworld gave this product a bad review due to bugs and limited use of the Mac's user interface. The product is due in revised form in "July," according to the InfoWorld article.

DAVID MORGANSTEIN ON 01/17
Dan, the Jan. issue of WAP contains a review of dMac. I found it to be workable and fast. Easier to use than dBase on the PC and several times faster than an XT equipped with dBase. It does deserve low marks for the manual but Nantucket is currently re-writing that. Frankly, if you know dBase you needn't worry about the manual. It is thick and contains a lot of info, albeit in a slightly disorganized way. The bugs are minor and pretty much insignificant. It is not as Mac-like as Helix but as far as I can tell it is 100% compatible with dBase, reads data files and uses programs. The new price will list at $295.

DAN YURMAN ON 01/17
Dbase III is certainly no speed demon on a 4.77 PC/XT. I was alarmed by the review of dMac in InfoWorld beause my organization has many "power" users of Dbase III and a rapidly growing number of proficient users of the Mac. As you might guess, the "power" users on the PCs are some of the first adopters of Mac systems and applications as they become available, all of which makes for the predictable rush for a Mac version of Dbase III. By the way, the same phenomenon occurred with Borland's Reflex. There were rave reviews of the IBM PC version and a variety of tales of 'whoa' <pun intended> for the Mac version. Neither product meets the real need many users in both environments require, which is the ability to download data from larger host systems in the appropriate format for further manipulation and report generation. I understand the Apple is with third party software developers for DEC and PRIME minicomputers to create true "transportable" software. Hopefully, user documentation for these products will be high quality stuff.

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MARK OSTROFF ON 01/09
"Baldy" (as usual [Blush - ed.]) is entirely correct in saying the Mac ALWAYS has color screen support. In fact, the program Silicon Press has an option to SELECT A COLOR SCREEN DISPLAY MODE !! In talking with one of the developers of the Radius FPD, he told me that there are hooks for ALL KINDS OF THINGS in the Mac system that have yet to be tapped. The only one he would confirm, though, was the support for color screens.

ALAN KAPLAN ON 01/20
The price of a Mac+ will not go any lower than about $1575 until we see a price from Apple. $1575 is already to the point where a dealer is making less than $100 on a Mac.

JERRY OPPENHEIMER ON 01/21
I don't know where you get your information from. I spoke to a developer source very close to Apple. He revealed to me that dealers pay about $1000 for a MAC+ these days. And this guys knows, no BS!!!!

RICK ROBINSON ON 01/23
I don't quite believe your source. This information is a bit old, but it is fact and the percentage difference between "Suggested Retail Price" and Dealer Price should still be the same: As of June 15, 1986 the Mac Plus SRP was $2599; DP was $1715. I seriously doubt the Dealer Price is $1000; your leg has been pulled.

STEPHEN MEYN ON 01/23
For what it's worth - the current (1/87) Apple University Consortium price for a Mac+ is $1380, $240 more than the $1140 I paid for my 128K Mac when I bought it from Yale in May '84.

LLOYD SWIFT ON 02/06
I heard on the radio last night that Nippon has come up with a 16 MEGABIT chip! Think of the Mac-possibilities. With 16 of these babies on board, we have 32 Megabytes of RAM. With a 28Mb Ramdisk and battery backup to keep it all warm we get rid of the need for a hard disk or a second floppy. Then give me a fast tape backer-upper. I understand the 68000 won't address that much RAM but most of it would be used for data storage anyway, leaving, say 4 MB of active memory for system and current applications. The speed! The convenience! The Price!!

FRED SEELIG ON 02/08
The new ROMs ought to be able to sense when an MS-DOS machine tries to sneak onto the AppleTalk network. Let's call this routine DOSDetect. If DOSDetect = True, then call Inject-Worm. InjectWorm is a subroutine that will hop aboard the AppleTalk net, and like a virus, be injected deep into the bowels of the offending DOS machine. It will then happily rummage among the bits and bytes and sectors of the machine's memory and disk. Run amuck. When the DOS machine (I can't bring myself to call it a computer) is close to death, the InjectWorm will time out and call the Show- SystemBomb. ShowSystemBomb will commit the ultimate act of viciousness and hostility, and will cause the dreaded System Bomb to appear on the DOS machine. And I, for one, will laugh and clap my hands. Thanks, I feel much better now.

<u>Telecom. Hrdwre & Sftwre</u>
JAMES HAYNES ON 01/09
I would like to default the phone numbers in MacTerminal so that when I ran the application I would not have to enter the phone settings each time. Also does anyone know why when I use MacTerminal in CompuServe and save the document I cannot go back and scroll through what I just read in CompuServe. If I could download a letter and then read it after I exit CompuServe I would save a lot of time and money. Any help would be appreciated.

DAVID GURSKY ON 01/09
All that is explained in your MacTerminal manual. See page 21 for how to set the phone number, 26-27 on saving in your "session" and page 22 for saving the settings in a document.

RICK ROBINSON ON 01/10
In the WAP Journal (March 1986, p. 64) you will find a listing of the Mac Plus pinouts. Pinouts for the "Mac+ Adapter Cable" are also given, so you can translate the Mac Plus pinouts to 512k pinouts. Remember that Pin#2 on the 512K Mac is +5V.

KEVIN PARKER ON 01/14
According to the most recent Infoworld (12 Jan), Intel is coming out with a new chip set that should help cut the price of 2400 baud modems to under $200 by this coming fall! (But does that mean it's worth enduring this 300 baud one for that much longer??)

RICK STICKLE ON 01/18
To save everyone <u>two</u> phone calls, the DC telenet 2400 baud node number is 429-0956. To get the systems attention use @ <CR>, instead of <CR> <CR> like you used to. I hope they haven't forgotten to tell me anything else, but all seems to be working properly now. As additional information Delphi has no extra charge for 2400, GEnie charges $10 an hour more, and CI$ charges the same as for 1200 baud.

ROBERT MANKA ON 01/23
Lou, some time back you asked about VersaTerm PRO. I tried to reply but had trouble with the Pi edit procedure. VT PRO is a solid, sophisticated communicatons program that does good VT100 emulation, along with Tektronix 4014 and 4105 (also Data General). The Tek 4105 allows output to LaserWriter as well as ImageWriter (including color). It will also hold a series of graphcis plots in memory for review. In comparison, Tekalike has usable but not complete VT100 emulation and Tek 4014 and some 4105 features. Its strongest point is the ability to drive several different pen-plotters. If you work with graphics from a VAX or other mainframe, then I think that you will like VersaTerm PRO; it also has some macro capability (get version 1.2 or preferably later). Hope this helps. What are your uses for Tek emulation?

LOUIS M. PECORA ON 02/02
Thanks for the info on VersatermPRO. Sounds great. I have only the $99 version of VersaTerm, but I think it's the best Terminal emulator for that price range I've ever seen. I also have Tekalike and I've noticed that it is limited in its VT100 emulation. I use Versaterm for 95% of my needs and Tekalike for those times when I need better control over the 4014 stuff

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(Zoom, etc.). I think I'll now have to consider purchasing VersaTerm PRO. My uses for Tek emulation are for display of 2D and 3D functions and (more recently) for display of trajectories of dynamics systems in 2D or 3D phase spaces. All my plotting is done through a set of routines supplied by the National Center for Atmospheric Research. They're freebies, but they're good. I'm really not an expert on Tek stuff. It's pretty much black box to me, but very useful for graphics for scientific publications and presentations.

MARLON NELSON ON 01/26
I tried to send a file from an HFS disk. It didn't show up in the dialog box. When I copied the file to an MFS disk it did show up and I could send it. I use MacTerminal v2.0. Can it handle HFS disks & folders or is there an upgrade that can?

DAVID GURSKY ON 01/26
Yes, MacTerminal can handle HFS volumes with no problems. Check that you are in the right folder [i.e. the one with the file to be transmitted].

BAILEY WALKER ON 02/03
I use MacTerminal 2.0 with HFS all the time. No problems sending or receiving files. Make sure that the System/Finder on your MacTerminal disk are upgraded and running HFS. It's the System/Finder on the default drive which determines whether or not the Mac is under MFS or HFS. Good luck.

Utilities
DAVE CHAMPNEY ON 01/15
Anyone know of a good utility to read and write the contents of a HD to itself to reduce/eliminate file fragmentation? After loading up my DataFrame with 10M+ of goodies I am sure pieces of files are scattered all over. Can these utilities use the empty space on your disk as a work space? If so, how much do they need? Or do you need another storage device to rebuild your files? Anyone have experiences to share?

RICK ROBINSON ON 01/16
Check out "Disk Express" by AL Soft, Inc, Ph: (713) 353-4090. Their program claims to "gather all the pieces of files and put them into contiguous blocks." This would minimize disk fragmentation.

DEACON MACCUBBIN ON 01/16
Disk Express is just the ticket. It will do exactly what you want, though it can take a long time. But you can "turn it on" and walk away for an hour or two and when you come back, all your fragmented files have been "repacked" on your hard disk. I presume a backup and restore would do about the same thing, but you'd have to sit there feeding floppies for 30-45 minutes.

LOUIS M. PECORA ON 01/17
Try Disk Express. You should be able to find the address of the company in one of the Mac journals. I've used it on the LoDown 20 Mb. Very nice. I think it was about $30. I think Disk Express was also mentioned in a recent WAP journal (Nov or Dec, maybe).

BAILEY WALKER ON 01/19
I bought DiskExpress from ALSoft, Inc., (713) 353-1510. Works very well. It analyzes both floppy and hard disks. Will compact the desktop file without losing comments, verifies volumes, optimizes the volume by eliminating file fragmentation and will prioritize files in the process (i.e., applications are places ahead of data files), and will erase free space for better security. It's doing a lot of work so restructuring a 20 Mb hard disk takes some time but it will tell you how much work needs to be done before you start. It also has some nifty animated icons as the work progresses. Not bad for $39.95.

DEACON MACCUBBIN ON 02/01
If you've been running Servant .89 and have run into the "expires after Jan. 31st" problem, you can extend the life of your Servant by doing the following: At offset $733E, change $62DA to $4E71. The $62DA follows $9C48407C, if you want to double check. This information, courtesy of Andy Hertzfeld, who has been too busy to get another version of Servant posted yet.

Word Processors
MARK OSTROFF ON 01/08
In regards to the Word 3.0 demo (at Jan. WAP USUHS Meeting - ed.), let me use the immortal words of none other than the Dark Lord of the Sith himself, Darth Vadar... "Impressive, MOST impressive." The demo started, or rather almost didn't start, with the MS rep getting lost on the way, so two of PI's stalwarts stepped in till she arrived. They showed us a few things, but the lady from MS made this FLY!! Customizable menus, hidden text and commands, outlining AND straight text in the SAME document at the SAME location (open up two windows on the same doc, one in text mode and the other in outline mode, move an outline topic and ALL its associated text in the other window moves with it), ability to control sub and super scripting to the extent that you can truly do subscripts of subscripts (handy for Math Formulas), has strike-through feature, and you can ADD YOUR OWN MENU FUNCTIONS, in addition to removing unwanted standard items that you may not use. The recommendation of the lady from MS is, if you are considering getting Word 3.0, don't wait. Buy Word 1.05 NOW for about $110 mail-order, and you can upgrade to version 3.0 for ONLY $50!! Wait, and the price will SURELY be more than $160, even mail-order, cause the retail will be $395.

BILL QUALLS ON 01/08
Here's another desk accessory program that you writers might like. It's called Toggle <>. This little gem makes the Mac keyboard work more like a typewriter keyboard by "fixing" the comma (,) and period (.) keys. Normally, when you hold down the shift key and type a comma, you get the less than sign (<); when you hold down the shift key and type a period, you get the greater than sign (>). This is annoying to some people. A guy named Lofty Becker must have been highly annoyed. He's the author of Toggle <>, and yes that's right, Toggle <> alters the keyboard so that you get a comma or period in uppercase mode instead of the less than or greater than sign. As the name implies, you can toggle between the two keyboard arrangements. Just select Toggle <> from the Apple menu and it does the rest. Oh yes, you can still type the less than and greater than signs with the alternate keyboard arrangement enabled. Just hold down the option-shift key combination. Since characters aren't normally assigned to

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option-shift comma and option-shift period, you don't lose anything with Toggle <>. You can see all of these changes with Key Caps. Toggle <> is simple and elegant. You can find it on CompuServe in the new Macintosh forum for business users. Log on, type GO PCS-17 and look in DL 7. The price is right; it's freeware.

DEACON MACCUBBIN ON 01/09
Lofty Becker has churned out scads of DAs and FKeys and they are all available on CompuServe's MACUS (most of them probably are on the Clone and Overflow Valve, too). Some are public domain, others shareware ($3-5), all are great! (BTW, you can no GO MACBIZ on CompuServe to get to the Macintosh Business Forum.)

BILL QUALLS ON 01/10
Well, I'm glad to hear that Lofty is prolific as well as creative. I confess that the Toggle<> DA is the first of his programs that I have come across. I suspect (actually, I'm positive) that there are many more utility programs and DAs out there that are useful to word processing users. I'd definitely like to know about them. If you or anyone else have one that you find useful, please tell us about it. If we get enough responses over time, I'll collect them in a Library file.

DEACON MACCUBBIN ON 01/16
Some useful things that come to mind: in DAs -- DiskInfo, DiskTop, FileSplitter (but it's buggy), miniWriter. In FKeys -- Fontsie, DateKey, ClipperKey, PrintKey (but it doesn't work with quite a few word processing programs) and FKey Manager. All of these are shareware or public domain and can be found on CompuServe, GEnie, the Clone and elsewhere (including, I suspect, on the WAP disks). There are plenty of others, but my mind's a blank right now.

BILL QUALLS ON 01/23
Thanks, Deacon. I'll start checking these out. BTW, if you like DAs that operate on files, you might look at FileStar. It lets you perform a number of file maintenance functions from within an application. I use it with Word ALL the time. You can delete, move, copy, rename, etc. Very handy.

DEACON MACCUBBIN ON 02/01
Yeah, I tried FileStar. But I like the new DiskTop (from CE Software) even better. It does everything that FileStar, DiskInfo, etc., do but with a smoother (more graphical) interface. It's $25 shareware and well worth it.

JERRY OPPENHEIMER ON 01/12
I'm most impressed with this program. As a professional writer/journalist I find the word processing module excellent and probably as much as I need for book, articles, etc. I'd like to hear from others using the program and get a dialogue going. I've found a couple of glitches and would like to compare notes.

MARK OSTROFF ON 01/19
I have a friend with MS Works who had a strange problem with the terminal package. He was communicating with a friend who was using MacTerminal, and when he sent a line of text shorter than the full screen width, the reply from his friend with MacTerminal would overwrite his line. They played with all kinds of settings to no avail. Hitting the return key twice was the work around, but he WOULD like to know what he can do to avoid having to do this.

JERRY OPPENHEIMER ON 01/21
I have not encountered that kind of problem and maybe someone on the telecomm board might have the answer. However, please, please call Microsoft and let them know. This is the only way the fixes will occur for the next update.

BILL QUALLS ON 01/24
I'd like to get a thread going on using graphics with word processing programs. One of the Mac's major selling points is the supposed ease with which you can mix graphics with text in a document. This can be a very powerful feature for people who make a living by communicating their ideas through writing. More than any other factor, it's probably what swayed me over to the little beige toaster. I'm not necessarily talking about publishing newsletters or doing other large-scale projects. Actually, I'm thinking more along the lines of writing a memo or a report and illustrating a point with a MacDraw picture. Anyone ever tried this? I've gotten my feet wet, and my experience is that it isn't as easy as the advertising hype would lead you to believe. BIG SURPRISE, right? Anyway, here's an example of what I'm talking about. The other day I tried to place a network diagram that I had drawn using MacDraw into a Word 1.05 document. I was running Word and MacDraw with Switcher, and I used the Clipboard to copy the diagram into my report. I wanted the diagram to appear at the top of a certain page, so I pasted the diagram just below a forced page break. The diagram was surrounded by a rectangular box. Everything looked good on the screen, but when I printed the report, the top line of the box was missing! I then noticed that the line appeared to be missing in the diagram's image in Word. The diagram looked fine in MacDraw, so I tried copying it over several more times. I tried changing things in Word, as well. For example, I varied the margins, and I put a carriage return after the forced page break, and I ... so on and so forth. Nothing worked. Finally, I ran out of time and drew in the line with a fine point pen! I know very little about the way Mac programs handle graphics information, so I can't tell which program (Word, MacDraw, Switcher, or even the System) is causing the problem. To complicate matters even further, I was printing on a LaserWriter, and the diagram's width in MacDraw was twice the size as the report's margins (6.25"). All things considered, I suspect Word was altering the drawing since the other programs seemed to be working properly. Anyone have a clue as to what the problem is? In general, I'm not ecstatic about the way Word 1.05 handles MacDraw pictures. The pictures are almost always elongated, and it takes some effort to resize them back to the proper proportion. Does anyone know a way of copying pictures into Word and avoiding this problem? I'm going to do some experimenting, and I'll share what I learn here or on the Graphics & Design Software or DPub Board, as appropriate. In the meantime, if anyone has any words of wisdom or even your own problems to share, let's hear from you!

BILL BALDRIDGE ON 01/25
Sounds like you have a problem there all right, Bill. I think you also have the proper board for this message, as you're

contd.

dealing with the way Word treats graphics imported from MacDraw. I don't own MacDraw, but know it produces object oriented graphics (as opposed to bit mapped from MacPaint, FullPaint, etc.). The only thing I can suggest is a kluge of sorts by adding some blank space at the top of the diagram/image you are importing from MacDraw to fool Word into chopping off this blank space and leaving the rest intact. Meanwhile, we are all waiting for a do-it-all program for text & graphics processing...I once wrote one for my old TRS-80 - maybe I can do the same for the Mac...

BILL QUALLS ON 01/29
I've corrected the graphics problem, and I thought I would share what I learned from that experience. To briefly recount the problem, I was trying to transfer a MacDraw diagram to an MS Word 1.05 document using Switcher 5.01. The MacDraw diagram was surrounded by a rectangular box. When I transferred the diagram to Word, the top line of the box was missing. Subsequent attempts at transferring the diagram failed to correct the problem. It appeared to me at the time that Word was somehow cutting off the top of the diagram. I had the rare (for me) foresight to save all of the files from that day, and I used them to determine what was causing the problem. It wasn't Word after all. It looks as if the copy of Switcher I was using lost a portion of the top part of the diagram when it transferred the MacDraw diagram to the Word Clipboard. I say this because the diagram copied to the MacDraw Clipboard had a complete box, and the diagram placed in the Word Clipboard by Switcher was missing the top line. I replaced the copy of Switcher and tried the transfer again. What can I say? Everything worked fine with the new copy of Switcher. I have no idea why that other copy of Switcher didn't work properly.

BILL QUALLS ON 01/31
I was using Switcher 5.01. This is the first problem I've had with this version. I have found that earlier versions of Switcher were buggy and caused occasional system crashes. As a result, I recommend staying away from all versions except 5.01.

BILL BALDRIDGE ON 02/02
Actually, the only difference between 5.0 and 5.01 is the bundle bit was not set in 5.0 (so the switcher icon wasn't recognized by Finder), so 5.0 should be just as bug-free as 5.01.

PAT SHIRLEY ON 01/31
Have you tried moving the right margin marker out past eight inches for the paragraph containing the draw graphic? Word will automatically resize graphics pasted into it to fit the default document width. If you want the graphic to be properly proportioned, you must change the paragraph margins to somthing greater than the graphic width. The graphic should automatically resize once it has the proper room.

BILL QUALLS ON 02/02
First, welcome to the Mac Word Processing Board. I believe this is your first time to post a message here. It's always nice to have a new person join in on the conversions. I understand your comments on expanding the diagram's paragraph margins to put the diagram into proper proportion. I have a question for you. Is there a way to then reduce the diagram's paragraph margins so that the diagram fits within the text document margins and at the same time, reduce the diagram's length proportionately (that is, without elongation)? Let me explain further. Let's say that I set up a Word text document with 1 inch margins on each side using the Page Setup command. That means that I have a usable document width of 6.25 inches. If I want to place a diagram in my document, then the diagram must fit within that width in order to maintain the document's margins. Now, I have a couple of options when I switch to MacDraw to do the diagram. First, I can make the diagram's width 6.25 inches or smaller, and I'll have no problem fitting it within the text document's margins and keeping its proportion. However, my experience is that unless the diagram is very simple, 6.25 inches is too small of a drawing area. That leads me to my second option which is to make the diagram's width larger than 6.25 inches and reduce it later, either before or after placing it in my text document. If the diagram just contains geometric primitives (lines, circles, squares, etc) and fill patterns, then I can reduce the diagram in MacDraw before I transfer it to the text document. I can also keep it in proper proportion. For example, let's say that my MacDraw diagram is 12.5 inches wide and 7.5 inches long. All I need do to proportionately reduce the width and length is to show a ruler, group all of the objects, and drag one of the corner handles until the diagram's width is 6.25 inches and its length is 3.75 inches. I'll have drawn my diagram and reduced it to a size so that it will fit into my text document without elongation. Unfortunately, if the diagram contains text, then chances are this technique won't work. Text keeps it's size in MacDraw even when it's grouped with the objects around it, and these objects are then reduced. It makes no difference if the diagram is in MacDraw format or PICT format.

As best I can determine, my one option here is to select all of the text and try a smaller font size, but my experience is that usually the text is still too large and out of proportion with the surrounding objects. O.K. This means I must reduce the diagram after I place it in my Word document. Now, Word handles graphics in standard PICT format and treats each graphic as a separate paragraph. As you pointed out, if the diagram's width is greater than the document margin width, the diagram is compressed to fit within the document's margins. The diagram's length, however, remains the same, so the diagram appears elongated. As best I can determine, the only way to reduce the diagram's length to proper proportion is to select the diagram, grab the middle handle at the bottom of the diagram, and shrink it until it looks correct on the screen. Sure, this method works, but getting the document's length back to proper proportion is sometimes a hit or miss affair. I find that it's a real pain. Your comment got me to wondering if Word can't help out in some way by automatically reformatting the diagram to proper proportions. If I change the diagram's paragraph margins to the diagram's original size (12.5 inches in this example) then the diagram is returned to its correct proportions and it looks normal. Unfortunately, it isn't going to print right with a 12.5 inch margin. Now I'm back to my original question. At this point, is there a way to reduce the diagram's paragraph margins so that the diagram fits within the document margins (its width would be reduced to 6.25 inches in this example) AND AT THE SAME TIME, automatically reduce the diagram's length proportionately (its length would be reduced to 3.75 inches in

contd.

this example)? I haven't found a way to do it yet, and if you know a way I'd appreciate it if you would fill me in.

PAT SHIRLEY ON 02/03
Sorry, I don't have an answer for that problem. As far as I know, Word does not have a feature that allows proportionate scaling of graphics. Readjusting the right margin will work for a too large graphic as long as you don't adjust the graphic size beforehand. I can think of no way to condense a graphic and still retain the original proportions. Macdraw and MacPaint won't work either. Maybe FullPaint or SuperPaint have a function that will do it, but I am not familar with either one. As it is, it looks like your best approach would be the one you described before, manually resizing it in MacDraw.

BILL BALDRIDGE ON 02/03
I had an interesting demo at Clinton Computer today which seems to fit in here pretty well. I had this graphic, bit-mapped, that didn't print out too well from FullPaint, so one of the people there booted up PageMaker and imported the image via the File menu and pasted it into a PM document. He then just selected the page and scaled it down to where it printed at 300dpi. This may or may not be of any help/ applicability but it is an option... You could do your charts larger than normal and then shrink them for hi-res printing. The only fly in this ointment is I'm not certain if PM can import object-oriented graphics...sorry.

PAT SHIRLEY ON 02/05
Bill, that sounds like a good way to get around the problem of scaling a graphic, I'll have to remember that for when I print some MacPaint artwork in the future and want it to look higher res. It doesn't let you include the scaled praphic in another document, such as a word document. You'ld still have to print the word document, then print the graphic in PM, then assemble the two. Better a tricky solution than none at all, however. I can't remember if PM imports Pict drawings either. (Ed. Note: It does.)

BOB MASSO ON 02/06
One item of interest for those using Word Perfect on IBM's or on a Mac and planning to port into IBM's.... Apparently the newest version (4.2) uses an internal file format incompatable with older versions (4.1 etc). So while you can read older WP files, if you send a WP file to someone running 4.1 or before, they CAN NOT read your datafile. You can specifically instruct the software to save a WP document in the older, 4.1 mode, but on a save by save basis. Apparently the company plans to ensure that EVERYONE sends in their update fee this time around.

SUMMER WAP TUTORIALS
by Robert C. Platt

Don't let summer slip by as one endless session with your lawn mower! Joe Isuzu reports that weeds can grown on your mouse and hard disk too, unless of course you keep your computer fully utilized with new techniques mastered at a WAP tutorial.

During the summer, we are suspending our Apple II introductory sessions, but continue to offer our introductory Mac tutorials in a new and improved format. We are also announcing a special tutorial on Apple II disk drive maintenance.

"Maintaining your Disk][" – *Richard Mlodoch*, Saturday June 20, 9 a.m. to 12 noon.

Richard Mlodoch is repeating his popular session which shows you how to take apart your Apple Disk][for cleaning and maintenance. Please bring your Apple and all of your 5-1/4" disk drives. Sorry, but 3.5" drives are not covered.

Revised Introduction to Macintosh Tutorials. For the past two years, WAP has offered a two-Monday night sequence for new Mac owners. We've concluded that three evenings are required to cover the material and that each session should have a different level of prerequisites to allow a member to jump in at the appropriate skill level. As a result, beginning in July, WAP will offer the following three tutorials every month, on the second, third and fourth Mondays.

"Introduction to Your Macintosh" – second Monday, 7:30 p.m to 9:30 p.m.

Prerequisite: Going through the *Guided Tour to Macintosh.* This course picks up where the Guided Tour left off. Learn how to care for your Mac, the differences between MFS and HFS, command key short-cuts and the secrets of Mac jargon and terminology. Bring your Mac, system disk and two blank disks.

"Intermediate Macintosh Skills" – third Monday, 7:30 to 9:30 p.m.

Prerequisite: Going through the *Guided Tour to Macintosh* and are familiar with the Desktop and basic Mac terminology, know how to copy files and whole disks. Learn how to use the control panel, the difference between the Clipboard and the Scrapbook, available hardware upgrades, desk accessories, and much more.

"Becoming a Macintosh Power User" – fourth Monday, 7:30 to 9:30 p.m.

Prerequisite: Feeling comfortable with your Mac and being familiar with Mac terminology, desk accessories, running some applications and knowing what a system folder and startup disk are. Learn how to upgrade your system file and finder when a new version comes out, to use Set Startup, to use the Font/DA mover, RAMdisks, Switcher and Minifinder. Suggestions on how to shop for software.

DISKETERIA DISPATCH
by Jim Little

We have several new disks this month.

Apple /// Volume 1006 A/B (two sides) - Word processing and WPL Disk. See Dave Ottalini's column in the May Journal for the details. Suffice it to say that it includes Super Apple Writer and a bunch of tutorial files.

Apple II Disk 503 is now in the library, after a bit of informal distribution over the last two months. This disk, **D-Com,** is a shareware communications package for nearly every use. It includes emulation of terminals, file transfers, etc. Some of those who have tried it say that it's ok. Others have had some trouble with the startup. To fully exploit the package, the documentation received upon registration is necessary.

Disk 504, Database, is from LOGIC in Canada. It is a data base program written by Jim Hill. It too is shareware, and looks good. The author suggests that it is more useful for files of 500 or fewer records. Data bases allow sorting or selection by some characteristic of the contained information. This one allows the use of up to 6 disk drives for the data disk. Up to ten keys may be selected for search criteria.

Disk 229, City in the Clouds, returns after debugging. It is another of the Eamon series, and as the name implies is in a floating city. Test your skills fighting hoards of sentries. Light Sabres and the force be with you.

Disks GS 2001 and 2002 are the first entries in the GS disk set. See Ted Meyer's descriptions elsewhere in this issue.

Much more is coming next month. Your contributions are also needed. If you have written a program, set up a whole disk of useful utilities, or have obtained a public domain download, we are always in search of new or better programs. For any contribution on a disk, we will give you a disk of your choice from the Disketeria.

IIGS DISKETERIA NEWS
by Ted Meyer

WAP is pleased to begin its collection of software for the IIGS. We are distributing the new library on 3.5 inch ProDOS disks. The collection will grow only with your help. Remember that for each disk of software you donate, you will receive a WAP library disk in return. To donate, contact Sherman Lewis, (703) 476-6547, our new GS™ disk librarian, or the WAP Office. Although we welcome materials written by WAP members, we will also scavenge the online services for the latest items.

/WAP2001/ Apple IIGS Disk 1 (3.5 inch format —do not use as a boot disk.)

ECP16 - Alpha test shareware ($40) ProDOS16 shell with line commands similar to UNIX or MS-DOS.

SHRCONVERT - Converts picture files from Macintosh, Amiga, Atari ST, and Apple Double Hi-res to Super Hi-res.

Picture Folder - Graphics which can be viewed with SHRCONVERT. Some are: Bob Hope, Astronauts, Rockwell, Girl.816, Max.Headroom, Cheeta.

ASQ, AUSQ - Squeeze and unsqueeze for fast file transfer and to save disk space.

Squirt - Program launcher for Apple][machines.

Binary.up,Binary.down - Binary II file transfer conversion programs. Use Xmodem protocol to transfer files. Then run Binary.down to create standard ProDOS files.

Diversi Folder - Documentation included.

Diversicopy 3.5 (shareware-$30 if used more then 2 weeks) Fast 3.5 inch disk copy uses GS's extended memory.

Diversi-Cache (shareware-$35 if used more then 2 weeks) Speeds disk I/O by using extra RAM for a disk buffer. (Requires 512K)

Diversi-Key (shareware-$45 if used more then 2 weeks) Keyboard macro utility for the IIGS.

Desk Accesories:

Visible Bell - Changes border color instead of ringing bell.

Mousetext Remover - Sets up "old" (non-mousetest) display mode.

Disk Info - Gives disk status of all online volumes.

Color Map Fixer - Fix for PaintWorks Plus.

Calendar - Page months and years with arrow keys.

Password - Requires password "Einstein" to return to menu.

Meltdown.NDA - Destroys window environment screen.

Also, NOTEPAD, Rational Calculator, Typeit

/WAP2002/ Apple IIGS Disk 2

This disk contains a set of programs put together by Apple to demonstrate the desktop environment and 16 bit mode of the IIGS. Source code for these programs is available on Compuserve and may be available from the disketeria in the future.

DEMO.S16 - Launches other demos and games on the disk.

PAINT - A 320/640 bit resolution paint program with some working features. It can be used to view and alter graphic file Screen.0.

BRICK - The Brick-Out game for the GS.

Daleks - Another old standard from the Macintosh.

HodgePodge - Displays Super Hi-res graphics.

QDSampler - Examples of Quick-Draw capabilities.

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MAC DISKETERIA NEWS

by Martin Milrod and David Weikert

New System and Finder Disk

For the first time WAP is issuing Apple's official System/Finder disks together with an End-User License Agreement. Elsewhere in this month's Journal, Jonathan Hardis discusses some of the new features of the latest Apple (System 4.1/Finder5.5) two-disk set. This release is expected to be used with the Mac 512, 512E, Plus, SE and II; it is also the first time we have issued 800K disks as few, if any, 400K disk-system owners will want this version. (They should continue using System 2.0/Finder4.1.) Please note that 512K Mac owners will find that this system and finder materials are larger than previous versions and will probably cause space availability problems on floppy disk systems.

The previous SE system (Sys4.0/Finder5.4) was "unreliable,"—at least that was my experience on the SE. This later version, while still having some "problems," is a significant improvement and boasts a much-improved LaserWriter printer driver (4.0) and an improved Imagewriter printer driver (2.6). Known problems includes crashes when using DA's with Excel 1.03 (1.04 is being shipped now and it may solve the problem); the INIT "Easy Access" intended to help disabled persons use "sticky keys" and move the cursor without the mouse, also causes crashes with certain, not yet fully identified, DA's.

Please purchase these two disks as a set and recognize that the downloaded version of these materials from CompuServe was, and is, seriously flawed and should not be used. Those version represented almost 5 hours of downloads and much frustration. By the end of this year still another System/Finder upgrade (6.0?) will be issued.

What Else is New?

This month we are issuing five new disks, in cluding two game disks, one fonts disk, one disk of Desk Accessories and one with sounds. The game disks feature selections from Ron Wartow, the emeritus GameSIG Chairman and beloved Guru ex-officio in all things.

Folder information is underlined, programs and files printed in bold and shareware price information is printed in bold italic print.

Please remember to send the authors their requested shareware fees if you decide to add the programs to your software library. Shareware now accounts for over half of the material that we receive for Mac disks and we must encourage authors to continue to use this distribution channel. If we don't all support the shareware concept with cash payments, authors will find different, more costly to us, distribution channels.

The Winter, 1987 Mac Disk Catalog containing comprehensive information about the entire WAP Disk collection (through Mac Disk 80) is still available. The cost is $3.25 at the office or general meetings and you may order it by mail for $4.75 to cover postage and handling. The catalog lists disks by (1) disk name, (2) description of disk contents, (3) alphabetic listing of files across all disks and (4) by "type of file" listing across all disks.

In June, six more disks will be removed from the Disketeria: volumes 8, 14, 16, 18, 24 and 34. If you want to add them to your collection, order them this month as they will no longer be stocked after May, even on an archival basis.

Mac Disk 93A Errata

The font mis-named Unical is really Uncial and it is a Celtic font. Thanks to Ben Frank, one of our duplicators, and his sharp eye for this correction.

Mac Disk 95: Fun & Games XX

Deep Angst: A World Builder™ game, but arguably the best of its genre. Note—Deep Angst may be considered PG–13 and should be reviewed by older eyes before turning the younger set loose to conquer new lands. Some of the graphics are borrowed from other places and add some "color" to the usual line-drawn look of most games in this genre. The adventure starts with the first screen. Read what each character says very carefully. So, grab your mongashart and hit the road to adventure. It has sound, so don't forget to crank up the volume! ***Shareware - Send postcard, support a users' group or BBS, or send money based on what it's worth to you.***

GAMMON: This is the old standby backgammon game. Yes, it will allow you to make illegal moves with only a beep to prevent you. The play is fast and you can play the computer. ***Freeware - But, donations are accepted.***

Mac Disk 96: Fun & Games XXI

Ramm 1.0: A fast moving game! Two players are required to play this game with any kind of finesse. You have to learn to control your worm in order to avoid hitting the tracks they leave as they travel at high rates of speed across the screen. ***Shareware - Send comments and $$$.***

Trick-Track: This game is an interesting dice game that was adapted from a barroom game. It is entertaining and more people than you would ever want at one time can play. By using different combinations of the dice, you receive points for the numbers you eliminate between 1 and 9 until you cannot continue. High score wins. ***Shareware - $6.***

Eidisi I: This is a World Builder game. It is a well thought out adventure game designed by two entreprencurial teen-agers, Det Konnor and Stephen Konig, from McLean, Virginia. As always there are signs to read, places to search and battles to fight. There are lots of places to explore. When you send in your shareware fee you'll receive a well done two-page map and ten-page hint booklet. The hint booklet is quite handy and informative and the map is useful in navigat- ing the game. ***Shareware - $4-10.***

DEEP ENNUI: Another World Builder game. "The adventure game that asks the musical question–should Ron Wartow be allowed to walk freely among normal people?" Karate action sound, dense fog and death. Or, as the final screen says, "DEEP, DEEPER, DEEPEST ANGST©1987 Ron (where's my prod) Wartow". It left this writer in the fog. Ron, please tell us that this is a joke.

Mac Disk 97: Fonts VII

Fonts VII features two very high-quality Imagewriter typefaces, Beverly Hills and Palencia. Our program annotator, Bob Soule, was a very satisfied user of the Boston II and

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doubted the need to invest more money and disk space in any additional fonts designed for formal correspondence or other business printing. He says, "These fonts are so good that you'll have trouble believing you're looking at output from a dot-matrix printer! For those of us who can't afford a LaserWriter but need printouts with a professional appearance, this disk is a 'must buy', in my opinion." Please note that the font Boston II-Word does NOT print well with Word 3.0 and for that reason Beverly Hills is now our choice for NLQ printing on the Imagewriter.

Palencia: Double-click on the open suitcase icon labelled Palencia and you'll be automatically greeted with a stylish introductory message. Click the PRINT MANUAL button to print a six-page manual in Palencia typeface without first having to install it in your System file. The manual provides installation instructions, a handy reference sheet, a shareware registration form, and other useful information. It also provides the telephone number for a 24-hour bulletin board system that offers support to users with questions. Palencia comes in sizes 9, 10, 12, 14, 18, 20, 24, 28, and 48 points. The fonts include real fractions and other special characters. All in all, this is a very professional product, marred only by a manual with a series of spelling, typographical, and punctuation errors. ***Shareware - $10.00.***

Braille: A braille font available in sizes of 12 and 24 points.

Chicago 9: The Chicago typeface that comes with the Mac, available here in a smaller 9-point size.

Icons 24: This font is labeled Geneva-24 in the Font/DA Mover, but it's really a set of familiar Mac icons, such as the trash can, the printer, the font suitcase, and the warning-box face. Watch out when you're printing Best-quality Geneva 12 type with this font installed in your System file; you'll get some unexpected results! In fact, this font may be best suited for practical jokes on unsuspecting Mac users.

Old English: This suitcase contains Codex, Exeter, and York fonts. Codex, available in 14-point size, is a series of boxes and other graphical characters. Exeter, available in 14 points, is an Old English type of font which I found somewhat hard to read. York, available in 12 and 24 points, is a more traditional serif typeface.

In the Beverly Hills Font Folder:

Beverly Hills: The outstanding business font for the Imagewriter printer. It is available in sizes 9, 10, 12, 14, 18, 20, 24, 28, 36, and 48 points. Not only does it look good in the standard 12-point size, but it also prints very well-formed characters in the larger "headline" type sizes such as 18 points. Like Palencia, Beverly Hills prints real fractions and other special characters. Also available is the separate **Beverly Hills Large** typeface, in 36 and 72 points, which can be used within MacPaint or MacDraw. ***Shareware - $10.00.***

Read This First!: A short MacWrite file with the shareware notice and instructions for printing the rest of the Beverly Hills font documentation.

BH Disc Configure: This eight-page MacWrite document provides helpful instructions for installing the Beverly Hills fonts in your System file. Different versions of the instructions are tailored for different Mac systems, depending on Mac type and number of disk drives.

Using Beverly Hills: This 12-page MacWrite document provides detailed information on the Beverly Hills fonts. After installing Beverly Hills in the System file, use MacWrite to print this manual in Beverly Hills type. You will be very impressed with the results!

Mac Disk 98: DAs IX

Wow! Sixteen, count them, 16, practical Desk Accessories. Some are updates of old favorites, others are new. Truly a disk for the DA aficionado. Some DA tips. One: See Bill Steinberg's article in the April, 1987 *MacUser* on how to revise the system file and Font/DA Mover (using ResEdit and Fedit1.1 or the like) to accommodate more DA's. Two: When a DA relates to a particular application, like FontSizer here, install it in the application, not in the system file. Select the application in Font/DA Mover by holding down the command and option keys as you open files. Three: DA's that add items to the menu bar may not work well with programs that fill up the menu bar themselves, like Word 3.0. Intrepid types can use ResEdit to shorten the application's menu titles. Note: All of the DA's in folders have documentation unless otherwise stated.

Choose Scrapbook +: Lets you pick any scrapbook file on any disk. Updated from Disk 33. ***Shareware - $10.00.***

DA Font 2: Another update (Disk 67), this displays font and DA information, as well as the actual fonts. (The font list and display show the fonts and sizes used by the system first, then the others.) ***Shareware - Any amount.***

Locator: This DA locates the position of the mouse on the screen as well as showing a 9 x 9 pixel "fat bits" view under the pointer. It has three modes, only one of which (global) seems obvious. If the view gets in the way, clicking on the center pixel moves it to the other corner of the screen. The last version (Disk 65) was shareware, but this one doesn't seem to be.

ResPeekDA 2.03: This DA displays the resources in any file, and lets you decompile them, copying the listings to the clipboard for incorporation in other documents. We non-specific hackers could use some documentation on this. ***Shareware - $10.00.***

In the DiskInfo Folder:

DiskInfo 1.45: Lets you see all mounted disks and their free space, set the default drive, see how much memory is available, see the names and other information for all files on a disk, delete or rename any file, and find a file in any folder, on any disk. (Our last version was on Disk 49.) ***Shareware - $10.00*** .

In the FontSizerStuff Folder:

FontSizer: Works with MacDraw 1.9 to allow the use of font sizes other than the ones MacDraw provides. The changes are temporary; the next time you use MacDraw you will have to change the sizes again.

In the HFS Find Folder:

HFS File Find: Lets you find the file or files that meet your search criteria (wildcards and all). Displays a tree outline of the the file structure of the disk.

In the PortWatcherStuff Folder:

PortWatcher: Monitors a serial port for incoming information while you are telecommunicating, putting up a "string art" screen blanker while you wait. (You can use the

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blanker by itself; see the documentation.) ***Shareware - What you think it is worth.***

In the Run Other DAs Folder:

Other 3.09: The latest version of Mr. Becker's DA which runs other DA's without having them installed in the system or application. (Version 2.01 was on Disk 66; see the documentation to see what is new since then.) ***Shareware - $!0.00; 5.00 for current version and goodies.***

[Double Apple]: Another approach to operating uninstalled DA's. This one puts the double apple in the DA menu; when it's opened and a DA is chosen, a double apple appears in the menu bar with the DA's name appended to it. ***Shareware:What you think it's worth.***

In the ScreenStuff Folder:

Gone Fishing: Design your own blanked screen; be artistic, leave messages for co-workers, etc. Type any key to return to work.

Stars 1.6: This screensaver reminds one of the rear-view mirror on the *Enterprise* at Warp 9. (Curiously, in version 1.3—Disk 55—the stars move toward you, not away, as here.) No doc.

XLScreen: This one's for Mac XL (ex-Lisa) types, a screensaver to take advantage of the XL's capabilities. No doc., but help screens available. ***Shareware: $10.00.***

In the TilerStuff Folder:

Tiler: Automatically moves and resizes windows so that they do not overlap, working very handily with applications that let you work in multiple windows.

In the TimeLogger Folder:

Time Logger 2.02: Here is a DA to keep track of time spent on the Macintosh, by client and client code, computing the minutes of time spent and billing at a rate you specify. ***Shareware - $10.00; $15.00 for latest version and goodies.***

Timelogger Init 1.1 and 1.2. Two init files, one of which, installed in your system file, will start Timelogger running when you boot the Mac.

In the Trojan Folder:

Trojan 2.0: Trojan removes copy protection from certain applications, allows access to program code while the program is running; and restores debugger vectors that may have been modified by unprincipled protection schemes. The documentation on all this could be clearer.

Trojan Menu. An init file that installs itself at startup. When you wish to use the Trojan Menu, hold down the 'Caps Lock', 'Shift', 'Option' and Command keys simultaneously to add a dot ('•') to the menu bar. This '•' is another menu, allowing access to Trojan from applications that do not support desk accessories.

Mac Disk 99: Inits I

Inits are INITialized upon startup in newer systems by merely placing them within the System Folder of your Startup disk. If you want to customize the beeping sound that the Mac makes, then this is the disk for you. This disk includes an Init resource file and files that contain digitized sounds. These unusual sounds can replace the beep that your Mac usually makes when it wants your attention.

In the BeepSoundStuff Folder:

beep.init: For a Mac with the 128K ROMs, just place this file in the System folder and it will look for and load a file called BeepSound at boot time. For a Mac with the 64K ROMs you will need to use ResEdit (Disk 82) to install beep.init into the system file.

beepinit.docs: This file describes how to use the beep.init and the digitized sound files.

On the Desktop:

Just rename any of these files to BeepSound and place them in the system folder along with beep.init.

BeepSound (Klaxon): The "red alert" Klaxon alarm from the starship Enterprise.

BeepSound.Hal: "I'm sorry Dave, I'm afraid I can't do that!" from the Stanley Kubrick movie version of Arthur C. Clark's space novel, "2001: A Space Odessey."

Break Window: Thank goodness, that breaking glass was not your Mac screen, ...or was it?

Twilight Zone: You can almost imagine that Rod Serling will appear on your screen at any moment.

In the Star Trek Folder:

These are some of the sounds from NetTrek, a network game based on Star Wars. NetTrek will be featured on a Games disk that will be released later.

BeepSound (Hail): "Whoo-eee, whoo-eee! Bridge to Captain Kirk!" Ata-boy Mister Chekhov.

KBeep, KCom, KPhasors, KTorps: Sounds made by communicators, phasors and photon torpedoes belonging to those nasty Klingons.

RBeep, RCom, RPhasors, RTorps: The same thing for the equipment of the Romulans, the other bad guys.

TBeep, TCom, TPhasors, TTorps: The equipment sounds of the Terran good guys.

Transporter: The only thing missing is the "Beam me up, Scotty" part that usually precedes this sound.

Boom: A very anemic boom.

Death: This is the sound of a quick, bloodless death so often depicted on "G" rated TV; definitely not up to Sam Peckinpaugh standards.

Next month we hit another MILESTONE with the issuance of Mac Disk 100.

Please note that the number for the TCS upload/download is (301) or (202) 654-2631. An incorrect number was printed on page 40 of the May Journal.

WAP TUTORIAL REGISTRATION

Apple //: The following three WAP tutorials are being offered to Apple // owners on the first three Tuesday evenings of the month from 7:30 to 9:00 PM, at the office, 8227 Woodmont Ave., Bethesda, MD. (The tutorials start promptly at 7:30; if you bring your computer please arrive 15 minutes early to set up.) You may sign up for any or all of the series. They are designed for the "beginner" and will be repeated monthly. A revised outline of the tutorials was given in the October Journal. The fee for each session is **$10.00**. You are urged to bring an Apple, monitor and disk drive. (Monitors are available for the 1st 5 registrants - call office.) Please note that WAP does not have equipment for you to use; if you do not bring your own, you will have to look over someone's shoulder.

( ) No Apple II Tutorials in July and Aug.
- **WELCOME TO THE WORLD OF APPLE**
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Apple II Tutorials will resume in September

Macintosh: Tutorials for the beginners are regularly given on Monday evenings. In **June**, as in the past, there are two tutorials. Beginning in **July**, there will be a series of three tutorials on the 2nd, 3rd and 4th Monday evenings of the month at the office, from 7:30-9:30 PM. See the details in "Summer WAP Tutorials" elsewhere in this issue. You may sign up for 1, 2 or all three. The fee for each tutorial is $10. You are strongly urged to bring your Macintosh. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

( ) Monday, June 22 and 29 (series of two - fee for two sessions is $30.) 7-10 PM. Prerequisite: Guided Tour to Macintosh.
( ) Monday, July 13 Introduction to Macintosh - fee $10. 7:30-9:30 PM. Prerequisite: Guided Tour to Macintosh.
( ) Monday, July 20 Intermediate Mac Skills - fee $10. 7:30-9:30 PM. Prerequisite: Familiarity with Desktop, disk copying, etc.
( ) Monday, July 27 Becoming a Mac Power User - fee $10. 7:30-9:30 PM. Prerequisite: First two sessions or equivalent.

Non-Regular Tutorials: The following tutorials are being offered in the next few months (at the office unless otherwise specified). The fee for these tutorials is $15 for each session within each tutorial ($20 each session for non-members).

( ) **Introduction to Apple II Telecommunications - Allan Levy - Saturday, June 6, 9-12 Noon.** Fee $15 ($20). Learn the important basics of accessing other computers with a modem.
( ) **Maintaining Your Disk II - Richard Mlodoch - Saturday, June 20, 9-12 Noon.** Fee $15 ($20). Bring your Apple and 5 1/4" disk drives.
( ) **Transition from //e to IIgs - Raymond Hobbs - Saturday, June 20, 1:00 - 4:00 PM.** Fee $15 ($20). This course is for those in the midst of converting as well as those about to convert.

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

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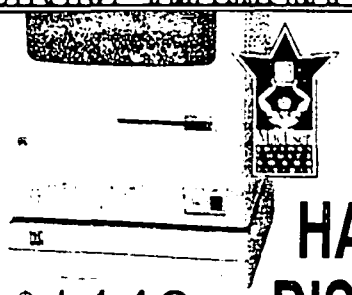

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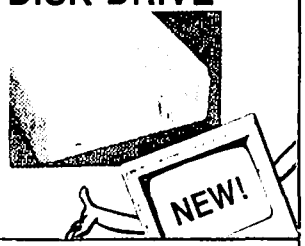

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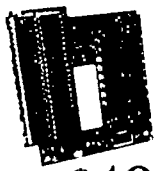

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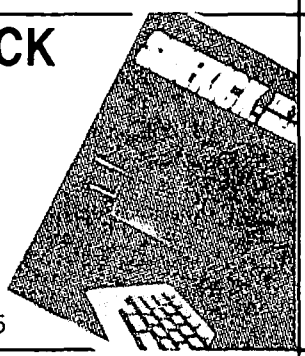

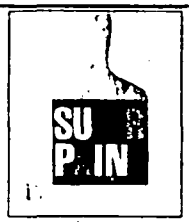

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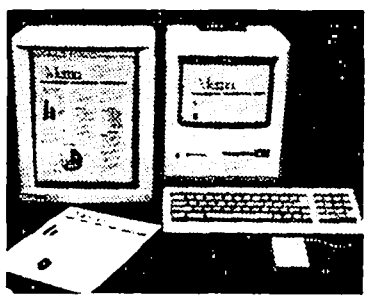

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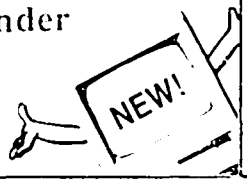

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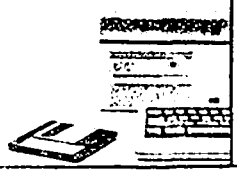

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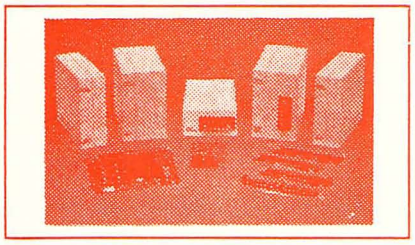

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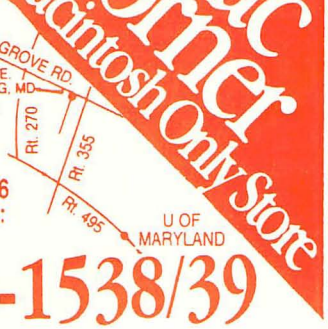

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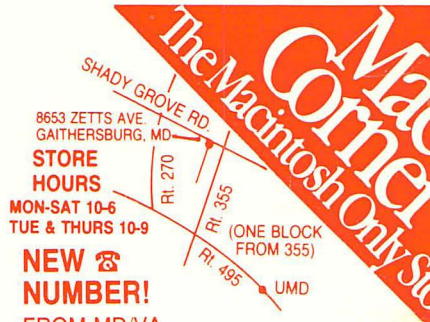

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