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Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 9

April 1987

Number 4

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- Turtle Graphics for the Apple //
- Webster's New World Spelling Checker
- 📖 Family Tree (MacNovice)
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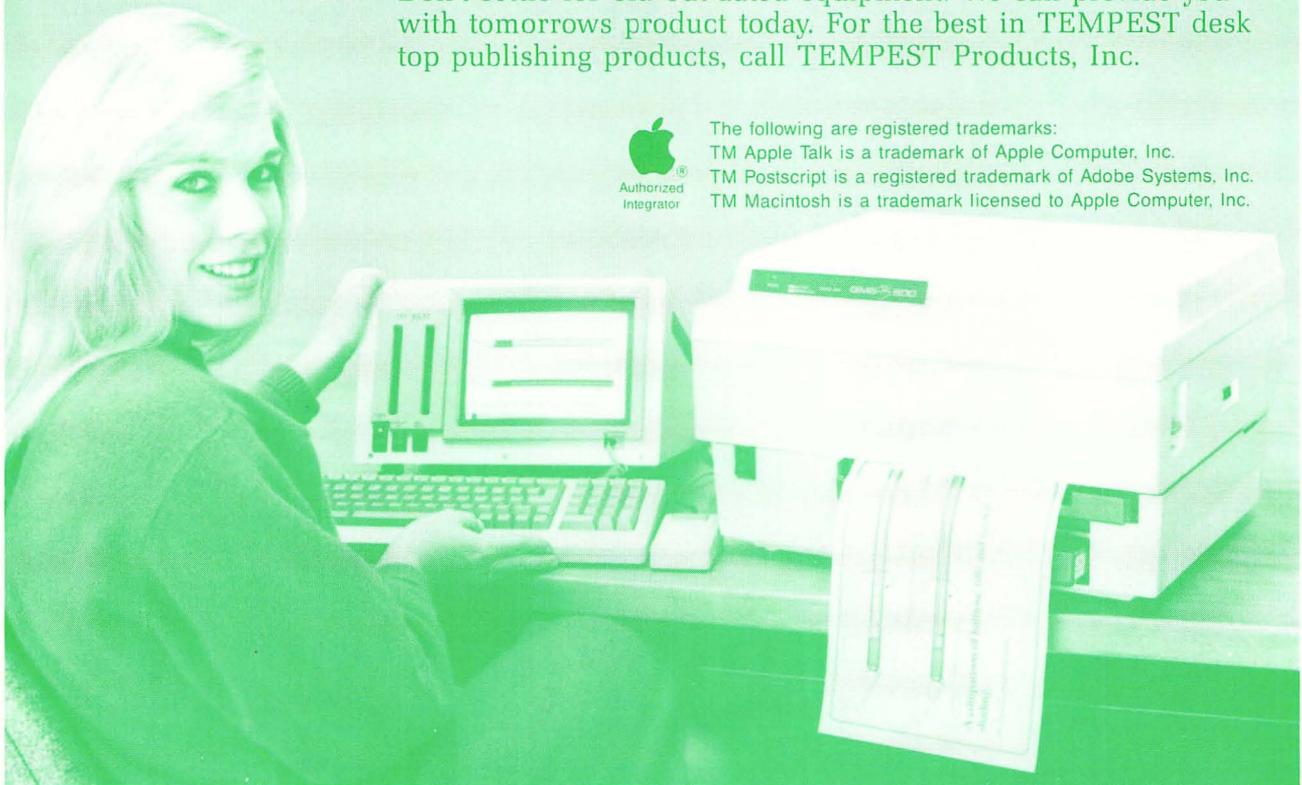
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Clinton Computer was founded in 1978 by owners Art Lundquist and Chuck Perilli. It began as a two-man consulting firm on the fourth floor of an office building and grew into a \$20-million-dollar retail business with over 100 employees.

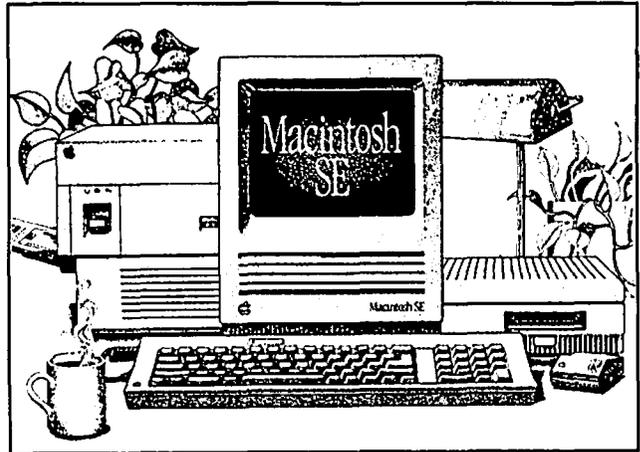
The first retail store was in Clinton, MD, behind a shoe store. Then the company moved to a shopping center fronting on Branch Avenue in Clinton in 1982. In 1984, Clinton Computer expanded by opening a retail Business Center in Old Town Alexandria.

The Laurel, MD, store opened in 1986 when we acquired the assets of the Comm Center. The Vienna store was opened in November, 1986 in the highly competitive Tyson's Corner area at 8032 Leesburg Pike (Rt. 7 West). This is an "Apple Only" store, carrying Apple products and third party products that complement the Apple line. The Rockville store, located on Rockville Pike, just north of Montrose Road, is opening in early April.

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Plus, a built-in expansion slot allows you to customize a system with a variety of cards to meet your needs.

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Come in for a hands-on demonstration!

Free Seminars!!

Free Desktop Publishing Seminars are offered at our Alexandria and Laurel Stores. Call Alyce Neukirk at 838-9700 to register for upcoming sessions.

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

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EDITORIAL

It never ceases to amaze. The other day an article that appeared in the *Washington Post* on the study of cobra venom in Egypt indicated that Fawzia A. Fahim, a research biochemist had isolated four extracts of venom. The most lethal was found to be most effective in destroying cancer cells in the laboratory. No mention was made, however, of what it might do to normal human cells but the implication is that future research may lead to poisons which would attack only the cancerous cells.

What does this have to do with computers? Well, following that article was one encountered in *High Technology* which described research on moth eyes and why they did not reflect light to give away the location of moths in

broad daylight. It appears that they have a peculiar hexagonal structure which is most effective in capturing light, but not reflecting it back. This has led to the creation of a whole new series of inventions which includes, among the first, a "write once ready many" (WORM) data storage system for computers. This has precipitated a thought which lead to the conclusion for this writer that answers to our problems exist all around us. Witness the resurgence of interest in old folklore and home remedies for ills. This leads further to the thoughts of possible great loss to humanity caused by our own carelessness, by our disregard for other creatures and the flora of the earth. If we could but have the foresight to preserve and to learn. Other examples come to mind. Our

contd. on pg 81



PRESIDENT'S CORNER

by Tom Warrick

Well, I made it back from *AppleWorld '87*. They had to pry me away from a *Macintosh II* keyboard to get me back here, but it's a good thing they did, because I can bring you a report on what happened. That report will appear in two parts, the first of which discusses Apple's introduction of the Macintosh SE and Macintosh II and appears elsewhere in this month's Journal. The second

part, which will appear next month, will discuss the extremely interesting user group activities held at *AppleWorld*.

In other business, the floor is now open for those who are interested in *running for office* in Washington Apple Pi. Offices include President, two Vice Presidents, Secretary, Treasurer, and seven Directors-at-Large. If you are interested in running, please contact *Jay Heller*, who is chairing our nominating committee. (Jay has announced that he will not be a candidate for re-election as Vice President for Macintosh. The Pi will miss Jay's hard work and good counsel, but he will continue to participate as actively in the club as his schedule permits.) If you're interested in running but not sure you have quite enough time to serve in elective office, there is a Washington Apple Pi tradition that we're all proud of—every member who comes to a Board of Directors meeting is entitled to participate. This even includes voting on virtually all issues. So please feel welcome to come to any WAP Board meeting. In fact, if you are interested in running, by all means come to the April 8 meeting and see what it's like. (Meetings are held on the second Wednesday of each month at 7:30 p.m. at the WAP office.)

Second, a number of people have expressed interest in forming a *Hgs Special Interest Group*. *Bob Platt* tells me that there will be two organizational meetings, the first held after the March meeting (this announcement will be timely only for those reading their Journals during the March WAP meeting, so aren't you glad you came!) and the second after the April 25 meeting. Both meetings will be held in the cafeteria after the Apple II Q&A session.

Third, on a sadder note, we mourn the death a few weeks ago of active WAP member *Shirley Weaver*. Shirley helped with the public-domain software library and was always willing to work at WAP's booths at MacWorld expos around the country. We will miss her willing hands and generous spirit.

Those of you who were at the February general meeting will recall our discussion about forming a *Public Affairs Committee* that would make recommendations to the Board

of Directors that the Pi take a more active role in matters of public interest to Pi members in their capacities as computer users. The consensus at the meeting was that such a committee would be useful, but that any position the Pi takes on a public issue should be well thought out and should first consider all sides of any question. In addition, of course, any action taken by the Pi should not jeopardize our tax-exempt status. The Board of Directors took up the matter at its March 11 meeting and voted unanimously to establish the committee under the guidelines discussed at the general meeting. Several people have already volunteered to serve on the committee, including *Brook Grayson*, *Bob Platt* and me. Our General Counsel, *Jim Burger*, will be an ex officio member of the committee. If you are interested in serving on the committee, which will meet on an ad hoc basis whenever issues arise, please let me know.

You may have already received a flyer inviting you to order a copy of the new "*Cast of Characters*," the directory of Washington Apple Pi members who have agreed to allow their names, phone numbers and zip codes (but not addresses) to be released to other members. If you are interested in receiving a copy, follow the instructions on the order form. We are trying an experiment this time—if you order the directory, the label on the flyer will be removed by our mailing service and applied to your copy. (This means you should make sure that the label is intact and unmarred.) If you have not received a flyer by mid-April, please call the office.

The *Cast of Characters* is but one of two big publications WAP will be releasing in the near future. We are also in the process of thoroughly revising our "*Member Reference Book*," which every new member receives upon joining. Even old members will want to buy a copy of this invaluable reference work to what WAP has to offer. There will be an announcement shortly.

Finally, the June 27 *Garage Sale* will not be held at USUHS. Jay Heller is looking for a place to hold a larger "computer fest" that would attract even more potential buyers and sellers of those games you've solved and those word processors you haven't. Watch this column in future months for more details as to location and time.

Before turning (elsewhere) to Apple matters, let me mention briefly something most of you Macintosh owners know: *Microsoft Word 3.0* is now out. Except perhaps for *Jazz* and *Excel*, I cannot recall a more eagerly anticipated Macintosh software package. Now don't take what I'm about to say in the wrong way—*Word 3.0* is the best word processing package for the Mac and is one of the best anywhere. To power word processing users, it is a must. But I was surprised at, well, how quirky it is. I've noticed some odd and usually unrepeatable bugs. For example, sometimes (but not always) if you have a footnote on the last page of a document with a section-end but not a page-end, the system will crash during repagination (curiously, *Apple Writer II* had a problem similar to this). A colleague of mine experienced

contd.

system crashes when he tried to get the short-cut copy command, Command-Option-C, to work in footnotes, although I had no problem. And there are a couple of now well-documented bugs. Word 3.0 has a tendency to leave WordTemp files in your System Folder, and if you print on a LaserWriter a one-page document that contains a header, the LaserWriter also prints a second page with only a header on it. This does not happen, however, in Page Preview. I've collected a lot of other reports from the msoft and macus forums on CompuServe. Virtually all of these problems have work-arounds, though, which is why I do not hesitate to recommend Word 3.0 to those in need of a power word processor, but it is regrettable that these bugs saw the light of day. Excel 1.0 was not like this when it was first released. (It had a few bugs, though—nothing this complex is perfect the first time, not even Word Perfect.) Microsoft has to hear the footsteps of Word Perfect, which has announced that they will ship their Mac version in the second quarter. One hopes that there will be a Word 3.1 for the Mac sooner than that. ☺

EDSIG NEWS

by Peter Combes

EDSIG Calendar

Thursday, April 23 at 7:30 PM - "Educational Technology in Software Design", by Jessica Weissman.

EDSIG meetings are held at the Washington Apple Pi office, 8227 Woodmont Avenue, Bethesda, MD. ☺

JOB MART

HELP WANTED: Part-time programmers with experience in OMNIS 3 Plus to participate in developing Macintosh systems. Call Mr. Berrios at 751-5733.

HELP WANTED: The Division of Biochemistry at the Walter Reed Army Institute of Research will hire a college or graduate student part-time to serve as continuing Mac consultant. The job entails analysis of research investigators' Mac needs, purchase of appropriate software, custom adaptation of software for investigators' needs, and training of personnel in customized software use. Hours flexible. Call Carl Alving 576-3248.

HELP WANTED: Person to help design and build a personal accounting system on AppleWorks to run on Apple //c with external disk drive and Imagewriter printer. Ideally, person would be located in McLean, VA area. If interested, call Richard Frank, home (703) 790-8477, office (202) 676-0585.

HELP WANTED: Micro computer manager for DC area based contemporary Advertising Agency. Candidate should have at least 1 -2 yrs experience with Apple P.C.'s, preferably Mac. Experience with Excel, Word and PageMaker a big plus. Candidate will train other personnel in using Apple P.C., review, recommend and implement state of the art products. Must know networking and work well with clients in a positive, friendly and energetic environment. To 27K with growth potential. Call Jim Hagan at work 556-0606 or home 764-2845. ☺

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. The following teas are scheduled for April:

Washington Apple Pi

Dupont Circle, NW D.C. Apple Tea

Sunday, April 12, 5:00 - 7:00 PM

Desktop Publishing and Graphics on the Mac

at the home of Susan Meehan

1740 Corcoran Street, NW 20009

Refreshments. Bring computer if convenient.

RSVP (H) 234-5151, (W) 727-5161 or 727-0002. Directions: Susan's house is between 17th & 18th, Q & R, near New Hampshire Ave. By Auto: Take Connecticut into city to Dupont Circle. Take NH exit off Circle going northeast (just before the DuPont Plaza Hotel). Turn right on Corcoran, which is the 1st block after 1st traffic light (Q St.). By Metro: take Q Street Exit. Walk two blocks.

Washington Apple Pi

Alexandria, VA Apple Tea

Wednesday, April 22, 7:00 - 9:00 PM

AppleWorks and Its RAM-ifications:

Uses of the Ram Disk

at the home of George & Delores Sall

7850 Southdown Road, Alexandria 22308

Refreshments. Bring computer if convenient.

RSVP 768-0212. Directions: Go 4 miles South on George Washington Parkway from Alexandria. Make 4 immediate right turns just after you pass under the stone bridge (40 feet, 100 feet, & 40 feet). That will put you on Southdown. 7850 is the 4th house on the left. ☺

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:

- | | | |
|-------|----|--|
| April | 25 | - Apple II & Mac: Music |
| May | 23 | - Apple II: Data Bases
- Mac: To be announced |
| June | 28 | - Garage Sale - Location TBA |

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

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 Raesly. (301) 439-1799.

CLASSIFIEDS

WANTED: Your donations of functioning Apple][+, //c or //c computers, monitors, disk drives, and compatible printers and educational software for use by primary school children with learning difficulties. Our small non-profit school has an individualized program which would be enhanced by the use of computers. We would be delighted with your donations to our new computer lab. Please contact Judy Zangwill at (202) 232-5877 between 9:00 and 4:30.

FOR SALE: 5 1/4" floppy drive for //e, AE, \$90. Also, 5 1/4" floppy drive for //c, Mitac, \$90. Ask for Dave, 567-3949.

FOR SALE: Dow Jones Market Manager Plus (their latest portfolio manager program), used once, lists at \$250, super bargain at \$50. Call Newt Steers 9:00AM-9:00PM at 301-320-5820.

FOR SALE: Apple //c, 2 drives, 10 meg ProFile hard disk, monitor. AppleWorks plus other software and games, hardly used. Amdek color monitor and SCM 200 printer also available, optional. Package offer. Call Marc (301) 652-0174, evenings.

FOR SALE: Gestetner machines and supplies: Mimeographs (1 each Models #460 and #466) and Scanner (Model #1100). Asking \$300 each. Call Advent Lutheran Church, (703) 521-7010, leave message for Betty Hill.

FOR SALE: Two Apple //c Professional Systems (one Enhanced) - 128K, 80-col Card, Duodisks, Monochrome Monitor; each with a 10MB Sider Hard Disk and 6MHz Applicard (CP/M), System Save fan. One Mouse & Joystick. WordStar, Word Perfect, Print Shop and Mousepaint. Presently used in church office for member and financial data. \$2,250. Call Joseph Murray, day (301) 236-6488, eve. (301) 381-9121.

FOR SALE: 1 - Apple ///, 256K with Monitor III; 1 - Apple /// with Monitor III and external disk drive; 2 - owner's guides; 2 - std device driver manuals; 1 - operator's guide; General Ledger; Apple Business Basic; Apple Writer III; BPI General Accounting; Work Juggler for III; System Software; System Utilities for Apple III. Call Paul, work 227-2632, home 868-7673.

FOR SALE: 2000K External RAM disk for the Macintosh (Mac+ requires a cable), \$400. Call Dan Adkins for information, home 822-8052, work 586-5990. ☎

COMMERCIAL CLASSIFIEDS

FOR SALE: PageMaker templates for SF 171 (page 1, 1979 version, other pages 1985). \$25. Call Dan Adkins for information, home, 822-8052. ☎

* April 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Mac Progrms. 7:30PM Office; dPub SIG 7:30PM PEPCO	2 GameSIG 7:30 PM Office	3	4 Intro to Excel 10-12AM Office; //e to IIgs 1-4PM Office
5 --> Deadline for Journal Articles is April 6	6 PI-SIG 7:30 PM Office	7 Apple II Beginning Tutorial #1 7:30-9PM Office	8 Executive Board 7:30 PM Office	9 Stock SIG 8:00 PM Office	Sat., Apr 11 --> contd.-Frederick Slice; Annapolis Slice; Music SIG	11 Advanced Excel Tutorial 10-12AM Office
12	13	14 Apple II Beginning Tutorial #2 7:30-9PM Office	15 FEDSIG 7:30 PM Office	16 Pascal SIG 8:00 PM Office	17	18
19	20 Mac Beginner's Tutorial #1 7-10 PM Office	21	22 Apple /// 7:30 PM Ch. of Com. DC	23 EDSIG 7:30 PM Office	24 Intro to --> Word Tutor! on Sat Apr 25 at USUHS, 1-3PM	25 WAP Meeting 9:00 AM USUHS
26	27 Mac Beginner's Tutorial #2 7-10 PM Office	28 Apple II Beginning Tutorial #3 7:30-9PM Office	29	30		

* May 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2 Word Tutorial Style Sheets 9 - 12 AM Office
3	4 PI-SIG 7:30 PM Office	5 Deadline for Journal Articles	6 Mac Progrms. 7:30PM Office; dPub SIG 7:30 PM PEPCO	7 GameSIG 7:30 PM Office	Sat., May 9 --> contd.-Frederick Slice; Annapolis Slice; Music SIG	9 Word Tutorial Hidden Text, Indexes, TblCon. 9-12AM Office
10	11 Mac Beginner's Tutorial #1 7-10 PM Office	12	13 Executive Board 7:30 PM Office	14 Stock SIG 8:00 PM Office	15	16 Word Tutorial Outlining & Col 9 -12 AM Office
17	18 Mac Beginner's Tutorial #2 7-10 PM Office	19	20 FEDSIG 7:30 PM Office	21 Pascal SIG 8:00 PM Office	22	23 WAP Meeting 9:00 AM USUHS
24	25 Memorial Day Holiday Office Closed	26	27 Apple /// 7:30 PM Ch. of Com. DC	28 EDSIG 7:30 PM Office	29	30
31						

SIGNEWS

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the Chamber of Commerce Bldg., 1615 H Street NW, DC. The next meeting will be on April 22.

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 April 1.

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 April 23.

Fed(eral) SIG meets on the 3rd Wednesday of the month at the office, 7:30 PM. The next meeting will be on April 15.

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

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

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 April 16.

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 April 9.

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

ON THE TRAIL OF THE APPLE ///

by David Ottalini, /// SIG Co-Chairman

Little Blue Card for the /// Killed

I am sorry to report that development costs have done in an Apple /// version of the long-awaited "Little Blue" IBM Emulation card. Bob Cook of Sun Systems Recycling in Utah says his company decided not to go forward with plans to have Wendell Sander's The Engineering Department (TED) make the necessary changes. The reason? TED increased development costs from \$150,000 to \$250,000 dollars (that did not include production costs).

Apparently timing problems between SOS and the MS-DOS card were causing TED more problems than Dr. Sander indicated to your columnist when I interviewed him last September. Cook says with the increase, Sun would have had to sell 2000 of the cards just to break even. And at an estimated price of \$599, the card would not have been competitive (since you can get an IBM clone for about that).

ASKY ENVOY Card Update

"Another disappointment! I received the card to try out and it is indeed small enough to fit inside our ///s. However the connectors go towards the front of our machine rather than the back like most other cards and thus it won't fit properly. The Apple // has more room toward the front and thus cables can be extended inside to fit. The card looks like a good one and it pains me to think this excellent potential alternative to getting IBM data into and out of our ///s will not be available to us as currently configured. You could run an extension cable outside the /// to connect it (you would still need a driver though) but for most folks that is not a viable alternative.

A ///+//e Tip

From CompuServe, the question was asked about using the ///+//e cards and a Profile in slot 4 working under ProDos 1.1.1. It seems that with this version, there is a hardware interrupt request problem of some sort that can cause your system to freeze up while getting an "Insert System Disk... ERR-01" message.

Apparently if you take the Profile card out or if the ProFile is on and doing its "medium check" this problem doesn't occur. But the best solution appears to be an upgrade to ProDOS 8 version 1.2 on your Apple // ProDOS boot disks. This problem, by the way, reportedly happens only on the ///+//e cards and not the older ///+//.

More New Products From On Three

You may have noticed On Three is now selling its Graphics Manager program for the Apple //. It's being sold in the February Nibble Magazine for \$29.95, \$20 less than /// users have to currently pay for their version. Hopefully as more /// programs are ported over to the //, the prices will stabilize for users of both machines.

On Three has also announced two new disks for its Desk-Top Manager program. One includes a number of modules you can add, such as "Printer Setup" to send complex control codes to your printer, a module allowing you to connect your /// directly to your printer as if it were a typewriter and a module that allows you to have sub-menus from within DTM. This disk runs \$41.95 including postage and handling.

The second disk is called the DeskTop Manager Toolkit, designed for folks who want to design their own DTM modules. It goes for \$21.95 including P&H. Look for all these products to be offered in both /// and Hgs versions. On Three's order line number is 800-443-8877.

On the rumor mill front, I hear On Three may be reducing the cost of their magazine subscriptions soon. Current subscription price is \$40 per year but I'm told renewals aren't coming in the way they used to. So look for subscriptions to drop by half sometime soon...

A Quick Little Program

Ever wish you could load a graphics picture into a program but didn't know quite how to do it? Here's one way. This program will load an Apple /// FOTO/Screen file of your choice and display it using a countdown. From there you can go on with your program (make sure you do a :TEXT:HOME too, however to clear the screen before going on).

Note that you will need to set the pathname (INVOKE ".D1/ bgraf.inv" for example) depending on your program's needs. Line 6 would also need a more complete pathname.

```
5 INVOKE"bgraf.inv"
6 PERFORM gload.(Insert Picture Name Here)"
7 PRINT CHR$(16);CHR$(1)
8 PERFORM grafixon
9 FOR i=1 TO 2500:NEXT i
```

News From The Phase /// Convention Front

Word from the folks setting up the Phase /// convention in Chicago this Fall is that they have decided to give user groups like Washington Apple Pi an incentive for signing up members to attend. While the convention will have an Apple /// bent, it will also be featuring other Apple products in its vendor hall, and 45 seminars.

The incentive is this: If five or more WAP members are signed up to attend (and have paid the convention fees) by September 1st, WAP will get a rebate of \$5 per attendee. Ten equals \$10 and \$15 equals \$15. If 20 or more WAP members attend (and are paid up by September 1st), the club will get one free admission to the convention to give away, etc.

Information on the Phase /// Convention was in last month's Journal, but if you'd like more information, feel free to contact me.

Another Tip

This is a great tip for all you Catalyst or Selector users, thanks to Daryl Anderson of D.A. Datasystems. When setting up your menu, be sure to have one selection be "Run Disk in .D1". Then set Catalyst or Selector's menu to run the SOS. Interp file in the internal drive. By doing this, you can run any program you want (that is not on your hard disk) and yet still be able to return to your program menu when finished.

By the way, I am currently beta-testing a new program that allows you to run the ///+// or //e emulation mode from Catalyst or Selector. There are still some bugs to report right now, but hopefully those will be worked out. But the main challenge, to run an Apple //e program from your Selector or Catalyst menu does indeed work. ☺

GETTING THE MOST OUT OF YOUR APPLE /// NEW MEMBER'S DISK

by David Ottalini

One of the most exciting things to happen to our SIG in 1986 was the introduction of our long-awaited New Member's Disk. Both the Apple // and Mac folks have had their own disks for new members for quite a while. For our new members, though, it's been frustrating to open the packet of information after joining WAP only to find that they got a disk for the Apple //. Many times, they didn't know it was for a // or understand why it wouldn't boot up.

Well now, our new members will get their very own disk that runs in Apple /// native mode and is packed on both sides with a great deal of Apple /// information. This disk was designed with a brand-new Apple /// owner in mind—someone who has never seen a computer before or barely knows how to turn on their machine (of course that doesn't mean there isn't information us old-timers can't use as well!). With this disk, all a new member will have to do is put it into the internal disk drive, turn on the /// and the program takes it from there. It uses our modified Business Basic Menu.Maker program to get things going. The menu on side one contains the following:

Use arrow keys to move; <RETURN> to select;
<CONTROL C> to abort

This ///SIG Disk is Copyright 1986, Washington Apple Pi, Ltd.

```
*BASIC 00001 HELLO
*BASIC 00007 MENU.MAKER
*TEXT 00050 A3.INFORMATION
*TEXT 00003 HELLO.TEXT
*TEXT 00004 READ.ME.FIRST
*CAB 00001 A3.HELPS1
*CAB 00001 A3.QUESTIONS1
```

Using the up or down arrow keys, simply highlight the file you want to read or run and press 'Return'. The program automatically takes it from there. Be sure to run the "Read.Me.First" file to get things started properly. From there, move on to the A3.Information file, as it contains a huge amount of basic information about the Apple ///, including vendors, books, magazines and other material. A3.Questions1 and A3.Helps1 are subdirectories which contain additional files offering tutorials and answers to questions on a wide range of topics. For example, here's what you'll find in A3.Helps1:

Type	Blocks	Name
*Text	7	CURSOR.MOD
*Text	15	BATTERY.BACKUP
*Text	12	GRAB.BAG
*Text	7	SERIAL.CABLE
*Text	4	SOS.DRIVERS

The Cursor.Mod tells you how to modify your Cursor /// to use in // Emulation mode, Battery.Backup explains how to install a clock chip with battery back-up in your ///, and Serial.Cable tells you how to make a serial printer cable for your ///.

On Side Two, the menu looks like this:

Use arrow keys to move; <RETURN> to select;
<CONTROL C> to abort

This ///SIG Disk is Copyright 1986, Washington Apple Pi, Ltd.

```
*BASIC 00007 MENU.MAKER
*BASIC 00003 TEXT.DUMP
*TEXT 00008 A3.NUTSHELL
*TEXT 00003 A3.POEM
*TEXT 00011 APPLE.SOFTWARE
*TEXT 00006 APPLE3.DOCTOR
*TEXT .00015 BASIC.ARTICLES
*TEXT 00026 CABLES
*TEXT 00007 COLOR.MONITOR
*TEXT 00001 CPYRIGHT.NOTICE
*TEXT 00018 DRIVER.CONFIG
*TEXT 00041 SOFTWARE.HELPS
*TEXT 00004 SOS.DRIVER.NOTE
*TEXT 00007 THE.APPLE3
*TEXT 00008 UPGRADING.SOS
*TEXT 00016 WAP.BIBLIO
*TEXT 00006 EZP.TIPS
*CAB 00001 A3.HELPS2
*CAB 00001 A3.QUESTIONS2
*CAB 00001 TEMPLATES
```

The information here is really a grab-bag full of Apple /// information, including bibliographies of Apple /// articles in the WAP Journal through 1986 and a bibliography of where to find articles on the Business Basic Language. There's information on how to hook up color monitors to your ///, how to configure your SOS.Driver file, tips for 3 EZ Pieces users and even some templates to use if you have the program.

Other files include information on what to look for if your /// gets sick and more information on how to put together different cables for your particular printer. Just for fun, there's even a poem written by a ///er on CompuServe. You might also want to look into The.Apple3 file, as it contains an excellent and concise review of just what the Apple /// system is comprised of.

If you want to get out of the Menu program to get back to Business Basic, simply hit the 'Control' key and 'C' at the same time. And if you want to change the prefix to load the other side of the disk, simply hit the 'Escape' key. The current prefix will be displayed at the top left of the screen. Use the left arrow key to move the cursor and type in the new prefix (on the New Member's disk, all you have to do is change the '1' to a '2' or vice versa to load the menu program from the other side).

Finally, if you want to print any of these files directly, simply run the "Text.Dump" program on side 2 and you can print the designated file. And since almost all these files are text files, you can also pull them up into Apple Writer, 3 EZ Pieces, Word Juggler or Ink Well and print the files from there.

contd. on pg 11

APPLEWORKS SIG NEWS

by Ken De Vito & Peg Matzen

The WAP February program consisted of a variety of AppleWorks applications very ably demonstrated by WAP members, which included: a Data Base consisting of all the VCR cassettes at Erols (a very popular VCR Tape Rental outfit in the DC area) by Curtis Lauret; a spreadsheet for your 1986 Income Taxes (for taxes due 15 April 1987 and available from the WAP Disketeria for \$5) written by Paul Koskos; a commercial checkwriting and printing program—Quicken (by Intuit)—presented by George Sall; use of Macros (and Beagle Brother's MacroWorks) for a multitude of Construction Jobs by Lou Pastura; and several unique miscellaneous applications from around the country by Richard Rowell. Ken De Vito then asked for a round of applause for Richard Rowell who put on an excellent program and for all the individual presenters for their efforts on this February demonstration, and went on to describe the functions of the AppleWorks SIG.

The AppleWorks SIG met at 8:00am and also after the main program—attendance was better than normal and the questions are getting tougher. Some items of interest that were discussed follow:

The various memory upgrades available for the Apple //c: AppleWorks 2.0 and the associated Expansion software from Applied Engineering; RAMworks 3 and RAMfactor comparisons; get 1 megabyte on any RAM card you buy in the near future. Develop a startup program to load your most used programs into RAM using ProSEL by Glen Bredon and/or the /BOOT program (using ProSEL files) written by Lee Raesly. This is a Start-up program to load up programs/files into RAM and uses ProSEL which is shareware (i.e., if you use it you are asked to send a fee to the developer who spent hundreds of hours developing it!)

In response to a question about DIF (Data Interchange Format) and ASCII (American Standard Code for Information Interchange) files, AppleWorks can read both ASCII Files and DIF files—check your manual and the helpful charts.

The best spelling checker, in the opinion of the majority, was considered to be "Sensible Speller". If you are using it with AppleWorks, then buy the ProDOS version—and put it in RAM to limit disk access and make spelling checking almost FUN! Some spelling checkers either don't work within AppleWorks or work horribly slow—ask for a demo before you shell out hard earned \$\$ for a spelling checker.

When a printer stops at the end of every page, and if you are using continuous-feed paper, change Printer Options using Open-Apple O (as in Oh and not Zero) at the beginning of the document, to eliminate the "PE" (Pause Each Page) instruction.

Pinpoint 1.3 has been updated to 2.3—however, neither version worked for this individual—it made the built-in drive only whirr. Pinpoint 2.0 worked fine.

Whenever you create a Data Base, be sure to add extra, generic data base categories—you can always get rid of the categories which are not used and it's a lot easier than trying to add Categories to an already established Data Base.

When data is moved or copied from one file to another, it

is always moved between files on the Desktop via the Clipboard like this:

1. Move, copy, or print the data to the Clipboard.
2. Switch from the original file to where you want to move or copy the data.
3. Move or copy the data from the Clipboard to the second file. The Move command removes the data from where you got it; the Copy command transfers the data to the destination file but leaves a copy in the original file.

Twenty-eight of the 40 disks from the TAWUG library are still available from Ken DeVito, Lou Pastura, and Richard Rowell. We will soon have the full 40! No charge, but bring your own disks.

Disks deteriorate with use just as audio/video recordings lose some of their quality after hundreds of playings. Make copies from original disk, keep original in a safe place so that future copies can be made from it on a regular basis. Naturally, this technique does not apply to copy-protected software which many members (and the USAF) refuse to purchase.

Recommendations on buying a modem: Get ASCII Express "The Professional" communications software, version 4.3 ProDOS. MouseTalk from the same company has swarms of BUGS—avoid it for now. Buy the Avatex Modem from WAP—the normal one is \$87 and the Hayes Compatible model runs \$129.

One use of Apple computer at home is to send material to an office or to a Big Blue compatible computer. This is done all the time with ASCII text files and its not a very complicated procedure. Ken discussed using the MCI Mail for this effort. MCI Mail also gives you access to DowJones and world-wide TELEX capability for only a subscriber fee of less than \$20 a year. (DowJones services charge the same rate sDJ subscribers pay and TELEX charges are also minimal—the access to these services is the beauty of MCI Mail!)

We'd like to make an all-out appeal for AppleWorks articles/tips/whatever for this column. You can leave them on the WAP Telecommunications System. Call Lou Pastura to transmit them to him via modem or mail them to Ken, Lou, Richard or Peg. Any inputs to help out this over-burdened nucleus of volunteers in service to WAP and the AWSIG will be appreciated. Thank you. ☺

A/// New Members Disk contd. from pg 10

The New Members Disk is a great tool for beginning /// users and a nice resource for folks who've been using their /// for a while. We hope to add more of these "Information Disks" in the future to the PD library so that /// SIG members can continue to get the most out of their machines. ☺

Q & A

by Bruce F. Field and Robert C. Platt

Gary Little had an article in the July 1986 *A+* explaining how to use the Macintosh 400K drive with the Apple //e using Central Point's Universal Disk Controller. With the upgrade of the Mac to 800K drives there should be plenty of reasonably priced 400K drives available. The only problem is that there is no eject button on the Mac drive (unless you're handy with a paperclip), but Tom Weishaar published a short routine in the June 1986 *Open-Apple* which ejects the disk.

Q. I am considering purchasing an Apple IIgs; however, I don't relish having to give up some of my valuable software and hardware. I would like to know which—if any—of them might be compatible with the IIgs. Years ago, I purchased a Microsoft Z-80 card and have been writing and running programs in Microsoft Basic under CP/M. I would appreciate your comments about their possible compatibility with the IIgs.

A. Some Z-80 cards designed for the Apple //e (or][+) use non-Apple conventions on the I/O Select and Device Select lines in the expansion I/O slots. Among others, cards from Microsoft and Digital Research will not work on the IIgs.

Generally, interface cards that use interrupts will also not work properly on the IIgs. Most standard printer interface cards or serial interface cards will probably work. But, the only safe way to be sure is to try it out.

Q. I am doing some engineering type programming on my Apple //e with Applesoft BASIC. One difficult problem that I have run into is that I want to label items within my graphics. This may sound familiar. One way to do this is to use a shape table of the keyboard characters. Do you know where I can obtain a ProDOS shape table for the keyboard characters? I would like some additional explanation on how to use it. In addition, I was wondering if it would be possible to store a whole screen of graphics, on disk, to be recalled and displayed faster than having to regenerate it later on.

A. Shape tables of ASCII characters have been around for so long and since almost everybody has one, it may actually be somewhat difficult to find them in the stores. Beagle Bros Apple Mechanic contains several ASCII shape tables and a shape table editor that you can use to create your own. Additional fonts are also available. Apple Mechanic programs are written for DOS 3.3; however, the shape tables are just binary files that are used by Applesoft not the DOS, so a shape table on a DOS 3.3 disk can be directly transferred to a ProDOS disk using the ProDOS CONVERT program. You may need to load the table in a different memory location for ProDOS because of the way ProDOS manages disk buffers. Generally for ProDOS you can load the shape table starting just above hi-res graphics page 2 at memory address 24576. Then, to protect it from Applesoft storing variables inside the shape table, set LOMEM to just past the end of the shape table.

It is easy to save and load graphics to disk. To save your completed graphics screen to disk use BSAVE filename,A8192,L8192 for hi-res graphics page one (what you get if you use HGR in your Applesoft program), or use BSAVE filename,A16384,L8192 for page two (HGR2). To load it back directly to the screen you will first want to turn on the graphics page with HGR or HGR2 so you can see it, and then load the binary file with BLOAD filename. No address (A) or length (L) specifiers are needed with the BLOAD statement if you want to load it back to the same screen it was saved from.

Q. I would like to know if there is a PEEK that can detect whether or not a printer is active. My Imagewriter has a bad habit of 'going to sleep' after it has been on for more than half an hour, so my programs that involve printouts just hang when they get to the printout routine. I have seen commercial programs (most likely machine language) which check and give a 'TURN PRINTER ON' or similar message, and I would like to do this from within Applesoft.

A. There is no PEEK or simple test that can detect the status of your printer. The way you can tell what your printer is doing is to send it a character and see if it responds. If it is completely dead, turned off, not connected, or not working properly, no indication will be sent back to the Apple. So, you can't tell for sure if it's on and working. The other possibility is that it is deselected (or acts like it is) and then when you send it a character it sends a busy signal back to the Apple printer interface card. The software on the card continuously monitors the printer waiting for it to become un-busy before continuing. This is what hangs up the Apple.

A possible solution is to bypass the software on the printer interface card and write a routine to send a character and monitor the busy status of the printer. Exactly how this is done will depend on your printer interface card. For the Apple Super Serial Card you should be able to POKE the character to address 49304 if your card is in slot 1, and monitor the status at address 49305. Unfortunately that doesn't work because among other things there is a quirk in the 6502 that causes it to issue a false read which confuses the Super Serial Card. For this card you would have to use machine language. An easier solution might be to get your printer fixed.

Q. How can I password-protect my AppleWorks files?

A. The only fool-proof way of protecting your files is the encrypt them outside of AppleWorks and then decrypt them just before using the file under AppleWorks. This is more trouble than it is worth (unless you work for the CIA.) SuperMacroWorks allows you to password-protect your AppleWorks Version 2.0 files. But anyone using a different copy of AppleWorks can access the files from your data disk without specifying the password.

contd.

- Q. How can I print a multiple column document in AppleWorks?
- A. You can use the spreadsheet under AppleWorks to type the columns and then move the document over to the word processor. As an alternative, MacroWorks has a column printing feature.
- Q. I am an Apple][+ owner who is planning to upgrade to a IIgs. What memory expansion board can I buy now to work on both machines?
- A. Judging by their ads, either a RAMFactor or Apple Slinky card should work on both the][+ and IIgs.
- Q. Have there been problems with fuses blowing on the Apple Color Monitor IIc?
- A. The original fuse used in the Color Monitor was too limiting. Apple is upgrading the fuses as the monitors are brought in for repair.
- Q. How can I use the 80-column display mode from Applesoft BASIC?
- A. The IIc, IIc and IIgs have a built-in 80-column text display routine in their ROMs. To enable the 80-column firmware, insert the statement, PRINT CHR\$(4);"PR#3". To disable the 80-column firmware, insert the statement, PRINT CHR\$(21) or type <escape><control>-Q from the keyboard. Do not use PR#0, because this will fail to reset certain flags. While the 80-column firmware is active, <escape>4 will shift to 40 column display and <escape>8 will return to 80 columns. On the original IIc (which, like mine, has not been enhanced) you cannot use column tabbing or HTAB while in 80-column mode. Instead of HTAB n, use POKE 1403,n-1 (where n is the column where the next item is to appear.) HTABing beyond column 40 causes non-screen memory to be overwritten.
- If you want to protect your program from a user leaving 80-column mode, use the GET command for input instead of INPUT. GET does not execute control character commands such as <escape><control>Q, while INPUT obeys these commands before passing a string back to your BASIC program.
- Q. I received an Applesoft program from a friend which has a IIc, but I only have a][+ without an 80-column card. All of the PRINT statements display punctuation and garbage. When I list the program on my printer, the PRINT statements have lower case characters. How can I fix the program to run on the][?
- A. If only a few lines are involved, LIST each one, then use <esc>II<space> to position the cursor at the start of the listed line. Move the cursor over the line using the right arrow and repeat keys to recenter the line. The][+ will automatically restore the line in all capitals. ☺

Smart Computer: Our Generic PC, Built with Care and Intelligence

by Bud Stalker

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

- **Easy to learn and operate.** Each Landmark PC comes with a customized start-up disk or hard disk menu system, as well as a personalized user's guide that fully explains your particular mix of hardware and software. The three-level help system with pop-up messages and explanatory graphics keeps you firmly in charge. As you cruise effortlessly from one program to another, help screens describe what's happening and tell you what you can do next. Full details on all hardware and software are integrated into the menu system, and are available by keyword search. And our help system is an open one; we tell you how to expand and further customize it.
- **Modular and upgradeable.** We custom-tailor each PC, and don't stick you with hardware or software you don't need or can't use. We can transform any of our generic PC XT's into full PC AT's (Advanced Technology computers) without using band-aid add-on boards, without giving up most existing components, and without compromising IBM compatibility. (We may be able to give your old IBM PC or compatible an AT transplant as well. Ask.)
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APPLE II NEWS AND NOTES

by Walt Mossberg

This month, we're going to talk about more new software, about music and telecommunications, and about an obscure fellow in New Jersey who is an unsung hero of the Apple II world. Among other things.

THE SOUND OF MUSIC

One of the great things about the IIgs is that it's the first computer to come standard with a professional-quality music synthesizer chip. But for months, there wasn't any software to show off this power. Now, two commercial programs have arrived, and both put out music that will knock the socks off anybody who thought the Mockingboard on a //e was the ultimate.

The first, and most impressive, of these packages is called **The Music Studio** and is from Activision, a company which is establishing an early lead in the IIgs field by translating some great software it had previously released for the impressive sound and graphics capabilities of the Amiga and/or Atari ST. Its previous IIgs offerings include the art program **PaintWorks Plus** and **Tass Times**, a game.

Music Studio (\$79 list, about \$55 by mail) allows you to compose songs with up to 15 different instruments per song, using up to four "tracks", and a wide variety of types of notes, rests, tempos, volumes, time signatures and keys. Notes are presented onscreen in 15 different brilliant colors, each representing a different one of the 15 instruments. You can even enter lyrics which scroll along with the notes, the words appearing under whatever section of music you choose. But the real thrill here is just running the cursor over the on-screen staves and listening to the sounds—it's just like running up and down a piano keyboard or the strings of a guitar. It sounds like a real instrument, not a computer. There are a dozen or more songs included and already there are several new public domain **Music Studio** pieces that have been uploaded to **MAUG™**, the Apple users section on CompuServe.

The program is mouse-controlled, with pulldown and popup menus. Using either a section of the song which you highlight with the mouse, or the entire song, you can instantly move and copy blocks of notes, transpose notes up or down the treble and bass staves, lengthen or shorten the duration of notes, replace one instrument with another, and more. The resulting music can be saved to your own data disk or printed out in highly usable sheet music form.

Music Studio can also be used with MIDI instruments you can connect to your IIgs and there's a special screen for setting MIDI parameters. For those who don't read music, there's even a "paintbox" feature, which lets you enter music as little blobs of color, rather than notes, and then translates it into real notation for you.

The real genius of **Music Studio** is that it adopts the concept of "palettes" of instruments, expanding exponentially the sounds you can use. Just as some art programs (including **Paintworks Plus**) allow you to load in whole new palettes of colors, **Music Studio** allows you to load in a whole new range of 15 instruments at a time for any song. On the disk, there are instrument palettes for jazz, classical, rock and even simu-

lated voices (not too real, but effective). And the program allows you to design your own instrument palette and store it as a "sound" file.

The other new music program is a IIgs version of the old standby, **Music Construction Set** by Electronic Arts. This costs less (around \$40 list) and it does much less than **Music Studio**. It is essentially the old MCS configured to use the new IIgs sound chip, and able to work with MIDI instruments. That means it sounds great, but it just isn't very elaborate compared to **Music Studio**. And it doesn't play MCS tunes composed on the older MCS. But never fear, Electronic Arts says it is working on its own powerhouse music program for the Apple II, a IIgs version of **Deluxe Music Construction Set**, already available for the Mac and other machines. That should be in the same league as **The Music Studio**.

So we're finally off and running with great-sounding music on the IIgs. But sadly, both these programs are copy-protected. That means that, because the makers fear piracy, they have denied honest users the right to make legitimate backup copies, or run the programs from a hard disk.

JERSEY GEM

Who is **Glen E. Bredon**, and why is he writing all that great software and selling it cheap? Glen is a math professor in New Jersey who has been a success in the commercial software market with two products that are mainly for programmers, the **Merlin assembler** (from Roger Wagner Publishing) and **ProDOS Commander** or **PROCMD** (sold by **CALL-APPLE**).

But he has also produced a slew of marvelous disk and file-handling utilities of great interest to the general, non-programming Apple user. They are elegant, constantly improving programs, they aren't copy-protected and come with great support. And he sells them out of his home, for a song. Updates and enhancements are provided to registered users either by mail for a minor handling fee, or via the **MAUG** Apple user group on CompuServe, for the cost of connect time.

I have never met Glen, nor spoken to him (except electronically via CompuServe). I have no tie of any kind to his business. But I highly recommend his software. I personally regard it as superior to its far costlier commercial competition. In fact, I couldn't do without it.

The heart of the Bredon line is **PROSEL**, a program selector that helps anyone with any of the new, larger storage devices—800K microfloppies, hard drives or even large Ram disks. When you boot one of these on which **PROSEL** has been installed, an 80-column menu screen appears presenting up to 48 entries (text, not icons) designed by you to represent the programs on the disk, hard disk or Ram disk. Using either the keyboard or mouse, you can pick any of these, and run it. When you quit from the chosen program, **PROSEL's** menu returns to the screen so you can pick another. You can write the menu entries as you wish, and group them (word processors here, utilities there, etc.).

PROSEL costs \$40, and is worth every penny. But once
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you get PROSEL, Glen throws in free a whole bunch of other great utilities. The main one is CAT DOCTOR, a file handling utility that catalogs, copies, deletes, undeletes, verifies, locks/unlocks, sorts, renames, types to screen or printer, etc. It is fast, works on batches of files, uses either keyboard or mouse, and in my view outperforms both Apple's system utilities and the standard file-handling portion of Copy II+ (CAT DOCTOR doesn't copy protected software). Like PROSEL, CAT DOCTOR is constantly being improved and updated, for free (except for handling or connect charges).

There are numerous other Bredonware programs thrown in with PROSEL. There's COPY, a very fast disk-copier. There's BACKUP/RESTORE, the fastest hard disk backup program I've seen (which also can backup the contents of a RAM disk to a large single file and auto-restore it to RAM on next bootup). There's FILE FINDER, which scans volumes for particular filenames. There's MR. FIXIT, which repairs damaged volumes, and BEACH COMBER, which reorganizes the files on hard disks to make disk access time shorter. There's INFO DESK, which does block maps of disks, among other things. Also QUEUEP, which lets your Apple automatically run a series of applications at preset times. And more.

Glen's address is 521 State Rd., Princeton, N.J. 08540. He is also reachable almost any night on MAUG.

REACH OUT

Now some words about telecommunications software. For years, the dominant Apple II software for controlling modems seemed to be either the powerful but complex ASCII Express Professional or the simpler but much less capable Apple Access II. Lately, a bunch of new telecommunications programs have made an appearance, and two of them seem to me to deserve special note. Both support the IIgs modem port (and all popular //e and //c configurations), neither is copy-protected, both come with good manuals and have been or are being updated to make them even better.

The first is Point-to-Point, written by Gary B. Little, author of several Apple books and a regular contributor to A+ magazine. PTP (\$129 list, \$79 mail) is published and sold by Pinpoint Publishing, but it is a separate, stand-alone program that isn't part of the same company's pop-up Pinpoint accessories package which enhances AppleWorks. (That pop-up Pinpoint program has its own simple telecommunications module, which has nothing to do with PTP.) Instead, PTP is a full-featured program that has lots of power and great ease of use. It follows the AppleWorks screen presentation of overlapping file folders and is almost impossible to get lost in.

With PTP (Version 2.0), you can set up 16 phone numbers, each with its own set of macros, to log onto your favorite BBS's or databases (including our own fabulous WAP Telecommunications System.) The macros are easy to write, and allow you to do all sorts of powerful things. You can also set up special "Dial Files", which can be run directly from bootup or from a program selector, that automatically run PTP, skip all menus, and just rapidly dial a preset phone number and execute all macros.

PTP has a capture buffer of about 18K, and when it fills up with a download the file is automatically saved to disk under a separate name you can designate for each phone number. There's also an online review buffer that lets you check

back to look at things which have scrolled off the screen.

PTP has the rare and VERY valuable ability to send AppleWorks Word Processor files in their native saved form, without the need for being printed to disk as ASCII files, or converted in any way. It also sends ASCII files and MouseWrite files. PTP handles XMODEM uploads especially well, and automatically converts into regular ProDOS files any files you upload or download in the new space-saving Binary II format (also written by Gary Little). The program has a full-featured disk/file utility and will print either the buffer, or a disk file. It has several built-in extra utilities, including one that strips linefeeds from text. One nice feature of PTP is the ability to make phone calls at preset times.

PTP's main weakness is its built-in editor, which is a fairly crude line editor, suitable only for working on short messages. There are a couple of methods in PTP for viewing text on screen, but neither is ideal. The result is that for any detailed review/editing of downloads, many users will prefer to leave PTP and boot up a word processor or text reader of some sort. And that's a drawback in an otherwise very, very well done piece of software.

The other new comm program is MouseTalk (v 1.2), the new simpler software from the makers of ASCII Express. MouseTalk (\$150 list, \$99 mail) follows the Mac/Mouse format, and though it will work from keyboard, you really need a mouse. It has powerful macros, capture and review buffers, and most other important features. MouseTalk's use of the Mac/Mouse interface makes it easy to enter commands. To dial, for instance, you just pull down the "phone" menu and either click on "dial" for manual entry of a phone number, or "do session", to start off an autodial-macro process. MouseTalk also emulates some popular terminals.

And MT is strong where PTP is weakest—in editing functions. It boasts a full-screen, full-featured MacWrite-type editor, which holds 33K (vs 18K for PTP). What's more, there's a handy feature wherein your capture buffer can dump right into the editor. You can also enable a separate capture-to-disk-file feature. As in PTP, there is a small online review buffer in MT for seeing material that has scrolled off.

But MT is far more limited than PTP in handling files. It doesn't handle AppleWorks files or Binary II files. And it "forgets" the prefix of your download data disk between bootups, forcing you to reset the prefix each time—a process that involves lots of mouse-clicking on various tedious menus. A new version will supposedly cure this and other problems.

Both programs are powerful and easy to use. For my personal style, I like PTP 2.0 better than MT 1.2. But this may be because I've lived with PTP a long time (I was a Beta-tester for it), and you may feel differently.

DESKTOP ACCESSORIES

Like the Macintosh, the IIgs has programming tools built into ROM which make it easy to design software that uses the Mac-style interface of mouse-driven pulldown menus. One feature of this interface is that the user can summon "desktop accessories" (DA's)—calculators, notepads, and the like—from a menu that appears when you click on the apple symbol at the far left of the menu bar. So you can expect to see programs which will install such accessories in major applications.

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PI SIG NEWS

by Robert Golden

One of the first (maybe THE first) has been announced for April 1 release by a Georgia firm called Simple Software. It is named DESKTOP and it automatically installs a series of "desktop accessories" onto GS programs which follow the pull-down-menu convention. These include a scientific calculator, a cursor editor, notepad, ASCII chart, scrapbook and puzzle. In addition, DESKTOP gives you direct mouse control, from within your application, of the IIGs control panel settings. And it allows you to set up a RAM-based printer buffer. Simple Software is selling DESKTOP by mail for \$29.95 (404-924-2667). It is unprotected, and supposedly works with PaintWorks Plus, MultiScribe GS, TopDraw, Music Construction Set, GraphicWriter and others.

There will also be individual users writing DA's. MAUG, the Apple user group on CompuServe, is sponsoring a DA-writing contest for the IIGs and a couple of DA's have already been posted there for downloading.

MS-DOS LOSS

One of the three companies planning to release cards that would give the Apple II MS-DOS compatibility has dropped the project, according to the April issues of *A+* and *InCider* Magazines. *A+* quotes Orange Micro as saying it gave up plans to introduce "DOS Boot" because the prices of MS-DOS clones were dropping so fast. That leaves the race to "Little Blue," from Applied Engineering, and "The Envoy" (\$180) from ASKY, Inc.

HARD DISKS

One thing IBM owners have that we don't is access to cheap hard disks. For a long time, the principal low-cost hard disk available for the Apple II has been The Sider from Xebec Corp. (First Class Peripherals is a Xebec marketing arm). But now that Apple has adopted the same interface standard, called SCSI, for hard disks (and potentially other devices) for the Apple II and Mac, we may see more competition, and, possibly, lower prices. One SCSI drive that is already available is called the ProApp. It was announced in 1986. A popular Mac drive, the HyperDrive FX/20, is being advertised now for Apple II's as well. And AST has announced a SCSI drive for both Apple II and Mac.

To use these drives, //e and IIGs owners just install an SCSI card in their machines (the interface is built into current Macs). Apple sells such a card, as does AST. Apple's card was buggy upon introduction, but a new corrected ROM has been made available.

INTERCHANGEABLE KEYBOARDS

The new Macs have keyboards which, it is rumored, can also be bought separately and used without modification on the IIGs, apparently. One is nearly identical to the IIGs keyboard, except has a larger border area. The other has a bunch of function keys. The interchangeability stems from Apple's adoption of a common system for interfacing keyboards and mice on all its computers. It also means there'll probably be third-party keyboards sold as well. ☺

PI SIG's March 1 meeting was programmed to demonstrate the Apple IIGs, to present and discuss three heavy volumes of documentation on the IIGs which had recently become available, and to plan our activities as new documentation and machines are closer at hand. Due to a last minute emergency, we were obliged to switch the meeting from the WAP classroom to Ray Hobbs' home. Several members convened first in the office, then reassembled in Laurel. I would like to extend my sincere regrets to the members for whom it was not feasible to travel further and to any others who may have missed this meeting.

Ray Hobbs demonstrated the price paid for the compatibility of the IIGs with the Apple II series—a slowness in updating the screen as fewer registers (than the Macintosh) and slower clock speed is inherent in the gs. RGB monitors were reviewed and compared, digital vs. analog. The gs has been fitted with the analog type in order to provide variable color intensity. We leafed through hundreds of pages of documentation and I, for one, secretly asked myself how many bytes would fit in a brain cell, and how many would be left over! It was agreed that this information should be eventually made available to WAP for the use of members.

Considerable interest was expressed in the way programming the IIGs would proceed, the use of shells and the insertion of the appropriate routines as required by the shell. The need to get the necessary know-how, the startup by simple demonstration projects to elicit computer response, and the creation of several desktop accessory type applications for availability as a disk accessory was suggested by Don Fortnum. Members agreed that the meeting frequency of once a month may inhibit growth, so Kim Brennan took a cue from Walter Urban's concern and suggested more frequent interaction via the WAP Telecommunications System. Kim will explore the means and we shall have to sharpen our Telecom skills!

Each monthly meeting will be structured with discussion of a particular phase of Apple IIGs interest, problems and Q&A session, and as we get acquainted with our new machines, a greater involvement in depth. We expect in the near future that our meetings will enable members to make early steps toward programming. Ray Hobbs predicted a series of changes and upgrades in DOS and documentation for the gs, and volunteered to become librarian to keep track of these events. Apparently the availability of the Pascal language is moving ahead of development of C language for the gs, and we shall try to keep members posted on developments. At our next meeting on April 6 we expect to have a few books available which have information on the gs. ☺

STOCK SIG NEWS

by Andrew D. Thompson

Although collaboration has not yet succeeded in allowing Stock SIG members to accurately "crystal ball" the stock market, the February 12 meeting showed continued signs of hope if not definitive progress.

1. MUTUAL FUND SUB-GROUP REPORT

Inclement weather caused cancellation of the January 29th Mutual Fund Sub-Group meeting. Accordingly, the February Stock SIG meeting began with an open-ended discussion of mutual funds. Thompson reported his initial effort to use daily tracking of changes in the total assets of each of Fidelity's 35 Select funds and of its Select Money Market fund. Based on the assumptions that volume precedes price moves and that the Select funds represent "smart" rather than simply "hot" money, his presentation raised questions but crystal clear implications for trading remained elusive.

2. DISCUSSION OF MARKET TIMING

Participants then discussed the forecasts made by national newsletter writers. Robert Prechter, members indicated, described the near term stock market as continuing its present choppy action, with 2300 on the DOW as a resistance level which must be crossed prior to any significant move to the up side. Charles Allmon was reported remaining in the cautious camp, staying largely in cash and being approximately only 30% invested in stocks. Still other national gurus such as Martin Zweig were reported being concerned about the relatively high price-earnings ratio of today's stocks and having questioned if the market had enough staying power to sustain the market's current upward move.

From the more long-term perspective, WAP member Ferd Hassler reported on the Investors' Seminar Inc. Conference he recently attended. Eight of nine national forecasters participating in that Conference's round table, including Bob Nurock, Al Frank and Stan Weinstein, were bullish on the market's future.

3. FOLLOW-UP ON MEMBERS' FORECASTING METHODS

For the past several months, participants have been evaluating the results of three different cycle-based methods of forecasting the market's future moves.

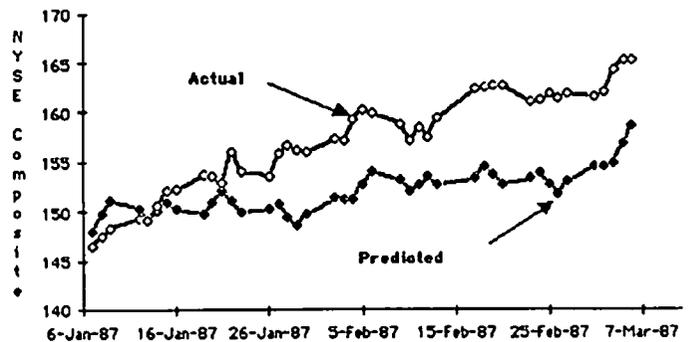
John VanHom, in previous meetings, shared his projections which repeatedly indicated the market would decline during the subsequent three weeks. Tonight he reported his judgment that given the market's continued rise, he remains unconvinced of the validity of cycle analysis. He doubted that any cycles shorter than the cycles he used, with the 300-day cycle being the longest, are contributing to determining the market's direction. Some members supported this doubt given that cycle analysis assumes market moves are symmetric, that some form of past market activity is repeated in the future, and given that current bull market activity seems to have no historical precedent.

Steve Rinehart and Peter Kasper, using proprietary software, reviewed their projections presented at the January 8 Stock SIG meeting. They had forecast that the NYSE index would rise from 146 on January 6 to 153 by February 5 and

reach 162 by mid-March. Those projections were based on an analysis of the closing prices of the NYSE from March 1983 through early January of 1987. In actuality, the NYSE composite index moved from 148 on January 6 to 160 by February 5. That projection accurately predicted the market's upward direction and the general wave form of the composite index. The projection underestimated the power of the upward move which Kasper described as due to the non-cyclic influx of monies related perhaps to factors such as foreign investors or to consequences of changes in U.S. tax laws.

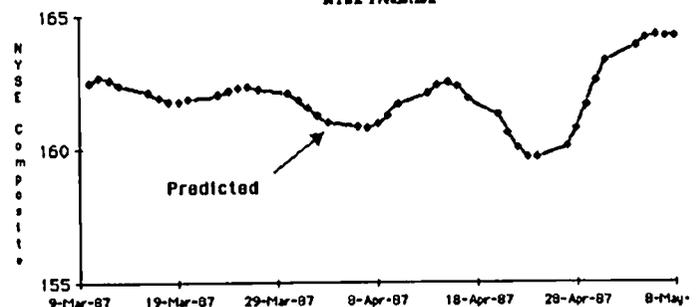
At the February 12 meeting, Rinehart and Kasper projected a relative market low to occur in late February with a sharp rise to occur beginning March 2 at the 156.6 NYSE index range and rising sharply toward the 162.5 level by March 12. As of early March, these forecasters provided the WAP Journal with the following Excel (Mac) generated chart which illustrates the above early February projection as well as the market's actual performance during that time period.

MERCARI INC 6 Jan 87
NYSE Prediction



The market's steep rise is due in part to strong 22-day and 54-day cycles which increased sharply in early January. An update generated in early March and shown in the chart below, projected the market starting to form a near-term top in April with continued oscillations during the months of March and May.

MERCARI INC 6 Mar 87
NYSE Prediction



This updated projection suggests that the overall trend of the market remains up for the next 4 months with the DOW expected to reach the 2300 level. For more information on Kasper's and Rinehart's methodology or software, write or call: Mercari, Inc., 2796 Crystal Wood Ct., Herndon, VA 22071. (703) 620-4071.

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ANNAPOLIS APPLE SLICE NEWS

by Steven Toth

The Slice is maturing rapidly. We now have over fifty dues-paying members who participate regularly in our general membership meetings. We, the Executive Committee of the Slice, have been trying to tailor a spring semester program to the unique needs of our group with mixed success.

The Slice's last regularly scheduled general membership meeting was held at the Anne Arundel Community College on the second Saturday of February. The February meeting represented a major milestone in the Slice's evolution: It marked the end of our "organizational" phase and marked the transition to the "operational" phase. The challenge before us is to achieve that transition smoothly, with broad member participation, and an efficient long-term operating procedure. Already informal Mac and Apple II groups have been established within the Slice. Several new service initiatives were approved by the Slice membership and the Executive Committee is pursuing these initiatives aggressively. Members rose to volunteer advice and welcome assistance, and the Executive Committee will be taking advantage of these volunteers. The following represents a brief Slice progress report to our members who were unable to attend.

Membership survey: One of the key objectives of the February meeting was to compile an accurate profile of Slice membership, which now exceeds 50. Over half of our members completed questionnaires on their needs and objectives for joining the club.

Future meetings: Please note that general membership meetings in the future will be held in the Anne Arundel Community College Careers Bldg. at 10 A.M. on the second Saturday of the month, instead of in the Science Bldg.

Secretary: All AAS members thank Claire Johnson for her past activities as Slice Secretary and Journal Editor. Unfortunately she cannot continue in her role and we are once again looking for someone to step forward. Please contact Steve Toth if you're interested.

Insurance reminder: Members are reminded to make sure their household insurance policies cover their computer—some policies have dollar value limitations on personal computers and you may not be covered in case of fire, theft, or other damage. Check with your insurance agent.

Slice Logo: We're conducting a contest for an Annapolis Apple Slice logo. Submit your suggestions to Steve Toth by the May 9 AAS general membership meeting. The winner will receive dinner for two at historic Middleton's Tavern in downtown Annapolis. Selection will be made at the general membership meeting. You must be a current WAP member to participate; if your artwork is available on disk, we'd love to showcase it in the Journal.

Phone book: We have prepared and are distributing a phonebook to Slice members.

Mac SIG: There are several active MAC users in our Slice who want to start a Mac SIG. This group meets monthly at the Annapolis Library under Paul Foer's dynamic leadership. The meeting times are: Mar 31, Apr 22, May 27, June 24 from 7 to 9 P.M. All Mac owners are encouraged to attend.

Executive Committee: Nearly three-fourths of our Slice members own Apple II family machines, yet the Executive Committee has only sporadic Apple II representation. We need Apple II owners to help shape our programs. All members are invited to join us in the AAS Executive Committee meetings at the Annapolis Library on West Street. Meetings are scheduled for Mar. 19, Apr. 16, May 21, and June 18 from 7:30 P.M. to 9:00 P.M.

Inking Machine: The Slice has ordered an inking machine for Imagewriter ribbons. It will be available to Slice members at the general meetings and also on request.

Bulletin Board System: We are working on setting up an official Slice Bulletin Board System. In the meantime you may use a bulletin board operated by Barry Conner in the evenings. (Phone Annapolis 267-2209). Thank you Barry. More on this topic later.

February Programs: The Apple II group retired to a demonstration of software in the computer laboratory. The Mac group demoed several software packages, including MORE, JAZZ, and Mac Pro Football. (The 1970 Baltimore Colts beat the 1983 Washington Redskins by a last minute field goal.) The versatility of MORE, a "thought processor", was shown by Casey Kester in organizing and running the meeting.

Future Programs: Following is the schedule of activities for the Slice:

April 11: Apple IIgs demonstration by Lou Aymard
courtesy of Clinton Computer

May 9: Mac - "Preparing a newsletter using
ReadySetGo 3.0"

Apple II - "Using Apple II games and
simulations to teach gifted students" by
Bob Zelenka

June 13: Program - TBD

We hope to see you all at the next AAS meeting! ☺

Stock SIG News contd. from pg 17

Irv Lowen, the third participant in the Stock SIG's "filter off" updated his projection which is geared toward forecasting with confidence mainly very short-term market turns on a 3 to 5 day basis rather than on a monthly or longer basis. Using Fourier analysis with a third harmonic, Lowen projected on February 11 that February 6 would prove to be a market high on the Standard and Poors 500 index which would decline toward a March 6 bottom and turnaround and head back upward. He cautioned however that given this forecast into March exceeded the 3 to 5 day range of confidence, that extenuated projection would need to be re-evaluated at least weekly.

The critique of members' methods of market projection, review of investment software and discussion of related issues will continue at future Stock SIG meetings held each 2nd Thursday of the month, 8 p.m., at the WAP office. The Mutual Fund Sub-Group will meet at the Bethesda Library, 8 p.m., on April 21, May 28 and June 24. ☺

APPLE DISCOUNTS

**SPECIAL: LIFETIME WARRANTY DISKETTES 10 for \$5 (50¢ each)
25 for \$11 (44¢ each) 100 for \$39 (39¢ each)**

MACINTOSH CORNER

- SS/DD DISKS, BOX OF 10 \$14.00
- SS/DD DISKS, CASE OF 50 \$60.00
- 10 DISK STORAGE BOX \$2.50
- 36 DISK STORAGE BOX \$9.00
- DS/DD DISKS, BOX OF 10 \$16.00
- DS/DD DISKS, CASE OF 50 \$70.00
- IMAGEWRITER CABLE \$19.00
- MODEM CABLE \$19.00
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5 1/4 INCH DISKETTES & STORAGE

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- SS/DD, PAK OF 25 \$11.00
- SS/DD, CASE OF 100 \$39.00
- SS DD, CARTON OF 500 \$175.00
- 2-NOTCH DS DD, BOX OF 10 \$6.00
- 2-NOTCH DS DD, PAK OF 25 \$13.00
- 2-NOTCH DS DD, CASE OF 100 \$45.00
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5 for \$10.00

(SPECIFY COLOR CHOICES: BEIGE, BLACK, BLUE, GREEN,
GREY, RED, YELLOW)

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- CITIZEN 120D, 120 CPS \$219.00
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- NEC P6, LQ \$545.00 *
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* DENOTES NEW PRICE OR ITEM

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- 12-INCH COMPOSITE \$79.00
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MODEMS

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- US ROBOTICS 1200 EXT. \$219.00

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- COMPUTEREYES \$109.00

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- EPROMS 27128/27256 \$7.00
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- 256K, SET OF 8 \$21.60 *

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- 6-OUTLETS WITH SURGE PROTECT \$25.00
- CABLE GENDER CHANGER \$9.00
- CABLES (S OR P) \$19.00
- GLARE FILTER \$29.00

COMPATIBLE COMPUTERS

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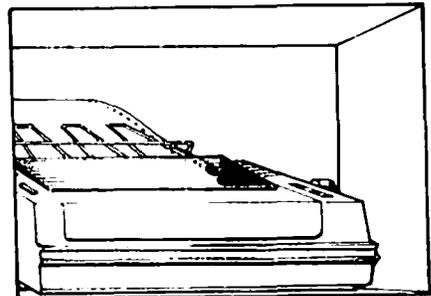
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GAMESIG NEWS

by Steven Payne

March came in like a manticore at the regular monthly GameSIG meeting on the 5th. We began with a demo of "Deep Angst," a new adventure game currently "under construction" by Ron Wartow, using WORLD BUILDER (see below). At this stage it includes a deadly mariachi band, cigarette-smoking dinosaurs, bug-eyed monsters and Ronald Reagan (much more radical than "Radical Castle"!). Watch this space for future developments.

Chairman Thomas Johnston showed us an autographed copy of Charles Gulick's latest opus, *Runway USA: A Pilot's Guide to Destination Cities in Flight Simulator* (Microsoft Press, 1987), which uses the Western Scenery disks. Next, Tom read some of the recent correspondence to GameSIG from home and abroad, and congratulated Jeff Stetekluh (a GameSIG regular) on his recent nuptials with an appropriate wedding gift. Members began discussing plans for another general WAP meeting sponsored by GameSIG, possibly in August. Among the new programs distributed for review were:

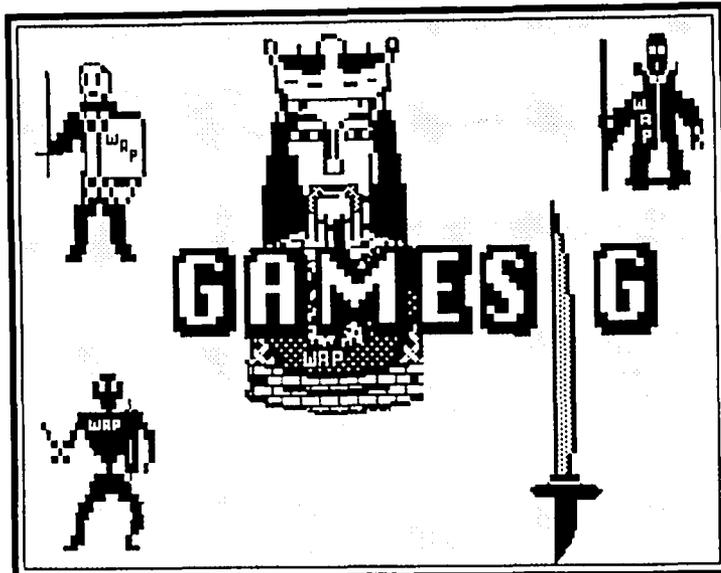
Ring Quest (Origin re-release, Apple // series, 64K): fantasy role-playing game with good graphics;

Marble Madness (Electronic Arts, Apple // series, 128K, joystick and color monitor recommended): arcade game;

PHM Pegasus (Electronic Arts, Apple // series, 64K): Patrol Hydrofoil Missile Craft Simulator;

Deep Space: Operation Copernicus (Sir-Tech, Apple // series, 64K): deep space flight simulator;

Dark Castle (Silicon Beach, Macintosh, 512K or better,



\$49.95 list): popular new arcade game for Mac, integrating animation and "RealSound";

World Builder (Silicon Beach, Macintosh, 512K or better): construction set for creating interactive programs and adventure games (like "Enchanted Scepters") integrating sound and graphics.

The meeting closed with exciting demos of most of the above-mentioned programs. GameSIG contributions to this issue include reviews of THE PAWN, BRONZE DRAGON, KING OF CHICAGO, WAR IN THE SOUTH PACIFIC, WRATH OF DENETHENOR, REALM OF IMPOSSIBILITY, and articles on RUN5 and building runways in Flight Simulator II. The next regular GameSIG meeting will be on Thursday, April 2nd, at 7:30 PM in the WAP Office. ☺

THE PAWN FOR THE APPLE // SERIES: A Review by Reid Hutchinson

THE PAWN (Firebird Licensees, \$39.95 list) for the Apple // series with 64K is an all-text adventure with all the traditions of an Infocom game. In fact, many of the commands are the same, such as Inventory, Again, Verbose, and Restart. It even has a status line with location, turns and score. The parser understands whole or compound sentences as well as short commands such as N, SW, and I.

The only major gripe I had was that the game package shows very enhanced graphics from the Atari ST, while a notice in small print indicates that the Apple // version is all text. I have heard that at least one club member bought the Apple // version without the notice on the package, and was quite disappointed in finding that there were no graphics.

This is a role-playing game, where you (the "pawn") arrive in the Kingdom of Kerovnia, which has recently undergone a period of social upheaval. The ruler of the land, King Erik, has started to lose his hold on his people, and many influential political groups wish to see changes in the rule or

ruler, whichever the case may be. The background of the story is all explained in the extended novelette *A Tale of Kerovnia* included with the package. You, as the "pawn", arrive on the scene and discover the object of the game as you play. Each character and animal found in the game has its own personality, and what you do (or don't do) has an effect on the way that character responds to you. Your efforts will shape the way you are used, for good or evil; after all, you are only THE PAWN!

Also included with the novelette is a Cypheric Help Section, with encoded hints to questions that may arise, which you must type into the computer in order to use. At least two answers to each question are included, from a gentle nudge to a complete solution. The game also comes with a Keyguide, a Poster, and a short book on gameplay for the Apple // version.

All in all, an interesting game with a weaving plot and a good endgame. I rate it 7 on a scale of 10. ☺

contd.

THE PAWN ON THE MAC: A Review

by David L. Porter

THE PAWN (Firebird Licensees, Mac version, \$39.95 list) is now available in formats for a variety of computers, and is advertised on the package as "Illustrated Interactive Fiction." This means that it is a text adventure with pictures. There is an on-screen picture (except in the Apple II version) for everywhere you can go. The pictures are in color (except for the Mac version). A few times the pictures don't change. This is understandable. One section of grassy wasteland looks much like all the others.

I can't tell the entire background story here. It is contained in a 60-page novella that comes with the game. Basically the Kingdom of Kerovnia has problems—possibly well deserved. You are on your way home from the grocery store when some kook zaps you with a magic spell and you wake up in Kerovnia. (This is starting to sound like *The Chronicles of Thomas Covenant*, isn't it?) However, you are neither magical nor an answer to a prophecy. As near as you can tell you are the gardener. You are broke, lost, and there is this strange wrist band on your right arm. (Quag Keep surplus?) All you want is to get home. In order to do that you have got to get rid of this wrist band. In order to do that you have to solve the Kingdom's problems, even though you're just a pawn in the scheme of things. Now to accomplish that—but you probably want to figure that out yourself.

The game has the standard text adventure format: you type in commands and the computer tries to figure out what you want it to do. The menus in the Mac version are customized to look like scrolls and attached to the bottom of a graphics window that you pull down to see the pictures. You can save the state of a game and restore it later. The game comes with the scenario book, a small instruction booklet, a computer specific reference card, and the 400K disk. The disk is not protected and the authors recommend that you create and use a backup. The labeling on the box is a little confusing. Although I say above that THE PAWN comes from Firebird, it was actually created by a group in England called Magnetic Scrolls, and distributed there by Rainbird Software; Firebird is simply the licensee for the United States. The Macintosh version fills the 400K disk with no room left over for a system folder. You need to either have a second drive, a hard disk, or transfer the game to an 800K disk if you don't want to engage in a lively game of "floppy swappy."

First, the good news. I can't really call this a "standard" text adventure. THE PAWN has probably the best parser I have seen in a game. Its handling of qualifiers and antecedents is definitely a step ahead of anyone else's. The example in their manual runs like this: Get all except the cases but not the violin case then kill the man eating shrew with the contents of the violin case. Remove the shrew's tail and use it to tie the pole and the noose together. (Can you parse that?) The only thing that you have to remember is that it speaks the King's English, not American. Thus, while you can lever something, you can't pry it (and you can examine "the armour", but not "the armor"). Another big difference is that you spend a

lot more time conversing with other entities in this game. They respond reasonably well to general conversation. Another great feature in the Mac version is the ability to define your own function keys. These act like multiple clipboards and allow you to paste commonly used phrases. The only thing I don't like about them is that you cannot put a carriage return keystroke in the function key.

Now the bad news. The first bad news is that the pictures displayed on the outside of the packaging may not be what you get with your version of the software. The Apple II version is "text-only" (see the accompanying review). On the Mac box there is an unobtrusive footnote that says the graphics pictured are from the Atari ST. It should be obvious that they are not Mac graphics because they are in color, but I still do not care for this type of advertising ploy. The pictures in the Mac version are grey shade images. They are a nice addition but a little cumbersome to use, and the documentation does not do a good job of explaining how to use them. I ended up playing for some time without them, expecting a picture to be displayed somehow. Essentially, if you want to see a picture, you have to pull the menu bar down like a window shade. While it is down, it covers up most of the text and response area. You cannot view both at once. Therefore, until you have seen all the pictures, you end up running the "shade" up and down to read the descriptions behind it. (When the picture changes, it automatically rises up for a moment and then comes back down.) The pictures themselves come out in one of three display styles according to a menu choice. The differences between these are not explained in the documentation and not overly apparent when you use them. I suggest that the software be left to choose the style itself. All in all, the pictures are in the 'bells and whistles' category. They do not contain any information that is not in the text. Most of the time, you cannot load the game if you have been using the system for anything else. You must turn it off for a minute first. Otherwise you will get an OOPS - OUT OF MEMORY message—even on a 512K Mac. The good news is that that is all the bad news.

THE PAWN stands out as unique for me. I really enjoyed playing it and I recommend it. Not because of the pictures but because of the need to converse to get what you want rather than the usual pick up and put down. It probably won't be as impressive after ten more of the same type are on the market, but for now it provides a new challenge. After all, isn't that why one goes adventuring?

RATING (Good/Neutral/Bad):

Mac Interface: Good
Documentation Content: Neutral
Product Physical Quality: Good
On-Line Help: Neutral
Performance: Good
Presentation: Good
Price Value: Good
Overall: Good



contd.

BRONZE DRAGON (CONQUEST OF INFINITY)

A Review by Ron Wartow

BRONZE DRAGON (Commonwealth Software in Indianapolis, IN) is a new fantasy role-playing game for the Apple // series that is a cross between Wizardry and a simplified Zork. On the plus side, BRONZE DRAGON provides an impressive variety of clever plots generously sprinkled with puzzles, surprises, and the acquiring of objects that truly affect events and your character, a very detailed combat system for magic and hand-to-hand, and some new wrinkles. On the down side, the game is all-text, requires some awkward keypress command and character manipulation sequences, and some disk-swapping at an oft-visited place even using two drives. (Three of the four disk sides are used plus a scratch "Castle" disk which contains the game map.) I was able to overcome the downers and thoroughly enjoyed playing the game. I should say games. There are 12 separate plots (some sequels) each with an estimated playing time of 10-15 hours and a major 30-hour plot called "Seekers of the Storm."

Your party of five characters can be chosen from five classes and four races, of four alignments ranging from virtuous to vile, each with its own special attributes, and abilities. For example, my now powerful Elf-Ninja, Urban of Warrick, can detect evil in characters by virtue of its elfness, and can learn any of 10 martial arts disciplines, imitate the dead, and leap in combat by virtue of its ninjaness.

Dragon Village is your jumping off point and here you can buy equipment and special magical items (wonderfully described) that can be very expensive (but very useful), haggle with merchants, learn spells and martial arts, hit the pub, visit healers, consult the Tower Wizard who, for free, identifies many items, resurrect a character, or visit First Federal Dragon. Here, the command structure becomes a little awkward. Bringing characters in and out of the bank is the only way to manipulate gold. The only way an individual character can enter establishments is after typing its name. On leaving, you must save the character, and successively bring in others. From here, you can visit two Lords, who reward you with skill points and levels on finishing plots. Unfortunately, this key location is visited often, and in addition to the above, you must do some disk swapping. (With 2 drives, no disk swapping is required while adventuring.)

Each plot calls for acquiring a Final Object and you generate one time for each plot a "castle" from 10-100 rooms setting the monster and difficulty levels. It took 12 minutes to generate a 57 room castle, with 3 levels above ground with 19 rooms per level. For mapping purposes, while each level is 19 x 19, the actual number of steps needed to explore each level is far less than 19 x 19 because many rooms, for example, are 5 x 3 or 10 x 1. Each room has at least one exit and the party moves as a whole through an exit no matter how large the room. There is some minimal disk access in moving from room to room.

Once you have gathered your party, armed up, and mingled in the pub for clues, the top of the screen displays a short menu containing the first character in the party's name, the

regular command numbers 1-9, and 0, Hit Points, Armor Rank, and Endurance. Toggling the space bar brings up another menu of special commands applicable to the class and race, like sneak for assassins and spellcasting which has its own submenu containing available spells. Several of the commands bring up submenus. For example, the search command has 4 kinds of searches, like for secret doors or for objects; the use command has 5 ways to use objects, like unlock or examine; the inventory command has 5 subcommands, and so on. This takes some getting used to, particularly because all keypresses must be followed by a carriage return, and most but not all first letters of a command highlight the command when pressed.

Entering a room spits out a text description and what monsters and objects are present. One terrific feature of the program is that you need not fight and can leave for another location. This prevents the often painful experience of constantly-killed new characters on starting a game of this type. At times, the monsters seem to chase you, but not often, at least not in the scenarios I played. Combat and spellcasting are in turns by character and are directed against individual monsters, which can attack in any of 17 ways. There are 9 spell levels for elders and wizards, including such unusual ones as turning an object carried by the caster into the number of bronze pieces equal to its weight, or exchanging weapons and armor with a monster. You can change weapons in hand (necessary due to the fact that monsters can be in short, medium, or long range), choose a special command, or whatever.

Should my knight go into a "Rage", should my assassin go into "Sneak" mode, should my ninja imitate the dead or just use the garrote, should my elder "innate heal", or should my wizard "Cast Energy" or a normal spell? (All of these special commands have advantages and disadvantages.) Then, a shocker, a die roll, remindful of the old FRP games, like WILDERNESS CAMPAIGN. The die roll is stopped by a keypress, and the results displayed. You can then scavenge in the area with the above-mentioned multiple options for search, hoping to find objects to solve the scenario. One clever feature: I found a dagger hilt and "used" it on a dagger blade, and voila, a dagger. The puzzles I encountered (so far!) were not difficult, but fun. An object floated unreachably above my head, but when I found some jumping boots...; a partially open window too high for jumping down, but using a rope....

Mapping is a little awkward in spots with several stairways up and down existing on the same level. (A future version will make transition between levels more exact.) There are several commands that are useful and helpful. It is easy to abort almost any errant command; group moves can be toggled on and off; time delay for text readout can be sped up; the game can be saved anywhere; location descriptions can be toggled on/off; and a quick reference overview of the whole party can be called up at any time. The Main Menu's character utilities permit you to print characters out on hardcopy.

contd. on pg 23

THE KING OF CHICAGO: A Review

by Lester Shipley

Billed as an interactive movie, THE KING OF CHICAGO (\$49.95 list) is the first Cinemaware product for the Macintosh distributed by Mindscape. The story puts you in Chicago in the 1920s. Al Capone has just been sent up the river and the town is wide open for takeover. You control a character named Pinky Callahan, described as a smart, good looking, ambitious mobster who will do anything to become King of Chicago. His first task is to take over his own mob which is controlled by the "Old Man." There are four territories which he must take over to win: the Northside controlled by the Old Man; the Westside; the Loop; and the biggest rival, the Southside, controlled by Capone's heir, Tony Santucci.

The story is told in comic strip form with the characters' dialogue in balloon-styled boxes. The major animation is the movement of a character's eyes and mouth. Occasionally you will see a car move or the character's arm will move. When you rub somebody out, you get to point and fire a gun by

using the mouse. The decision-making path is controlled by choosing one of two or three "thought balloons" your character is thinking. An example would be deciding whether to: 1) see the boss; 2) see my girl; or 3) talk to the boys. You have a limited time to make up your mind or the computer will choose for you. The decisions you make affect the characters in that episode, and if you make the same choice in a different game the result might change, making each time you play different.

There are several things that could be changed to make this game better. The first is a save game option, for obvious reasons. Others would be increased animation with realistic sound and a more challenging arcade-style action. Although the story line is good, I think this program falls short of what was advertised as CINEMAware. This program is the beginning of a new type of gaming software, and with time and improvement could become very exciting. ☺

WAR IN THE SOUTH PACIFIC: A Review

by Ben Mangus

In my opinion, WAR IN THE SOUTH PACIFIC (SSI, Apple // series with 64K) is a much improved and expanded version of GUADALCANAL CAMPAIGN, also by SSI. SOUTH PACIFIC covers the period May 1942 to March 1943. All ships that were historically available to Japan and the U.S. are represented, from the aircraft carriers down to the transports and submarines. Please don't think that this is just a naval simulation; air and land forces are an important aspect.

In setting up the game you can vary the handicap level, game length, and delay length. You can play an opponent, or the computer can be the Japanese or U.S. player. One unique feature is that no matter which side you select, the computer can be allowed to control certain airbases, task forces or ports of your choice.

The game can be divided into 2 major sections: the Action Phase where all battles and movement take place; and the Orders Phase which is the core of the game. In the Orders Phase you can choose Task Force Orders, Carrier Orders, Airfield Orders, Port Orders, Army Orders or a few other options (not as important as those already mentioned). By simply typing a letter or number, you can tell the computer to enter one of the options. By pressing O you can enter the Orders Phase. Enter T from the menu and you enter the Task Force Orders Phase where you can build task forces, combine/divide existing forces, assign missions, give port orders, etc. In the Airfield/Carrier Order Phase, under air group missions, there are 8 different missions that one can use, such as 4 different air strike missions, 2 types of combat air-patrols and others.

Logistics play an important role. Ships and planes must be re-armed, re-fueled, and repaired. Transports must be used wisely to haul supplies and infantry to various ports. Supply points must be wisely used to obtain new ships, expand your

bases and build other forces.

There is much more to this simulation that can be described here. The movement of the game itself is typical of most war games of this type. In the faster modes the game moves along quite nicely. The graphics on the map are 100% better than GUADALCANAL, and there is some sound also. The screen shows a map of the South Pacific from Truk in the north to Brisbane in the south, and from Fiji in the east to Port Moresby in the west. The game is very detailed, and record keeping is essential. Any Apple // with 64K can be used, and I can recommend this simulation for serious war gamers. ☺

Bronze Dragon contd. from pg 22

The real strength of the game is the staggering number of options and "events" available, like over 100 spells, almost 60 weapons, 3 merchants to haggle with, hundreds of monsters, and clever little surprises at almost every turn, to say nothing of 13 separate plots. I expect that much of this detail comes from D&D: the die roll mentioned above, "To Hit" ratings on weapons, and poisons that do +50% damage. All of this is explained in the manual which is very thorough, but might overwhelm an absolute beginner. Warning: Be very careful when creating a castle disk or copying "Seekers of the Storm" onto a scratch disk. I almost formatted one of the master disks this way.

Future modules are planned, a Part Two of "Seekers of the Storm" and disk with 10 new plots. As I said above, I thoroughly enjoyed the game. After a while, I got used to the command structure and it became almost automatic. As for the lack of graphics, did it bother you when you played Zork I? While the disk swapping is a pain, I used the time to think about whether I should... or....! ☺

contd.

WRATH OF DENETHENOR: A Review

by Charles Don Hall

WRATH OF DENETHENOR (Sierra On-Line, Apple // series, \$24.95) is a fantasy role-playing game in the ULTIMA tradition. Despite its low price, this is a quality program, spanning both sides of two disks. Sierra priced the program so cheaply at the request of author Christopher Crim, who also requested that the program be released without copy-protection. In a press release that was sent to GameSIG, Crim was quoted as having said, "I honestly think Sierra will sell three times as many copies of my game at \$25 as opposed to \$50."

So you know what to do: buy one copy for every member of your family and another for the moron across the street that owns the IBM PC (you can watch him go crazy trying to boot it up). Be sure to write to Crim and tell him what a wonderful person he is. (Write care of Sierra On-Line, P.O. Box 485, Coarsegold, CA 93614.) If sales are high enough, we might see lots more unprotected, cheap, high-quality software in the future.

As to the game itself, you play the part of the Standard Fantasy Role-Playing Game Peasant, who, according to prophecy, will gain great power and eventually single-handedly destroy the Standard Fantasy Role-Playing Game Evil Wizard—Denethenor being the wizard. Your quest will take you through the towns and dungeons of the five continents of Deledain.

Each continent is a quest in itself. You must first find a town where you can buy food. You next need to find a boat. Usually, only one town will have boats, and that town can be tricky to get to. It may be on an island, or surrounded by mountains, and you'll need to find a magic gateway or a tunnel-dungeon to get you past the barrier. In the meantime, you can kill monsters for gold, and talk to townspeople for information. Eventually, you'll be able to find the magic gate that leads to the next continent, where the whole process starts all over again.

Overall, the game is not too difficult. I finished it in about three weeks of playing time. While experienced gamers will enjoy it, Crim wrote the program specifically for novice gamers, to give them an alternative to dealing with the complicated combat and magic systems and multiple character parties of most of the recent role-playing games.

The magic system is rather unusual. There are only ten spells, but you'll need almost all of them to finish the game. You learn spells by talking to townspeople, who will give the names of the spells and hints as to what they do. You have to experiment to figure out exactly how the spells work. If you're in a bad mood, you can start stealing from townspeople. In fact, the program encourages you to steal. Many of the towns have banks, which you aren't able to use. Whenever you talk to a teller, he replies, "We only serve royalty. YOU can't have an account here." That gives you great incentive to chop the teller and all the customers into little pieces, and then stroll into the vault and take all the treasure.

The only sad note is that you have to be very careful

whom you kill. Anyone you kill is forever dead. So if you kill all the merchants in the restaurant, you'll never be able to buy food in that town again. Also, when you kill someone, a warrant is put out for your arrest (in that town only). When you return, hours or days later, the guards will immediately attack you. Eventually, the warrant runs out, and the guards forget you. I'm not sure how long you have to wait, so take my advice: choke back your rage until you're *positive* that you've talked to everyone in town and bought everything you want. *Then* you can chop the banker into little pieces. And don't forget to run by that tavern where everyone snubbed you until you bought a round for the house. There, isn't that more fun than trying to become an Avatar in ULTIMA IV?

My biggest complaint with the game is the "day-night cycle." Time slowly passes in the game, and the sun rises and sets. When the sun goes down, you can't see very far in any direction, and most stores close until the next morning. Casting a light spell helps a little, but you still can't see very far. You can't get much accomplished exploring the surface. Your best bet is to find a dungeon and explore it, since that's going to be dark anyway. But dungeons are fairly small, and after you're through with them, you're reduced to going to the outskirts of town and waiting until morning—not a total loss, since you'll slowly gain hit points. I developed an interesting strategy for handling nights. I'd haul out a paperback and start reading, with the volume on my computer turned up so I could hear if I was being attacked by a wandering monster. The "day-night" cycle is an interesting idea, but can get irritating fast. (Those of you that were at the August '86 WAP meeting heard Lord British announce that ULTIMA V will also have a day-night cycle. Growl, mutter.)

The game also drags a little towards the middle. It's well worth waiting for the ending, though. I especially enjoyed the last continent. After fighting my way through a vast horde of monsters, I finally reached Castle Denethera, home of the evil wizard. Not only were there no monsters there, but the townspeople were the friendliest I'd seen. Denethenor was holding open court, and I just wandered up and talked to him. He was friendly too. A lot of the townspeople were saying, "The other Lords of Deledain are just jealous," and I started to find myself agreeing. Needless to say, the game doesn't end there.

The grand finale is a masterpiece of programming. After it was all over, I re-booted it and played the ending again, this time with the volume turned ALL THE WAY UP. Very satisfying. Later, I was shocked to realize that this seemed to be the only fantasy role-playing game ever written that didn't end with the promise of a sequel. It's there, though. After you've won the game and the closing credits have rolled, you have to wait for about a minute. You'll see the program drop a hint about a sequel.

HISTORICAL NOTE: Beta-testers for this game included GameSIG Chairman Emeritus Ron Wartow and GameSIG member Dave Granite. Ron's name appears in the acknowledgements in the documentation. If you come to a GameSIG
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REALM OF IMPOSSIBILITY: A Review

by Tom Lucas

REALM OF IMPOSSIBILITY (Electronic Arts, Apple // series) is a new edition of the graphic action game ZOMBIES. You play an Indiana Jones type of explorer who has to race through dungeons, climb ladders, avoid various creatures, find the treasure, and then find your way back out.

The plot of the game is that an evil cleric has stolen seven crowns and has hidden them among 13 dungeons. Your task is to search the dungeons to find the crowns and get out alive. Some of the dungeons are locked, so you have to conquer other dungeons to obtain keys. You need to find the right key before you can enter the locked dungeons. Once you enter a dungeon, the program will not let you out unless you can get the key or crown, turn around, and get back out.

Each dungeon is displayed in a colorful three dimensional overview with ladders connecting multiple levels. When you move to the edge of the screen, the scene shifts to the next room. You control a graphic figure with a joystick. In each room you encounter creatures which will attempt to move toward you. The touch of any of the creatures such as a zombie, snake, orb or spider causes you to lose hit points, and when you go to zero, you are dead. You can protect yourself by dropping a cross which will block the creatures for about four seconds. After that, the cross disappears from the screen, and reappears in your possession. As you go deeper into the dungeon you will find scrolls which allow you to cast spells or increase your hit points. The spells do such things as freeze the creatures, protect you from losing hit points, or just confuse them so they move randomly rather than toward you.

What really sets REALM OF IMPOSSIBILITY apart from other computer games is that two players can play at the same time, on the same side, and without taking turns. Both players play all the time, can help each other out, and one player can even resurrect the other. Because of the cooperation required to move through the rooms, it can be more difficult for two players to survive than just one. To be successful, you and your partner must develop strategies together, and control

your moves so you are both ready to exit at the same time.

There are three modes of play. One player can play the game alone using a joystick, partners can play using two joysticks, or partners can play with one using the joystick and the other using the keyboard. One difficulty of playing in the two player mode is that both players look the same on the screen, and you can lose track of which figure belongs to each player.

REALM OF IMPOSSIBILITY has four levels of difficulty, beginner to severe. To complete a dungeon, you must have sufficient arcade game skills to move your figure around objects, avoid creatures and move through the rooms as quickly as possible. You must also develop a strategy to lure your attackers out of position so they are blocked by natural barriers or crosses. The more difficult levels require more complex strategies which use the crosses and spells to block, confuse, or paralyze the creatures. In the easy skill level, you can practice moving through the narrow passages, climbing up and down the ladders, using the crosses, and casting spells. These skills must be mastered before venturing to the higher skill levels if you hope to survive. I preferred staying on the easier skill levels, and exploring the larger and more complex dungeons. Even in the beginner level, I found it difficult to maneuver through some narrow passages and move up and down ladders.

My only complaint is that the dungeons remain the same each time you play and once you have mastered a dungeon, there are no more surprises. I wish Electronic Arts had provided a dungeon designer. Maybe at some future date they will create additional dungeon data disks. The greatest strength of REALM OF IMPOSSIBILITY is the unique two player cooperative mode. Two player arcade games are not very common in the Apple software world; this is the first computer game I have played in which players aren't playing against each other, but are using the computer to cooperate and play for mutual success. ☺

RUN5 MAGAZINE: A Review

by Chris Hancock

Run5 Magazine is produced by Strategic Studies Group and may easily be considered a house magazine. It deals mostly with SSG games, but includes occasional reviews of games from other sources. Issue 3, for instance, contains an excellent review of SSI's BATTLE OF ANTIETAM.

The main value to me is the in depth coverage of SSG games throughout the magazine. Additional scenarios are included for all their games, along with excellent background information on the units involved.

A particularly unusual feature of Run5 is that that subscriptions are offered for either the magazine alone or the magazine together with disks containing the scenario

information to complement all the scenarios in that issue. The latter is definitely a time saver, but a year's subscription (four issues) including the disks is \$65. For the magazine alone the subscription is \$15. The magazine contains all information necessary to construct the scenarios using the design menus provided with each game, so no one need be left out. For those who later decide they need the disks, they are available separately for \$15. (With our review copy of BATTLEFRONT we also received Guadalcanal scenario disk from Issue 3; I enjoyed this a great deal.)

Obviously this magazine is a must for all SSG fans. Whether one subscribes to receive the disk each issue must be

contd. on pg 27

OUTLINING A COMPLETE RUNWAY IN FLIGHT SIMULATOR II

by Thomas Johnston

I was wrong! You don't have to content yourself with drawing a thin centerline in the field out behind your grandfather's barn. You can outline a complete runway. In the February journal I told you "How to Create Your Own Airstrip in Flight Simulator II." I told how you can draw a centerline anywhere in the FS2 world. Now I have figured out how to draw a whole runway with square corners.

The trick is to use the SLEW mode (I call it the flying saucer mode). Position yourself on the ground in the SLEW mode. Turn on the "smoke trail" (the Q key). Now use your North, South, East and West SLEW keys to draw a box of the appropriate size. Practice by drawing a runway on top of a real runway until you get the idea of it.

This system works for me: use two keypresses of East SLEW (H key), move for 6 seconds (use the Pipers' clock), then stop (G key). Then 6 presses of North SLEW (T key), move for 25 seconds, then stop. Then 2 presses of West SLEW (F key), then stop. Last, 6 presses of South SLEW (B key), then stop. Then Display your "smoke trail" (Q key). What you should have is a long rectangle about the size of a small runway.

If you're clever you can probably figure out how to draw a T-shaped runway. (Hint: after drawing the last long leg go halfway back in the opposite direction and start over, drawing to one side.)

This runway is much more satisfying than the simple centerline. It is three dimensional instead of two, and it gives you a sense of perspective. It really looks like you're landing on a runway. Best of all, it is your own, wherever you want it. ☺

Wrath of Denethenor contd. from pg 24

meeting and plead on bended knee, they might consent to autograph your package.

BOTTOM LINE: If this game were priced at, say, \$50—which is pretty much the going rate for a game of this size—I'd give it an 8 out of 10. Since it's priced at half that, and isn't copy-protected, though, it easily earns a 10 out of 10. This one should be on everyone's must-buy list. ☺

Run5 Magazine contd. from pg 26

left to the individual's preference, but certainly at \$15 the magazine is a bargain! For all those of you who have not tried SSG games I suggest you try at least one. This magazine certainly enhances their long term value and shows a true commitment to after sales support often missing in other publishers! For a subscription, write to: Strategic Studies Group, 1747 Orleans Court, Walnut Creek, CA 94598. ☺

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TURTLE GRAPHICS FOR THE APPLE //

by Guy McCarthy (Frederick Apple Core)

Turtle graphics provide a way of creating hi-res pictures using interactive commands. Although commonly associated with the language LOGO, they can also be implemented quite easily in Applesoft. This version grew out of my first experiments with Apple Mechanic, an excellent shape drawing utility by Beagle Bros. Turtle.Graphics was written under ProDOS, but should also work under DOS 3.3 with one minor change. It will run on any Apple //; if you have lower case, be sure the CAPS LOCK key is down.

Pictures are created by directing a hi-res turtle with simple commands like MOVE, DRAW, LEFT and RIGHT. These commands have optional parameters in the range 1-16. Type in Listing 1 and save it to disk as a normal Basic program (SAVE TURTLE.GRAPHICS). Then enter the monitor (CALL -151) and enter Listing 2, the turtle shape table. Save this to disk as a binary file (BSAVE TURTLE.SHAPES, AS4000,LS0027).

If all goes well, running the program will cause the turtle to appear in the center of the screen. At the bottom is the COMMAND prompt. Type DRAW <return> and the turtle will crawl towards the top, drawing a line segment. LEFT will turn the turtle 90 degrees to the left. More than one command may be entered at once, provided they are separated by spaces. Also, all commands may be abbreviated. The command string D L D L D finishes a box on the screen.

A sequence of commands may be repeated with a FOR .. NEXT loop. First enter C to CLEAR the screen. Then enter F 4 D R N. The sequence DRAW RIGHT will be repeated four times. FOR (or F) must be followed by a positive integer—4, 8 or 16 are common values, depending on how many steps left or right are taken in each loop. To draw a circle, try F 16 D 1 R 1 N. In this case a parameter is specified for DRAW and RIGHT. Increase the value following D for a larger circle. A nice star can be created with C F 16 L 1 D R 2 D R 6 D R 2 D N.

The MOVE command is used to change position without drawing and can be followed by a parameter in the range 1-16 if desired. HOME causes the turtle to jump back to the center. Pictures can be saved and retrieved from disk with SAVE and GET. These commands prompt the user for a file name. Entering 'Q' lets you back out of either command if necessary while a 'C' catalogs the disk. Finally, EXIT is used to end the program.

How It Works

Turtle.Graphics uses Applesoft hi-res shapes for the turtle and line segments as well as movement about the screen. This is possible due to an interesting feature of Applesoft graphics: unless otherwise specified, a shape is drawn wherever the last shape ended. Since drawing the turtle does not disturb the graphics cursor, simply drawing a line segment in any direction sets the next turtle position.

After a little experimentation, this basic algorithm was developed for moving or rotating the turtle:

1. start with the turtle drawn
2. XDRAW the turtle

3. DRAW a line segment (or update the ROT value)
4. XDRAW the turtle again
5. repeat steps 2-4 if necessary
6. finish with the turtle drawn

The range of possible ROT values was limited to 16, allowing the user to create regular patterns easily. This resulted in each step LEFT or RIGHT being equivalent to 4 increments or decrements of ROT (recall that the maximum ROT is 64, corresponding to 360 degrees). A loop was used to change ROT in a smooth fashion. Parameters for MOVE and DRAW were handled similarly.

To minimize the problem where lines at different angles have different lengths, the scale factor array SF was created. Each line segment is multiplied by the appropriate scale factor, depending on direction, before it is drawn. These numbers were determined empirically by drawing segments of unit length and comparing them with a ruler, right on the screen. (I would not be surprised if there is an easier way to do this.)

The command interpreter is simple but adequate. The list of legal commands is read into array CS in line 80. A subroutine at line 200 is used to parse words from the input string. Finally, the loop in 140-150 tests each word against the command list and branches accordingly. (Note that this loop is implemented with a conditional branch in line 150. A FOR..NEXT loop could not be used since branching out via GOTO would leave looping parameters stranded on the stack.)

You may customize Turtle.Graphics by adding extra commands. The adventurous might choose to add a defining word (like the colon in FORTH). To add a command edit lines 140, 170, and 190. You could begin your new routine at line 1500.

Listing 1

```
10 REM *TURTLE.GRAPHICS*
15 REM
20 REM G. MCCARTHY 4/2/86
25 REM
30 LOMEM: 24576:DS = CHR$(4)
40 SH = 16384: DIM CS(30): DIM SF(15)
50 PRINT DS"BLOAD TURTLE.SHAPES,A";SH
60 POKE 232,SH - INT (SH / 256) * 256
70 POKE 233,INT (SH / 256): GOSUB 250
80 READ N: FOR I = 1 TO N: READ CS(I): NEXT I
85 FOR I = 1 TO 15: READ SF(I): NEXT I
90 HOME : VTAB 21
95 ONERR GOTO 9000
100 INPUT "COMMAND (? for list): ";AS
110 L = LEN (AS):P = 0: IF L = 0 THEN 100
120 GOSUB 200: IF BS = "" THEN 100
130 I = 1
140 IF CS(I) = BS THEN ON I GOTO 300,300,400,400,
500,500,600,600,700,700,800,800,900,900,1000,
1000,1100,1100,1200,1200,1300,1300,1400,1400
150 I = I + 1: IF I < N + 1 THEN 140
160 PRINT CHR$(7);"?";BS: GOTO 100
```

contd.

```

170 DATA 24: REM NUMBER OF COMMANDS
180 DATA D,DRAW,M,MOVE,R,RIGHT,L,LEFT,F,FOR
190 DATA N,NEXT,H,HOME,C,CLEAR,S,SAVE,?,/,
    G,GET,E,EXIT
195 DATA ,9,1,4,1,1,2,1,1,4,9,1,9,1,4,1,1,2,1,1,4,9
200 REM GET A WORD FROM THE INPUT STRING
210 BS = ""
220 P = P + 1: IF P > L THEN RETURN
230 CS = MIDS (AS,P,1): IF CS = " " AND BS = ""
    THEN 220
235 IF CS = " " THEN RETURN
240 BS = BS + CS: GOTO 220
250 REM INITIALIZE GRAPHICS SCREEN
260 HGR : HCOLOR= 3:R = 64
265 SCALE= 2: ROT= R
270 HPLOT 0,0 TO 279,0 TO 279,154 TO 0,154 TO 0,0
280 Z = PEEK (49200): DRAW 1 AT 139,79
290 Z = PEEK (49200): RETURN
300 REM DRAW
305 MF = 0
310 PTEMP = P: GOSUB 200
320 DV = VAL (BS): IF DV = 0 THEN P = PTEMP:DV = 8
330 IF DV > 16 OR DV < 0 THEN PRINT
    CHR$ (7);"?";BS: GOTO 100
340 DV = DV * 2:RS = (R - 64) / 4: IF RS = 0 THEN 360
350 DV = DV * SF(RS)
360 FOR I = 1 TO DV
365 IF MF = 0 THEN XDRAW 1: DRAW 2: XDRAW 1
370 IF MF = 1 THEN XDRAW 1: DRAW 3: XDRAW 1
380 NEXT I: GOTO 120
400 REM MOVE
410 MF = 1: GOTO 310
500 REM RIGHT
505 RD = 1
510 PTEMP = P: GOSUB 200
520 RV = VAL (BS): IF RV = 0 THEN P = PTEMP:RV = 4
530 IF RV > 16 OR RV < 0 THEN PRINT
    CHR$ (7);"?";BS: GOTO 100
540 RV = RV * 4: FOR I = 1 TO RV
550 Z = PEEK (49200): XDRAW 1:R = R + RD
560 ROT= R: XDRAW 1:Z = PEEK (49200)
570 NEXT I: IF R > 127 THEN R = R - 64
580 IF R < 64 THEN R = R + 64
590 GOTO 120
600 REM LEFT
610 RD = - 1: GOTO 510
700 REM FOR (LOOP)
710 GOSUB 200:LN = VAL (BS)
720 IF LN < = 0 THEN PRINT "?FOR": GOTO 100
730 LP = P: GOTO 120
800 REM NEXT (ENDLOOP)
810 LN = LN - 1: IF LN < 1 THEN 120
820 P = LP: GOTO 120
900 REM HOME
910 Z = PEEK (49200): XDRAW 1
920 R = 64: ROT= R:Z = PEEK (49200)
930 XDRAW 1 AT 139,79: GOTO 120
1000 REM CLEAR
1010 GOSUB 250: GOTO 120
1100 REM SAVE
1110 INPUT "SAVE AS FILE NAMED (Q to exit): ";FS
1120 IF FS = "Q" THEN 120
1130 XDRAW 1: PRINT : PRINT DS"BSAVE";
    FS;" ,AS2000,LS2000"
1140 XDRAW 1: GOTO 100

```

```

1200 REM ? (COMMAND LIST)
1210 FOR I = 1 TO N
1220 IF LEN (CS(I)) = 1 THEN 1240
1230 PRINT CS(I);" ";
1240 NEXT I
1250 PRINT : GOTO 100
1300 REM GET
1310 INPUT "GET FILE NAMED (C for catalog): ";FS
1320 IF FS = "Q" THEN 100
1330 IF FS = "C" THEN 1340
1335 PRINT : PRINT DS"BLOAD ";FS;" ,AS2000":
    R = 64: ROT= R: XDRAW 1 AT 260,140:
    GOTO 100
1340 TEXT : PRINT : PRINT DS"CAT": PRINT
    "PRESS ANY KEY": GET CS
1350 REM FOR DOS 3.3 USE CATALOG IN LINE 1340
1360 POKE 49232,1: POKE 49235,1: POKE 49236,1:
    POKE 49239,1
1370 GOTO 100
1400 REM EXIT
1410 TEXT : END
9000 PRINT CHR$ (7);"ERROR DETECTED!"
9010 GOTO 100

```

Listing 2

CALL-151
4000: 03 00 08 00 21 00 23 00
4008: DB 0C 24 67 91 05 C1 24
4010: 95 2A 2C D6 0E 1E 36 E5
4018: BB 07 C1 37 27 C1 61 01
4020: 00 04 00 00 00 00 00 00

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WEBSTER'S NEW WORLD SPELLING CHECKER: A Review

by Ken Bishop

I have been frustrated for one reason or another by every spelling checker I've ever tried, starting with SpellStar running with a Z80 card and WordStar on my original Apple][+ four years ago. I also passed through a temporary phase trying various DOS 3.3 word processors and spell checkers until I moved up to AppleWorks last year when I bought my //c. I believe that Webster's New World Spelling Checker (Simon & Schuster Software Division, \$59.95 list) is the best product of its kind I have ever used. I still have a short wish list for the program, but they are minor nits, which I'll cover in a moment.

Webster's comes on two disks—one has the program (ProDOS on one side, and a DOS 3.3 version on the other) and the second has the 110,000 word dictionary. It may be the largest lexicon running on the Apple—at least none of the other programs I have tried could match its vocabulary. (I work occasionally on a mainframe system, and that only has 90,000 words in its dictionary.)

The documentation comes in a hardbound 94-page volume which is written for both the IBM and the Apple. That didn't present a problem, since the program runs exactly the same way on both types of machines. The only real difference I could see was that the MS-DOS machines are given the option of using function keys in addition to the control key sequences. I would prefer the mnemonic nature of the control keys even if I had the choice, however.

The prompts as you proceed along are generally adequate to have you using the dictionary with little or no help from the instructions. Also, the last 30 pages of the book that comes with the package form a usage guide which includes phonetic spelling, punctuation usage, and a handy section on proper footnoting.

Everytime the program is booted, it offers the user the option of changing a variety of default settings. The original settings lead you to conduct a spell check of a sample document on the program disk; this also serves as a short tutorial which is helpful. Among the options are type of word processing document. ProDOS choices are: ASCII, AppleWorks, Apple Writer II, Magic Slate, MasterType's Writer, MouseWrite, and Word Juggler. DOS 3.3 choices are: ASCII, Apple Writer II, Bank Street Writer, HomeWord, Magic Window II, PIE Writer and ScreenWriter II. If you select two drives, Webster's assumes the Program disk is in drive 1 and the Document disk in drive 2. Prompts tell you when to switch disks as necessary, should you have just one drive.

Once the housework is done (it can be saved so that the chosen configuration will be there next time you boot), the screen splits into 5 windows of various sizes. The context window at the top will display nine lines of your document surrounding the current work in question, which will be highlighted. Two windows display menus of commands (i.e. Ctrl-A for "Add to the auxiliary dictionary" or Ctrl-R for "Replace to the end", etc.). Another display provides prompts

such as error messages ("*** Error processing temp file ***" means your document disk doesn't have enough space left on it to create a backup of your file, which is essential).

The last window provides up to ten suggested spellings for the word in question; the one you most likely meant to type is among the first words in the list. This is the feature I found most useful about this program. Most other spell checkers I have tried leave it up to you to find the word in a paper dictionary. In Webster's, you cursor down to the word you want, select it, hit return, and it's replaced automatically.

Webster's uses different strategies to find the most likely suggestions as alternatives to the word in question. The scan level can be changed at any time. For instance, if you're a good speller and don't make too many typos, a manual scan is quickest: no alternate spellings will be suggested, although questionable words will be highlighted and shown in context as usual. A Ctrl-S will cause Webster's to supply possible spellings. At the other extreme is Full Scan which usually looks at 2,000 to 3,000 words in the general alphabetic vicinity of the work in question; it also employs all of Webster's transposition rules and phonetic substitution rules. There are two other intermediate scan levels as well.

By far the most impressive feature of Webster's is the size of its dictionary. My frustration with SpellStar was its propensity to "hit" on so many words simply because they were pluralized or past tense. Webster's not only recognizes plurals, but nearly every other variation allowable such as gerunds, adverb forms of words, even contractions such as "doesn't" and "can't" and most abbreviations. For instance, it didn't like "Feb" and suggested "Feb." with a period instead.

When Webster's is finished scanning your document, it gives you a word count and the number of suspect words. It then walks you through the document one suspect word at a time. You can edit the words yourself, or select one of the suggested words provided by Webster's. When you complete the editing, the program saves your corrected document under its original name and the primal document is saved under the same name with ".BAK" tacked on.

My complaints are minor. If, in trying to save the corrected document, Webster's finds insufficient room on the disk, it offers no opportunity to try another disk. Instead, your session is lost and you have to reboot (after going through a file program procedure with ProDOS to make room on your document disk of course). This has happened to me twice—you'd think I'd learn.

Another nit is that you can't direct the program to ignore future occurrences of a word it doesn't recognize. The other day, I knew I'd be using a particular abbreviation throughout a paper, but didn't want to add it to the auxiliary dictionary. So the program stopped on that word everytime it appeared. By simply hitting the Escape key I zipped on by it, but it would have been nice not to have been bothered.

And finally, when the program goes to save your unique
contd.

words to your auxiliary dictionary, it tells you it's adding a number of words but doesn't provide you a list as a reminder, or give you the choice of changing your mind about any of them. The first time I used Webster's, I added the words "AppleWorks" (!), and my last name and the name of my street address so I wouldn't be bothered in future sessions. Amazingly, it recognized my first name, as well as most first names of my family and friends.

But as I said, these are very minor issues compared with the ease of use and the power of the program.

I compared Webster's against MegaWorks mainly because it was available, running this article through each. They both counted 1295 words in the document. Webster's found 13 suspect words, and all but two of those were unique brand names like "SpellStar", "//e", "MegaWorks", "ProDOS", and the "MS" in MS DOS (it suggested "Ms." as the correct spelling while it recognized the "DOS" part of the word). It also found a typo where I had typed "in" as a repeat word "in in". Oh yeah, it also found two genuine misspellings.

MegaWorks found my two misspellings too, but didn't find "in in" and didn't recognize 80 other words. The difference is the size of the dictionaries. MegaWorks didn't recognize any of the brand names listed above either, including its own name, "MegaWorks" (!). There were several hits on plurals such as "plurals", "spellings", and "typos". It also didn't know "mainframe", "ASCII", or "reboot", among others.

I timed each, also. Webster's scanned this article and was ready to edit in about two and a half minutes. MegaWorks took a little more than 5 minutes. But speed isn't nearly as important to me as the annoyance of checking 80 unrecognized words compared to 13 suspect words with Webster's.

Webster's price is competitive and its performance is impressive. I've settled on my spell checker at long last. ☺

Service

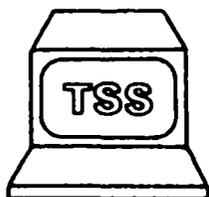
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Point to Point 80	Sikekick/PhoneLink 72

Database

Bank St. Filer (128K) 50	DBase Mac 365
pfs: Workmates(f,r,p,w) 170	Reflex 71

Education

Computer SAT (HBJ) 55	Mind Prober 34
Math Rabbit 29	Statworks 101

Graphics

Fontrix 1.5 66	Cricket Graph 153
PrintMaster 26	Full Paint 73

Leisure

G. Kitchen's Gamemaker 36	Smooth Talker 2.0 63
Leather Goddess/Phobos 29	Toy Shop 46

Programming

Enh. Terrapin LOGO 3.0 70	MacForth II 79
MacroWorks 23	Turbo Pascal 71

Spreadsheet

HabaCalc N Graph 38	Business Filevision 235
Supercalc 3A 141	Excel 275

Word Processing

PaperClip 43	MORE (512K) 175
Word Perfect 1.1 98	MS Word 1.05 140

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

APPLE

MACINTOSH

816/Paint 40	Bond:View to Kill 29
ASCII Mousetalk 105	Business Sense 395
Award Maker Plus 32	Ferrari-Gr. Prix 49
Multiscribe 49	Graphadex 78
Quicken 35	MacGolf 41
T-shirt Shop 36	Ragtime 250
Where USA is C. SD 33	Super Paint 71
Writer Rabbit 29	Works 205

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THE BEST OF THE APPLE ITEMS FROM TCS

by Lou Pastura

Decisions, Decisions!

JEANIE EGBERT ON 02/05

I am in the market for a new software package, and am interested in any recommendations you might have. I have read a lot about ASCII Express; it seems to be very popular. Is it the best? If I get that one, should I get the ProDOS version? (I don't currently have ProDOS, but am considering getting that, too.) I want a telecomm package which lets me toggle my printer on and off, so what goes to the screen goes to the printer at the same time. I'd like to be able to have macros, and store set-ups (baud rate, etc.) together with the phone number.

HARVEY KAYE ON 02/05

There are at least two ASCII Express communications programs around. The one you're probably referring to is called ASCII Express Professional. It is a very versatile program, but most people have a little bit of difficulty when they first start using it. The other is called MouseTalk and is brand new. It is much easier to use than AE Pro, but the current version has a few problems which the company has indicated will be corrected. If your Apple can support ProDOS I would recommend you get that version. Before purchasing any of these or other comm programs you really ought to watch someone using them in a setting where you can ask lots of questions. The Telecommunications Special Interest Group meets after the WAP monthly meetings and if you attend, I am sure you will get all the comments and suggestions you want.

BRETT PARKS ON 02/06

If you want one package that will "do it all", and are willing to spend more than 30 seconds learning how to use it, then ASCII Express would be hard to beat. And don't let the manual (thick as it is) put you off. Just cause you don't know everything about what makes your car work does not mean you can't drive it.

ALLAN LEVY ON 02/06

Personally I think the AE manual is awful. Why not pick up a shareware program of DCOM 3.3 from the library and have a VT100 emulator.

KIM BRENNAN ON 02/06

The February 87 issue of InCider magazine had an article that briefly reviewed nine telecomm programs. My personal opinion would be either Mousetalk or Point-to-Point. Both use ProDOS; however Mousetalk requires the more specialized hardware. Mousetalk works best with a mouse and requires an enhanced //e, //c or IIgs. Point-to-Point will work on any Apple // that can run ProDOS. On the basis of your message Point-to-Point would probably be the better choice, though a lot depends on individual preference.

File Recovery

THOMAS MARTIN ON 01/27

We have lost the ability to access (read) an Apple Writer II file

which was stored on a Profile hard disk under the ProDOS operating system. Is there a disk recovery system which we can use to recover this lost ProDOS file? When we try to access the file, which does appear when the disk is cataloged, an I/O error results. There is some valuable info in this file. We tried copying it to another disk but it didn't work. Any ideas?

ERIC RALL ON 01/27

You can try BAG OF TRICKS II from Quality Software. Just be certain that it is the version with the II at the end or it won't work on ProDOS files. All in all it is a good program worthy of owning just for those special times when things go bump. It has 4 utilities and is really quite nice.

What's Where?

BOB VELKE ON 01/29

RE: "What's Where in the Apple". Can someone please tell me the author? The latest edition? Is it still in print? I have called NUMEROUS computer/book stores and a few people have said that they could order it (\$25.00?) but none have it in stock. Does anyone know where I might get one?

EUCLID COUKOUMA ON 01/30

I'd like to find What's Where In The Apple also. I had seen the original book and the //e supplement at the Comm Center before the fire, but I've never seen them anyplace since then. I regret not buying them then. I have made my own list using various Apple reference manuals and some of the short lists that come with Beagle Brothers programs. If you would like a copy let me know.

KEN DE VITO ON 01/30

The author is William F. Lucbbert. It is published by Micro Ink in Chelmsford, Mass. I got mine in Taiwan for much much less than \$25.00—something like 160NT\$. I'd check with the Library to see if it is still in print and then call the publisher for a copy. P.S. 1US\$ = 40NT\$.

BOB VELKE ON 01/30

Thanks to several people for their responses. How current is "What's Where..."? I am particularly interested in ProDOS ROM listings. Was this published before ProDOS? And what about other ROM revisions (//c for instance). Maybe "What's Where..." is not the best source. Any suggestions for a good source for a CURRENT listing.

TOM VIER ON 02/01

I have found numerous errors/ommissions in my What's Where and haven't opened it since years before I got my //e. If you can tell me what you plan to use it for, I might be able to direct you to some better references...

BOB VELKE ON 02/01

It is mostly curiosity but I would like to find a disassembly of ProDOS. I have disassemblies of Applesoft and numerous
contd.

PEEK/POKE charts and soft switch, status, and I/O port locations. I was hoping for one COMPREHENSIVE memory map and that was how "What's Where" was described to me. But I understand that there were not only mistakes/omissions but it is now very much out of date. Any more help appreciated.

TOM VIER ON 02/01

Beneath Apple ProDOS and its supplement are what you need for ProDOS. It's not exactly a disassembly, but just the comments from one that can be followed with a disassembler like Sorceror (comes with Merlin) that can offset the addresses since you have to load it in low RAM. One comprehensive map will be tough since the JI, the //c, //c and the GS are all different in some respects. The extended 80-col card manual goes into the bank switching pretty well. I think I uploaded a memory map of a 64K Apple somewhere around here. That's more than you'll need to have unless you get into bank-switching memory yourself. Not a good place to begin... My favorite Apple AutoStart ROM source is The Apple Monitor Peeled (Apple Product No. D2L0013, Copyrighted 1981). It gives a good rundown of how to use a lot of the most useful routines. Includes the reg states on entry and exit, etc. Once you've memorized the common ones from use (i.e., COUT=SFDED), you'll need it less and less. It's also important to get the free source listing from Apple of their ROMs. They're also available in the Tech Reference Manuals for each machine. Ones that I haven't seen are: The newest //c Memory Expansion ROM and the GS ROMs.

DALE SMITH ON 02/01

In the previous message, you mentioned the FREE ROM source listings from Apple. I just got the Memory Expansion upgrade from Clinton. When I asked them about the Programmers Guide to the //c 3.5 ROM (Apple Sales Part # A2L4037; Service Part # 030-1196-A), they had never heard of it. When I first asked, I didn't have the part nos. I returned this weekend with the numbers. FREE?!?!? Service would CHARGE me \$24.95 for this FREE listing. SALES has to contact their buyer; they didn't know WHAT it would cost. HOW DO YOU GET THIS FREE LISTING! (Shouting intentional)? Or are the guide above and the free listing two different items??

TOM VIER ON 02/02

First, the 3.5 ROM and Memory Expansion ROM have major differences. I don't know if Apple has a Programmer's Guide to the //c Memory Expansion upgrade. However, the 3.5 ROM Guide is supposed to be FREE! They are trying to RIP YOU OFF!

DALE SMITH ON 02/02

DON'T I KNOW THAT!! A whole new //c Reference Manual only costs \$25 including BOTH the old and the 3.5 ROM listings.

ProDOS File Types

FRED PROTOPAPPAS ON 02/15

Can anyone tell me what it means when in a ProDOS catalog, instead of "sys" "txt" or "bin" there's a "S00"? I downloaded a

program via xmodem from Clinton's BBS and when I looked at the disk catalog its was designated as above.

DALE SMITH ON 02/15

In ProDOS a file-type of S00 = typeless. It's used for the Volume name entry and I've seen it used on Beagle Bros. disks to put a title block in the catalog. It occurred because Clinton's BBS and your program did not have a way to pass the file information including file type, length, load address (for BIN files), etc.

RICHARD ROWELL ON 02/16

PRODOS FILE TYPES

<u>HEX</u>	<u>DEC</u>	<u>CODE</u>	<u>TYPE</u>
S00	0		(No Type)
S01	1		(Damaged)
S0	4	TXT	Text
S06	6	BIN	Binary
S0F	15	DIR	Subdirectory
S19	25	ADB	Data Base (AW)
S1A	26	AWP	Word Processor (AW)
S1B	27	ASP	Spreadsheet (AW)
SEF	239	PAS	Pascal
SF0	240	CMD	Command File
SF1	241		(User Defined)
SF2	242		(User Defined)
SF3	243		(User Defined)
SF4	244		(User Defined)
SF5	245		(User Defined)
SF6	246		(User Defined)
SF7	247		(User Defined)
SF8	248		(User Defined)
SFA	250	INT	Integer BASIC Program
SFB	251	IVR	Integer BASIC Variables
SFC	252	BAS	AppleSoft BASIC Program
SFD	253	VAR	AppleSoft BASIC Variables
SFE	254	REL	Relocatable File
SFF	255	SYS	PRODOS System File

AppleWorks: One Size Fits All

TOM VIER ON 01/25

I'm getting ready to set up one of two volumes for ProDOS applications (the other for data) and would like some suggestions from "power" users as to the space I'll need for AppleWorks and add-ons or Apple Writer and APL stuff. I know how much AE Pro and Merlin will take, but I haven't used the above yet. ps. I have a total of approx. 18 meg on hard disk.

LOU PASTURA ON 01/25

The space you'll need for AppleWorks depends on the version.

1.1	315 Blocks
1.2	297 Blocks
1.3	358 Blocks
2.0	331 Blocks

The space needed for accessories depends on the accessories you select. I'm only familiar with MacroWorks and Super MacroWorks. They only need a few K, depending on the size of the Macros you write/include. (50 Blocks should be MORE than enough.) Hope this helps.

contd.

PROSEL Rave

HENRY DONAHOE ON 01/26

I'd like to make an enthusiastic, unsolicited endorsement for PROSEL, which is still probably the *most* under-rated Apple program around. Anyone using a large Ramdisk would do well to spend the (I think it's) \$40 for this stack of application programs. It provides an excellent way of switching among all your application programs—includes an excellent copy/delete/catalog program, disk zapper—and it allows you to dump EVERYTHING in your ram disk to floppies very quickly—and then reverse the process and re-load your Ramdisk with all those programs even faster. (I can load and unload a 1 meg card in about 2 minutes.) Also, the author Glen Bredon is always available to answer questions on CIS MAUG. I've got an address for anyone who's interested. Maybe we should think about seeing if Bredon will go for a group purchase??

The Good, The Bad, and The ...

HENRY DONAHOE ON 01/31

Darndest thing about software—you can kick around for years with the same old programs and, unbeknownst to you, a terrific alternative is out there just waiting to be discovered. "If only someone had told me it existed—outside of those self-serving magazine articles!" So how about singing the praises of the unsung software heroes. We'd like you to leave a brief message identifying your most useful and/or most used program (in any category). If you can take the time, why not briefly describe its virtues (and failings). And while you're at it, what's the worst piece of programming to ever dirty your disk drives? This category might be even more useful. Vivid explanatory notes would be appreciated.

ELI BERGMAN ON 02/01

Highest ratings to AppleWorks and Copy II+. Fingertips was a bust.

RICH MLODOCH ON 02/03

Bag of Tricks II should be recognized for its ability to pull your fanny from the fire when you have a trashed DOS 3.3 or ProDOS disk. It's remarkable how well it works, and you don't have to be a Guru that can read nibble dumps as easily as the Wash. Post. It will get back that "lost" data almost automatically.

User Beware

BOB RUSK ON 02/04

WARNING!!!! DO NOT *** REPEAT*** NOT USE PRODOS 1.3 ON ANY APPLE EQUIPPED WITH A 6502!!! There is a 65C02 instruction in there that will trash your everything!!! The fix is listed on Bix for sure, and probably CompuServe (as mentioned above). I have hardcopy downloaded, but am unsure whether it is legit to add it to this board. More later. (Ed Note: the "fix" is available on the WAP TCS.)

Beware.2

WALT MOSSBERG ON 02/04

BEWARE! If you applied for Apple's \$250 rebate, you may inadvertently toss out the rebate check weeks later when it

arrives. The reason? It is packaged in a manner that makes it look like junk mail—and sleazy junk mail at that. The check isn't in an envelope, just one of those tear-apart things in which the check itself forms the back half. The return address makes no mention of Apple, by name or logo—instead it says "ACS Marketing", somewhere in Oregon. You have no idea (a) it's from Apple or (b) it's a check. Curiously, once you do open it the check has the words "Apple Computer" but in a slightly incorrect typeface and without the familiar logo.

GS Buffer Bug

TOM VIER ON 02/16

Has anyone here used the printer buffer in the GS? I have heard that if a new document is started, the initialization clobbers any data still in the buffer instead of tacking it onto the end of that previous data. Have you had this happen to you?

ALAN DAVIS ON 02/20

I've had the same problem. The only solution I've come up with is to let the document finish printing—otherwise you lose everything that's in the buffer. Also some of the old //e software seems not to print with the buffer active, in particular my daughter's copy of Electric Crayon. ☺

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TAKE 1 (Apple II): A Review

by Bob Oringel

"Take 1" is not a suggestion for you to enjoy a cookie, rather it is a standard movie director's identification of a particular scene on film or videotape which is about to be slated, then "taken", or shot.

In this case, "Take 1" is the name of an application program which allows you to do a very creative bit of animation on the computer screen, save it to disk, and then if you wish, transfer the animation via your VCR, to videotape.

It seems that many of us have gotten into graphics recently, and this program extends our use of graphics from the paper printout to the moving medium of videotape. What for? Well, how about introductions to those tapes you are shooting of your growing child or grandchild?

The Take 1 package includes a two-sided disk and a well-written manual, in the familiar Apple Computer 8 1/2 x 5 inch spiral bound style. The Program, on side one of the disk, is menu driven and works like a charm, but folks, let me seriously suggest that you read the documentation. There are many steps to animation, and if you miss one it means going back and doing it over. The manual has a chapter titled, "Let's Make a Scene", which walks you right through the methodology.

The Take 1 menus include Pictures & Backgrounds, a hi-res picture editor whose features include colorfill, a zoom-pixel editor and compatibility with Applesoft shape tables, and other shape and font libraries including Fontrix.

There is Actors & Actions, both a menu of the program, and additionally a library of actors and actions found on side two of the disk. You used to have to purchase this library separately, but it is now part of the package. It is used to create and edit animated actors, and provide them with predefined actions.

There is the Scene Editor, where scenes are shot, frame by frame; and the Movie Editor where scenes are combined, backgrounds are added, and where fades and dissolves supply the transition from scene to scene. Included too is the Movie Projector, which has been updated to a Movie Disk. This created data disk "runs" on the user's monitor screen, or it can be transferred to videotape with the simple instructions supplied.

Finally, there is Disk Utilities, which formats data disks, converts hi-res pictures and shape tables from other graphics

programs, a file copier—from one data disk to another, a disk copier, and a data disk checker which indicates if all of the actors, scenes and backgrounds are available to run a movie.

I found Take 1 to be a very good program. It does what it purports to do, and it does it well.

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WAPACROSTIC

by Dana J. Schwartz

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18	R	19	A	20	R	21	W	22	P	23	I	24	U	25	T	26	W	27	K	28	V	29	O	30	G	31	F	32	Z	33	H	34	Z	35	Z	36	Q		
37	U	38	X	39	N	40	M	41	N	42	L	43	Q	44	K	45	G	46	S	47	D	48	W	49	B	50	D	51	B	52	M	53	W	54	N				
55	G	56	M	57	J	58	Y	59	P	60	F	61	J	62	T	63	P	64	T	65	S	66	L	67	B	68	F	69	C	70	P	71	P	72	V	73	C	74	O
75	U	76	A	77	E	78	C	79	S	80	X	81	Z	82	O	83	T	84	S	85	V	86	W	87	Z	88	Y	89	V	90	E	91	W	92	D				
93	F	94	S	95	W	96	Q	97	Q	98	F	99	Y	100	E	101	W	102	R	103	V	104	Y	105	A	106	V	107	B	108	X	109	X	110	X				
111	O	112	E	113	E	114	B	115	Q	116	H	117	M	118	K	119	Q	120	S	121	O	122	Q	123	B	124	A	125	D	126	L	127	A						
128	B	129	K	130	T	131	Q	132	Q	133	R	134	D	135	T	136	N	137	K	138	U	139	R	140	K	141	J	142	I	143	J	144	G	145	E	146	G		
147	V	148	Y	149	T	150	S	151	F	152	X	153	U	154	C	155	D	156	P	157	V	158	I	159	V	160	R	161	A	162	P	163	X	164	E				
165	K	166	C	167	P	168	H	169	B	170	E	171	A	172	I	173	N	174	M	175	W	176	I	177	X	178	T	179	S	180	E	181	W	182	T				

Definitions

Words

A. Cavalryman	105 124 171 19 76 127 161
B. Friend or foe signal	114 67 51 16 169 49 123 128 107
C. Absconder	154 166 2 78 73 69
D. Perfectly	50 125 47 5 92 155 134
E. Leaping Mammals	164 145 112 90 100 170 113 180 77
F. Certain Baseball Plays	98 68 31 151 13 93
G. Where Buffalo Roam	144 45 146 30 55
H. Heavy Blow	17 116 7 33 168
I. Swampy Land	14 142 176 172 158
J. Main Road	15 143 61 141 57 1
K. Coffin Alternative	4 44 165 129 27 118 11 140 137
L. Super	126 3 42 66 23
M. Sacagawea's State	56 174 117 52 40

Definitions

Words

N. Company Pieces	8 54 136 41 173 39
O. Baker's Desires	111 6 121 29 74 82
P. Forever	59 60 22 63 71 70 156 162 167
Q. Lathroea Squamaria	131 96 36 119 43 122 132 97 115
R. West Side of Asia	139 160 133 18 102 20
S. Mediocre Poet	65 120 10 84 79 46 150 94 179
T. Indecency	130 135 182 83 149 62 64 25 178
U. Brusque	24 138 37 12 153 75
V. Inattentive	89 85 72 103 106 147 159 28 157
W. Frequently	181 95 86 91 21 53 175 101 26 48
X. In a Wearisome Manner	177 9 38 163 109 11 152 80 108
Y. Banishment	148 99 88 58 104
Z. Head and Neck Wear	34 87 32 35 31

ANSWERS TO LAST MONTH'S WAP ACROSTIC

How many Macintosh designers does it take to change a light bulb? One. He holds the bulb while the world revolves around him.

Editor: (Kurt) Guntheroth

Work: (Canonical Collection of) Light Bulb (Jokes)

Source: John Dvorak - DEC Professional - Dec 1986

- p194

Words

A. Gloves	F. Enmity	K. Loomed	P. Bow
B. Unhand	G. Riches	L. III	Q. Unscrew
C. Nebula	H. Others	M. Gasket	R. Lobar
D. Thaw	I. Thai	N. Heved	S. Boheme
E. Holds	J. Hid	O. Tonight	

PASCAL NEWS

by Robert C. Platt

The PIG library. A fellow Texan, Ron Franzetti of Austin, writes to ask about master catalog programs on disk PIG6:. A master catalog program will read the directory from a number of disks and then produce a sorted list of all files in that disk collection. This is essential if you are like me and collect disks faster than you can keep track of them. Disk PIG6: has two versions of such a program which first appeared in the May 1981 *Byte*. I prefer the Jim Harvison version which can be obtained by compiling file PIG6:CAT. That file includes CAT1, CAT2 and CAT3. The documentation for the file can be found in file PIG6:CAT.DOC.TEXT.

Ron's letter leads me to review some background information which WAP's Pascal devotees should know about our PIG collection. First, we include the source code for each program, so that other PIG members can learn by studying the code. Second, most programs are accompanied by a .DOC.TEXT file with documentation which can be reviewed in the editor or by Transferring to CONSOLE: in the Filer. The PIG library welcomes programs of any level of sophistication or specificity. Please contact Mike Hartman, 301-445-1583 to arrange a donation. You will receive a library disk in exchange for any donated disk. Disks need not be full to be donated. Finally, you may wonder how is the current PIG library indexed. The answer is that pages 270-271 of *Perfect Pascal Programs* is a subject index with references to volume and file numbers. Abstracts of each program are listed on pages 259-270 of the book. The WAP Office is selling both hardbound and softbound copies of *Perfect Pascal Programs* for \$5.00.

I would also encourage Mac programmers to donate source code for MacPascal, MacApp, TML, MPW or any other Pascal project they have undertaken. The distribution of just the compiled application deprives our members of the educational benefits of seeing source code. Let's continue to learn by sharing.

Referencing handles. Last month, I introduced the concept of handles. You may ask what good is a handle if the language does not permit you to reference the underlying base object. Again the ^ symbol comes to the rescue. Recall that if *p* is a pointer, *p*^ refers to the base object. Well if *h* is a handle, then *h*^ refers to the master pointer, and *h*^^ refers to the base object. Be careful when working with the Mac and IIgs ROM's—sometimes you will need to pass an object to a ROM routine, but most of the time you will pass the handle to the object as the parameter.

USUS and Pecan news. Mike Hartman reports that a USUS meeting will be held in June in conjunction with the Stride Fair. Pecan is now actively marketing products formerly supplied by Volition Systems. The Advanced System Editor (ASE) has been improved for a version 2.0. [N.B. Version 2.0 is not available on the Apple][which continues to be served by the Volition version.] Upgrades are available for current ASE owners.

If you own Volition's Modula-2 compiler, you can send in your original disks plus \$59.95 to upgrade to the new p-

System and the new Modula-2 compiler, even for a different machine. Thus, former Apple // modula mentors can use this upgrade to get Modula-2 on their Macs.

Pecan has released Version IV.2.2 of the p-System. This version offers full support of the 128K Mac ROM including HFS and the new finder. You can upgrade your current system for \$80 which includes a new release of one compiler. Additional fees are needed to upgrade additional compilers.

MPW Version 2.0 is evolving. Macintosh Programmers Workshop Pascal will take full advantage of the Mac SE and Mac II. Developers were seeded with the alpha version of MPW 2.0 when they were seeded with the new Macs. The beta version will be available through APDA. The MPW 2.0 Pascal compiler will be able to generate code for the Motorola 68881 math coprocessor chip and will handle arrays and data structures exceeding 32767 bytes in length. It appears that MPW, rather than MDS, is the way to go if you want to program for the new Macs as well as the old.

Meanwhile, my less ambitious attempts to master MacApp under MPW 1.0 continue to plod along. My MacApp Version 1.0 finally arrived yesterday, and I hope to keep you informed as I explore its features. ☺

WAP ELECTIONS

Washington Apple Pi will be holding its annual elections in June. The nominating committee (Bruce Field and Jay Heller) is looking for candidates for all elected WAP offices. These include President, Vice President for Apple, Vice President for Macintosh, Treasurer, Secretary, and seven Director-at-Large positions. The only requirement is that you be a WAP member in good standing. Here is your chance to help WAP grow and prosper. The President's duties include handling major decisions, presiding over the Board of Directors meetings and the General meeting, and representing WAP in meetings with other user groups. (Day-to-day operation of the club is handled by the Office Managers.) The Vice Presidents arrange for the program content of the General meetings and step in for the President if necessary. The Treasurer is responsible for keeping the WAP's books, and generating accounting reports for presentation to the Board of Directors and the general membership. The Secretary is responsible for taking and maintaining the minutes of the Board of Directors meetings. The Directors-at-Large attend the Board of Directors meetings to provide guidance on club business, and are generally the first called when volunteers are needed. If you are interested in running for any of these positions, or know someone who is, please get in touch with one of the nominating committee members. ☺

dPubSIG NEWS

by Steven Payne

The March 4th "Desktop Publishing Special Interest Group" meeting began with a discussion of paper for the LaserWriter, with Chairman Thomas Piwowar passing around comparative samples of the same image printed out on different stock (including newsprint, which fared well). Ron Moore distributed copies of our new "DC Desktop Publishing Directory," which so far has only a few entries, and will presumably be expanded as new submissions are received.

Tom mentioned again that all dPubSIG meetings will be held on the first Wednesday of the month during 1987, and then announced plans to demo Word 3.0 and Hypertext at the April meeting, and an improved version of Graphic-Works on May 6. (Mary Stanley's IBM Desktop Publishing SIG continues to meet on the third Wednesday of each month at 7:30 PM in the STSC Auditorium, at 2115 E. Jefferson Street in Rockville.)

Kudos were extended to Jo Ann Goldberg for work which appeared in the Business section of the *Washington Post*, and to Hersh Cousin for serving as equipment coordinator (though we still need volunteers to help transport the projector to and

from the WAP Office!). Tom noted the new free upgrade to MORE version 1.1 for those who have already sent in their registration cards, and the less-than-it-appears "deal" now available on ReadySetGo 3.0. (He also mentioned, as an aside, that RSG 3.0 seems to cheat on italics, using oblique Roman instead of the real thing.) There were discussions of a new proportional font display desk accessory from Aldus called WYZZY, and the Aldus Prep 1.2.3, which fixes certain problems encountered in using MacDraw graphics.

In the demos section, Tom previewed the new System 4.0 from Apple, intended primarily for the new Macintoshes (or older ones using AppleShare); it offers an improved LaserWriter driver, with faster text printing and bitmap handling, among other things. Jim Stewart also demoed XPress from Quark (\$695 list), with an interface similar to ReadySetGo's but with many new features, such as tracking, fractional point sizes, better control of space widths, and automatic wrapping around irregularly shaped graphics. dPubSIG will meet at 7:30 PM on April 1 in the PEPCO Building Auditorium at 19th and Pennsylvania Avenue, NW. We hope to see you there! ☺

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VOLUNTEERS NEEDED

NewSIG Leaders. WAP needs two or three members who attend monthly meetings and are willing to help lead a brief introductory session for new members. You need only spend a half hour to an hour at one or two meetings. We will provide you with answers to the most commonly asked questions. If you are unable to answer any questions asked, just take the name and phone number of the member and pass the questions on to us. We will insure that the new member gets a call with an answer to his or her question. This is one way we can help make new members feel welcome to our group.

Sysops Needed for the TCS. If you would like to help assist the TCS by running one of its many boards, leave a message on the TCS. In last month's issue, our TCS Chairman, Lee Raesly, discussed the pleasures of being a Sysop on the TCS. If you do not have a password, call the office to get one. Sysops help answer questions and connect people who have problems with those who have solutions. An exciting, albeit low paying job, that is great for those wanting to meet people and help others. ☺

CALLING ALL KIDS

Washington Apple Pi is looking for a bunch of kids to make presentations at the May General meeting (Saturday, May 23). If you have written a nifty program, solved the mysteries of the delicatessen in Pixel's Revenge, composed some music, etc. we want to hear from you. Maybe you have a recommendation on games or books; if so, give us a call. If we get enough response we will turn the May Apple II meeting over to you. We want to see all WAP kids at that meeting. Who knows, if you can guess Ron Wartow's hat size you might even win something! Call Bruce Field, 340-7038 between 7 and 9 in the evening, or call the WAP office and leave your name and number. ☺

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REVIEW OF DESKTOP PUBLISHING TO GO

by Loren and Jane Yager

Desktop Publishing may be the hottest thing in microcomputing, but the price of entry—an Apple LaserWriter printer—is more than most of us can afford to ante up. Fortunately, there are ways to take part in this new field without owning a laser printer, or knowing someone who does. Apple LaserWriters linked to Macintosh computers are showing up in an increasing number of copy shops and other small business operations around the Washington area where they can be used for a fee. These services are neither difficult to use nor terribly expensive—used in moderation—and the results can be impressive.

This article provides a comparison of a few of the services in the Washington area businesses that have Apple LaserWriters for rent. While some of these businesses also offer to actually compose documents, resumes, etc., Macintosh users are more likely to use these services for printing documents composed at home or work. The average Macintosh owner may have an occasional need to have a formal letter, resume, or paper laser-printed, but not nearly enough to justify the cost of purchasing a LaserWriter. That's when renting someone else's LaserWriter makes sense. In addition, since laser printers prices are dropping and performance is improving, a laser printer may become affordable for the average user in a year or two. Instead of watching the downward spiral of prices as we have for the Macintosh and agonizing over how much we could have saved by waiting, we can wait out the LaserWriter price drops while renting time on someone else's machine. This waiting game is possible for Macintosh users in the Washington area because there is an increasing number of businesses offering laser printing. So if you need some occasional laser printing, but still find the purchase price hard to swallow, there is good news. This is one of those all-too-infrequent cases where you can have your cake and eat it too!

This review of the laser printing services at a selected sample of area businesses will be based on using a LaserWriter to print four fairly typical documents. All documents listed are composed before heading out to the local laser print shop, and saved on disk:

- Three page letter (MacWrite),
- Two page resume (MacDraw)
- One page announcement (Macpaint)
- One page table (Excel)

The four documents were chosen to represent a variety of printing demands, while not costing an arm and a leg to review.

Preparing the documents:

All documents to be printed on a LaserWriter have to be carefully viewed on the screen at the laser-printing location before they are actually printed because changes in fonts, page widths, etc., manage to mysteriously find their way into the documents. However, to save time and in some cases, money, the following preparation was done at home:

The three page MacWrite letter was proofread carefully in an Imagewriter font (such as New York), and the margins were widened approximately 1/4 to 1/2 inch on each

side since the LaserWriter can print a wider page. Be prepared that most laser printing uses far less space (depending on the fonts chosen) than the corresponding printing on an Imagewriter. This means that if you have an assignment for a twenty page paper, and have barely made the required length in your Imagewriter version, think twice about getting it laser printed because you will probably end up about five pages short of the requirement. Before going to the laser printing facility, the entire document was selected and converted to the desired font (in this case Helvetica) for final printing. The document was stored on a 400K disk with the Macwrite application and no system files.

The two page MacDraw resume was set up specifically for laser printing using the Helvetica font. MacDraw was used for the resume because it allows for somewhat easier editing of text blocks than a MacWrite document with a lot of tabs. However, since a resume is one case where you want it to come out just right, preparing the document at home in the font to be used for the final printing is highly recommended to save money, time, and tears. The document was stored on a 400K disk with the MacDraw application and no system files.

The one page Excel document was also prepared and proofed on the Imagewriter. Default fonts were used for this application with no special preparations for the laser printing. The document was stored on an 800K disk with version 1.03 (non-copy protected) of the Excel application since both would not fit on a 400K disk.

The one page MacPaint announcement was created and proofed on the Imagewriter. However, since there are often numerous additional fonts available on the LaserWriter that are neat to use in this type of application, it may not be possible or desirable to prepare the document completely. MacPaint documents seem to take more time to perfect and print on the LaserWriter. The document was stored on a 800K disk with the MacPaint application and no system files.

The Criteria

The laser printing services were compared on the following criteria:

1. Price
 - per hour
 - per page
 - membership fee
2. System performance
 - Macintosh equipment (description)
 - laser printing equipment
3. Knowledgeability of staff
4. Other information about the service, including
 - hours
 - working environment
 - additional software available

The Laser Printing Services :

1. Bel-Jean (College Park) This business has two locations in the College Park area near the University of Maryland on Route 1. The Bel-Jean with the Desktop Publishing is

contd.

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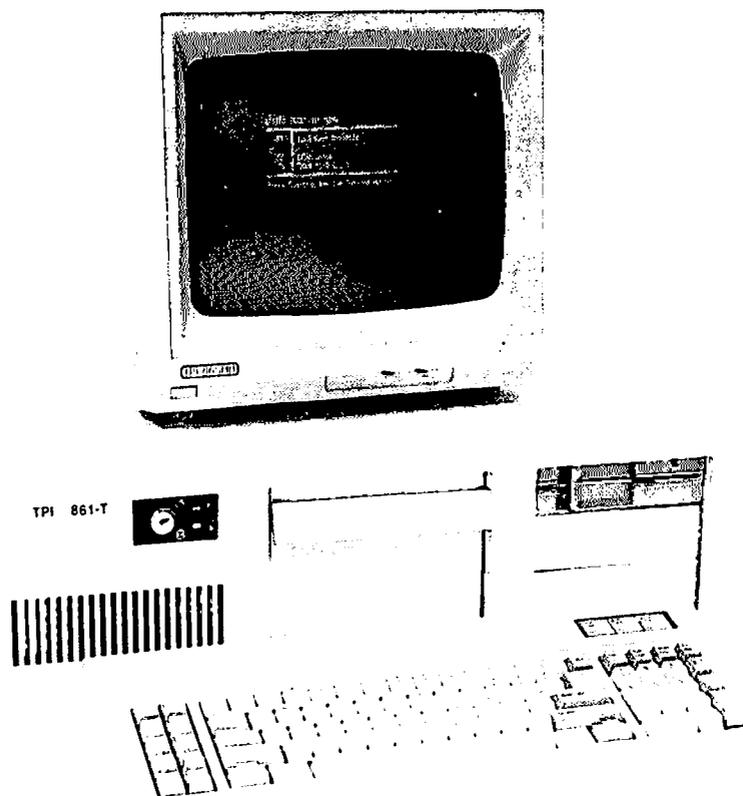
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about a half block west of Route 1 on Lehigh Road. Bel-Jean appears to use the Macintosh/LaserWriter combination primarily to compose resumes and other material for students, and doesn't seem to emphasize laser printing for current Macintosh owners quite as much as the other businesses reviewed. As a result, the resources are mostly used during the day by Bel-Jean staff, but for the remainder of their fairly long business hours, the LaserWriter is usually available.

The system that Bel-Jean uses is provided by Gestetner Desktop Publishing (remember all those newspaper ads) and is based on Mac Pluses equipped with internal 20MB hard disks with MacWrite, MacDraw, FullPaint, and PageMaker as part of the system. Therefore, if your document uses one of these applications, you don't need to bring the application. They have a variety of other software, MacPaint disks, etc. for use if you use the machines on a \$10/hour basis. Unfortunately, the MacDraw resume could not be printed in the font selected at home (Times) because Times was not available in the MacDraw font menu. The Bel-Jean staff couldn't solve the problem (MacTography was able to solve the same difficulty), and the Gestetner manual suggested converting the document to PageMaker. After a quick but unsuccessful effort with PageMaker, it was back to MacDraw and the Boston font; a somewhat unsatisfactory solution. Other than that problem, the Bel-Jean Desktop Publishing is ok, pretty much what you would expect from a self-service copy center next to a large university. It's, like . . . convenient.

2. **PC Resources** (Reston) was probably the first place to advertise laser printing services in the Washington area. The owner, Joe, saw the opportunity to get a neat product and try to make some money at the same time. Since that time, he has moved to larger quarters and invested in additional equipment and office space. The result is that he now has a room in one of the new office buildings off the Dulles Access Road (actually the parallel road), with one 512E with an external drive (400K), a 512 Mac with an external disk drive (400K), and a LaserWriter Plus. He also has a bunch of other equipment available for rent including digitizers, modems, color printers, etc.

After registering with Joe as a user (no formal exam—just a chat about his set-up and some identification), you make appointments during normal business hours with receptionists who also handle all kinds of other phones and offices. Joe's office is nicely furnished and the equipment doesn't seem as roughly treated as some of the other places. Joe is usually a phone call away, but other than that there isn't anyone around to help. It is a lot like having a laserprinter in your own office—if a page is taking a long time to print, maybe you have to refill the paper tray. You pay by filling out a form for xx copies (@\$.50 per copy for WAP members) and xx minutes (@ \$10 per hour), and leaving a check with the receptionist. There is no one there to tell you that you can forget about those two copies that came out all wrong (through no fault of your own!). The test documents were all printed successfully, although the quality of the paper was lacking.

The bottom line is that PC Resources ends up being slightly more expensive, especially if you are paying tolls to get out there. With the exception of people who print a lot of

pages of text and minimize the hourly charge (20 pages per minute is the breakeven rate between this and the \$1 per page), you may never recoup the membership fee (\$25) despite the low price per page. On the other hand, it is easy to get used to those working conditions.

3. **Kinko's** (Capitol Hill) This big time chain of copy-centers is getting into Macintosh/LaserWriter combinations on a nationwide basis. The Fairfax and Capitol Hill locations in the Washington area are now equipped, and other area locations will be getting equipment soon. However, if the Capitol Hill service is any indication, Kinko's doesn't seem to offer much more than a large number of locations.

On the positive side, the setup of two Mac Pluses with 800K external disk drives successfully printed all the documents. MacWrite, MacPaint, and MacDraw are all included on the Kinko's startup disk, so you don't really need to bring these applications. The quality of the assistance depends on whether qualified staffers are working at the time. Kinko's also offers separate training sessions on the available applications for a fee.

On the negative side, the working environment is lousy—you are right in the front window (fishbowl style) and the printer is back behind the counter. This means that you have to walk back to the printer to pickup each copy before moving on to the next job. Possibly the worst feature of Kinko's is the price. Not only is it too high, but the pricing scheme is unnecessarily elaborate. The first page costs \$2, pages two through 25 cost \$1.25 each, pages 26 through 100 cost \$.65 each, and each page over 100 costs \$.45. The Macintosh rental charge is \$5 for the first half hour (minimum), and \$2 for each fifteen minutes thereafter.

Kinko's also doesn't seem to be sure whether persons who do quick printing will be charged the hourly fee. Upon arrival, the staff person said there would be no hourly charge if the time was less than around 20 minutes. After finishing in 15 minutes, a different person included a \$2 hourly charge in the bill, contradicting both the previous staff person and the stated minimum of \$5. It is obvious that Kinko's pricing should be lower and simpler.

4. **MacTography** (Rockville) From the appearance of the full page ads in the WAP Journal, MacTography appears to be a significant business with a wide range of Macintosh services. That is why it is a little disconcerting to get the directions to a private residence for your first visit. Once inside, however, the appearance of a house disappears as you immediately enter the working room with a wide variety of Macintosh related hardware and software. The owner, Earl, or his father are around to schedule appointments and assist users with any problems that may occur. As a matter of fact, problems do occur because the setup is probably the most capable—and complex—of the systems reviewed. For example, MacTography has a wide variety of fonts, but they sometimes get in the way when printing a document in one of the standard fonts such as Times or Helvetica. Fortunately, knowledgeable assistance is available, although not without some impatience. With a little of this assistance, all the test documents successfully printed.

Fees at MacTography are \$1 per page printed and \$10 per hour for system time, with a minimum charge of \$5.

contd.

However, as in the case of some of the other businesses, there is no hourly rate if you are only staying long enough to print normal documents. Other positive aspects of this business are the wide variety of software that is available for use, and the training and consulting services that are also offered for a fee.

Conclusion

All these businesses provide a unique printing option for the Macintosh user which is not available for other computer users—near typeset quality for a minimum of effort and money. The current trends in microcomputer hardware prices and capability reinforce the economics of renting. However, the bottom line also depends on the value of your time and your printing needs.

The laser printing services reviewed in this article represent a surprisingly wide variety of businesses and locations: from one-person operations to nationwide companies, and from the city to the suburbs. Is it possible to pick a winner out of this group? It seems to be a clear case of a three way tie for second, with Kinko's a distant third. The real winner is: the Macintosh user in the Washington area.

Desktop Publishers To Go

Name, address other info.	Prices/Fees	Macintosh System	Assistance, Work Environment	Cost for 4 Test Documents
Bel-Jean Soft-Service/Color Center, Lehigh Road College Park, Maryland (301) 779-2333	\$1 per page* \$10 per hour** no minimum	2 Hard Disk Equipped Macs with one Laserwriter, uses Gestetner Desktop Publishing	Assistance depends on time of day and staff on duty; generally cluttered work environment	\$7.35
Kinko's Copies 611 Pennsylvania Ave., SE Washington, D.C. (202) 547-0421	\$2 first page \$1.25 2 - 26 pages \$.65 26-100 pages \$.45 100+ pages and \$5 first 1/2 hr (minimum) \$2 each 15 min thereafter	2 Mac Pluses with external drives, Laserwriter Plus	Assistance depends on time of day and staff on duty; poor working conditions (Capitol Hill)	\$12.19 (does not include 10% WAP discount)
Mactography 702 Twinbrook Parkway, Rockville, Maryland. (301) 424-3942	\$1 per page \$10 per hour** \$5 minimum charge	2 Mac Pluses, 1 512E Mac, 1 Laserwriter Plus, other equipment	Assistance is available and familiar with typical problems; shared work room.	\$7.35
PC Resources 1850 Centennial Park Dr., Reston, Virginia. (703)860-1100	\$.50 per page for WAP members \$10 per hr. (\$5 min) \$25 membership	One 512E Mac, one 512 Mac Laserwriter Plus, other equipment	Assistance only by phone; Very pleasant working environment.	\$8.84

* Generally no charge for misprint
** Generally no hourly charge for quick printing documents

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GraphicWorks: A Review

by J.T. (Tom) DeMay, Jr.

Have you, like most of us, bumped into MacPaint's limitations? It is still a very good program, but it was conceived in the days of 128K. It is starting to show its age. There are several alternatives available. GraphicWorks is one of this new generation of painting/drawing/text programs. It has all of the capabilities of MacPaint and most of the editing features of MacWrite. Included also are page layout capabilities.

Before we look at the program I must mention that it has been reported that GraphicWorks is a re-release of ComicWorks. Some of the pictures included on the disk indicate this to be true. There is also a reference in the manual to opening a second ComicWorks document when it clearly meant a GraphicWorks document. I suspect the original name was a bad choice that didn't actually represent the product's full potential. The name change was probably an attempt to improve the image of the program.

Working with GW (as I will refer to it from here on) will take a little getting used to but is worth the effort. In addition to the program disk a system disk and a template disk are included. There is also a quick reference card which is almost useless, but that is the way I feel about most quick reference cards. The Manual is divided into several parts: a getting started section, a tutorial section, and a reference section that provides complete details about how the tools and menu selections work.

When GW first opens, you will notice the familiar MacPaint tools in the Tools palette on the left of the screen. There are some new ones as well. Most obvious are the panel, easel, balloon tools, and the air brush. It is more powerful than the Spray Can that it replaces. Along the bottom center of the screen lies the Patterns menu. The Tools and Patterns menus can be easily repositioned on the screen with the mouse pointer.

Before you can start drawing or entering text you must create a panel. This is done by selecting the panel tool from the Tools menu, then clicking and dragging to the desired size.

If the pointer is dragged past the edge of the page, GW automatically scrolls to fit the panel on the screen. Don't worry about the size of the panel. It is easily changed. When a panel is selected, there are grey borders with handles at the corners and in the center. Dragging on these handles will resize the panel. Next either an easel or a balloon must be created. Easels are the things one draws on, and balloons are the shapes that hold text. Just like in the funny papers, text balloons can take many shapes. To change the shape of the text balloon, choose Balloon Styles from the Window menu. You will be presented with a selection box containing 18 modifiable shapes and 6 outline thicknesses. Clicking on the desired shape will change the active text balloon to the chosen shape. Custom shapes can also be created by dragging the handles. Use the same procedures to manipulate panels.

Entering text with GW is like using MacWrite. One minor annoyance: if the text balloon is larger than the screen, the screen does not scroll. Text entered off screen cannot be seen without moving the window manually. All the standard

editing tools and menu selections are there including some new ones. The Font menu contains 14 fonts: the standard ones plus Comic, Commando, Symbol, Crypt, Avant Guard, etc. There are several new options on the Style menu. They include Extended or Condensed text and Narrow, Standard, or Wide Leading. The Size menu starts at 6 points per inch and goes up to 72 points per inch.

Most of the MacPaint tools are here, and they work as expected, with some improvements. For example, the marquee can be used to "scale" the selected item(s). Simply holding down the Command key while dragging a corner of the rectangle will change the size and proportion of the surrounded items. The shift key can be used to constrain the scaling to proportional only. The familiar spray can is replaced by an adjustable air brush. The spray area can be adjusted from 1 to 96 pixels across. I didn't actually count them, but that's what the manual says. Holding down the CapsLock key while using the Air Brush sprays transparent paint.

The "About GW" information box under the Apple menu is very informative. It tells the size of the current document, the amount of free disk space, the number of pages of the current document, and the number of panels as well as the version number of the program.

The File menu is missing an option that I have seen on all previous file menus. It is the Close document option. My first thought was that I wouldn't be able to close the drawing I had created, but choosing the Quit, New or Open option closes the current document after asking if it should be saved. Thinking about it—whenever one wants to close a document, the next step is to start a new document, open an existing document, or leave the program. All of these require an additional step if Close is chosen first. The Close option is therefore redundant. Although the GW treatment of this is unusual it indicates free thinking on the part of the program designers.

Since GW treats pictures differently than MacPaint, there are two options which allow compatibility with MacPaint. They are Open MacPaint and Save as MacPaint. There is also an Open Browse file. It works like Art Grabber, but only with GW documents. Existing drawings can be opened, and portions copied to the current work via this command without leaving GW.

There are several new choices in the Print menu. The most unusual permits printing in greeting card format: The top half of the page printed upside down so that when the paper is folded it will be the correct orientation. There is also an option to print just the selected panel. "Print page detailed" does a nicer job on the text, but only affects the output of the LaserWriter. There is also a special option for the Imagewriter 1 called Bitmap. The remaining print options affect when and how a grid is printed.

The Edit menu is basically the same as with MacPaint except that since GW is not limited to a single page, additional pages can be added or deleted here. I prefer the Drawing Size command of MacDraw. The Rotate option, like the one in

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MINDWRITE: A Review

by Fred Seelig

MindWrite has been banished from my hard disk forever. You should not buy it. If you did buy it (like me) you should ask for your money back (like me). It is unreliable. It does not do what it promises. And its commands and operating structure will drive you nuts.

MindWrite is a "full-featured" word processor. It is the creation of Cary Wyman and Linda Moncrief of MindWork software of Carmel, California. It used to be called MultiWrite back when it was being bundled with FullPaint. FullPaint was advertised as being everything that MacPaint wasn't and MultiWrite was advertised as being everything that MacWrite wasn't but should have been. FullPaint comes very close to the mark. MindWrite doesn't.

It was ordered from Icon Review on June 30. My copy finally arrived in the first week of December. Icon Review, the mail order firm run by Dennis Moncrief, was falsely advertising MultiWrite as an available, existing product in its Summer catalog. After a huge number of complaints from buyers that bought it in the summer, it was finally delivered near the end of the year. The name of the product had changed to MindWrite. Icon Review still sells MindWrite for \$89.

MindWrite has many features that MacWrite 4.5 doesn't. MindWrite allows multiple windows. It contains outlining features. It has cursor control keys. It has lots of command equivalent keys. There is a word count feature. There is a Mark feature that allows the highlighting of paragraphs that have been changed since a certain date. A Table of Contents feature is built in. It allows the importing of MindWrite, MacWrite (version 4.5, I didn't test with earlier versions), ThinkTank (I didn't test this either), and text-only documents. Documents can be saved as MindWrite, MacWrite and text-only files. It has rulers similar to but not exactly like MacWrite's rulers. These 'multi-level' rulers don't always work like you think they will. Figure 1 shows some rulers that MindWrite uses.

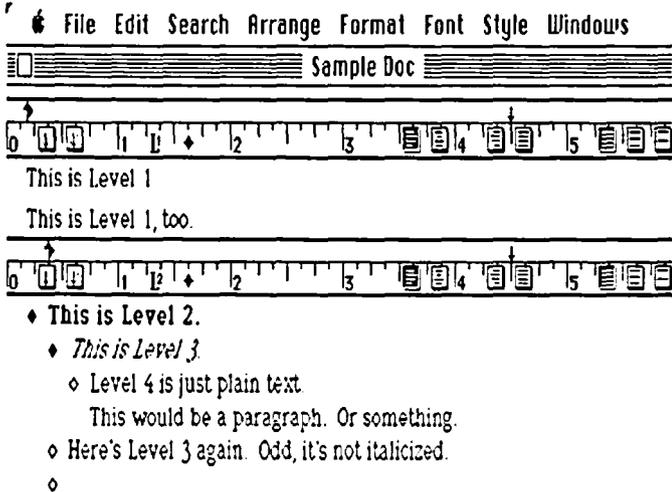
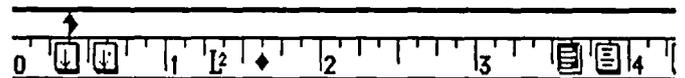


Figure 1. This figure shows multiple levels, indents and rulers found in MindWrite. Each section within a level is given a section designator. You can select diamonds, numbers, or bullets. The diamonds require a special font, called ZDiams, to print.

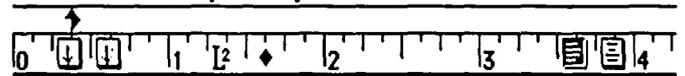
MindWrite doesn't have some features that the current wave of word processing programs offers. MindWrite doesn't have an integral spelling checker. It doesn't have move-and-select cursor control keys that allow insertion-point *and* select simultaneously. The result is that you must still use the mouse in order to select, cut and copy words. It doesn't have any rudimentary page layout features that Write Now and MS Word 3.0 have. There are no graphical capabilities built into MindWrite.

MindWrite has some features that really don't work too well. Cursors will leave you cursing. There is a regular arrow. There is a dimmed grey arrow that the regular arrow turns into when it is passing over some forbidden territory. What exactly MindWrite defines to be a forbidden territory is, as they say, context sensitive. That is a fancy way of saying that you never know if a paragraph or section is off limits or not. Then there is the pointing hand cursor, and the pinching hand cursor for dragging paragraphs around the page. See Figures 2 and 3 for examples.



This is Level 2.
◆ *This is Level 3.*
◆ Level 4 is just plain text.
This would be a paragraph. Or something.
◆ Here's Level 3 again. Odd, it's not italicized.

Figure 2. The arrow cursor turns into a pointing hand when to the left of a diamond. Clicking on or to the left of a full diamond expands or collapses text underneath that heading. An empty diamond indicates no underlying text. I boldfaced the Level 2 heading and italicized the Level 3 heading. This was not automatically done by MindWrite.



This is Level 2.
◆ *This is Level 3.*
◆ Level 4 is just plain text.
This would be a paragraph. Or something.
◆ Here's Level 3 again. Odd, it's not italicized.

Figure 3. The pointing hand in the left margin has turned into a pinching hand after the mouse button has been held down, ready to drag the highlighted selection elsewhere. Heading and underlying text darken, indicating that the heading and subordinate text have been selected.

Inserting rulers is a breeze: command-6. Command-7 shows rulers or hides them. The multilevel rulers mentioned earlier have almost impossible-to-read margin and paragraph indent symbols. They're also hard to move. It's hard to contd.

create rulers which will indent and fully justify text. Ruler operations are risky. For some reason moving tabs and other things on the rulers usually results in a System bomb.

The MindWrite Help notes are generally quite complete and more helpful than the manual. It seemed to me, however, that the last item on the Help menu was not completed. "Shorthand Notes" says, "These mnemonics, which are based on the symbols that appear on the number keys, can help you remember the effects of Command-(number) shortcuts." Then it does not list the command-(number) shortcuts.

The Table of Contents are odd. See Figure 4. When a paragraph or section is formatted as an italicized or boldfaced text string, then the Table of Contents page number has the same text attribute! The result is a funny-looking table of contents, with the page numbers having different text attributes.

Sample Doc-TOC	
◊ This is Level 1.	1
◊	1
◆ This is Level 1, too.	1
◆ This is Level 2.	1
◆ This is Level 3.	1
◊ Level 4 is just plain text.	1
This would be a paragraph. Or something.	1
◊ Here's Level 3 again. Odd, it's not italicized.	1
◊	1

Figure 4. The Table of Contents page column lists page numbers which do not share uniform text attributes.

MindWrite's cursor control keys are a great idea. You can move up and down lines (using up/down arrow), move to the next character (right arrow) or word (Option-right arrow) or previous character (left arrow) or word (using Option-left arrow). You can move to the beginning of the line or the end with a simple command-left arrow, or to the end with command-right arrow. It also has a marvelous feature that allows you to keep your hands on the keyboard a little longer, and that is command-T, for delete-next-word (delete the word to the right of the insertion point). I wish MindWrite had added a delete-previous-word command (command-Option-T?). I used such a command a surprisingly large number of times using the EDT (keypad-oriented) text editor on a VAX minicomputer, and felt that it was a nice feature.

MindWrite has an automatic outlining feature that is somehow tied into the formatting feature. It can number paragraphs automatically. Formatting at multiple levels is confusing.

The reference card is sometimes wrong. The card incorrectly states that the option-< command causes the cursor to move to the top of the document. Actually, command-< does this.

Some of the features aren't operational all of the time. For example, a command called "Go to page number" is supposedly invoked by command-'. Wrongo. It only works if the pagination command (command-2) is on.

Screen updating is a very puzzling and nerve-wracking thing. Sometimes MindWrite will appear to delete words. Sometimes the screen will be refreshed with new changes, and sometimes not. The errata sheet that comes with the manual makes note of the fact that bugs in the screen updating portion of the program are still present. It's one thing to see it on the errata sheet. But it's very disconcerting when you watch it happen. And it makes you nervous. Nervous writers are not happy writers.

The manual is thick: 248 pages. Its table of contents is lousy since it goes down only one level, to show the chapter headings but not any of the chapter contents. It's odd for a text-processing program to have a manual with such a poor table of contents. It's nicely written and illustrated on glossy paper—very high-tech look. I wish it had a good tutorial section. It does have a section that attempts to give a tutorial. It uses example files that are on the MindWrite disk. But the tutorial is more confusing than it's worth. Several times I found myself wondering, "So what? What's the point of this example?"

MindWrite seems designed to handle large documents, with all of its formatting commands and "Skip to page..." type commands. But the reality of it is that for even reasonably sized documents, like 50 pages, MindWrite's performance degrades tremendously.

Bugs? Yep, I've Seen a Few.

Saw some bugs, saw some bombs. The CMD-N key is supposed to create a window for a new document. Sometimes it does, sometimes it doesn't. There were some insertion-point bugs. Once while I was merrily typing along, the insertion point decided to switch from 12-point height to about 127 point height. I already pointed out the screen update bugs. Sometimes the dum thing would even hop to another part of my document! This did not instill much faith in the integrity of the product.

There were also some Bombs. I used MindWrite in Switcher 5.0 in its minimum memory configuration (288K). 128K RAM cache was on. Had two or three windows open, and MindWrite started to get creaky. Opened a 50K document (pictures and text). Added a ruler. Began writing. Scrolling started to get slow as molasses. And then, the Bomb. Another time, I tried to remove a tab from a ruler. Bomb. My not-so-scientific conclusion is that ruler-related software needs work, i.e., is prone to cause System Bombs.

Exporting documents from MindWrite to MacWrite works unreliably. Most of the time this feature worked fine. But in a few cases it didn't. Upon opening some converted documents from the Desktop, twice the Mac showed a System bomb, and once the Mac did a soft restart, that is, it turned itself off and then back on again.

I gave up on MindWrite while working on deadline on a rather large and important document. I broke the document up into chapters and shuffled them all over to MacWrite 4.5. It took longer to work in the MacWrite environment, but at least MacWrite was so bulletproof that I didn't always have to live in the fear of an impending Bomb being just around the word-wrap.

And that about sums up my attitude about MindWrite. It has a lot of nice features that leaves MacWrite in the dust. But ultimately it must be abandoned because it's unreliable

contd. on pg 61

MICROSOFT WORD'S NEWEST: VERSION 3.0 IS A WINNER, BUT...

by Bonnie L. Walker

In a word, you are going to love it! With its newest version of Word, Microsoft has created the most exciting new software that I've seen since that famous duo, MacWrite and MacPaint.

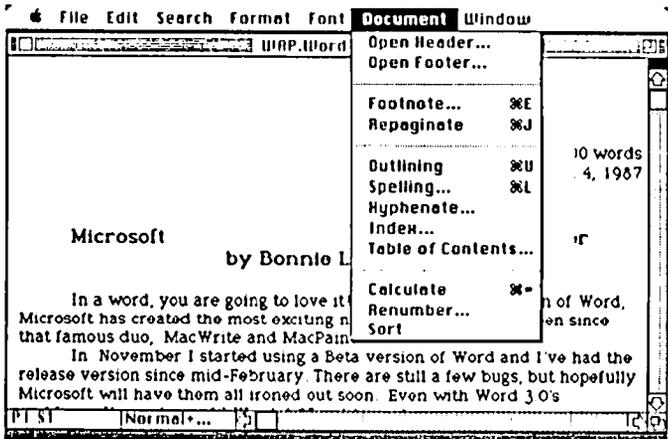
In November I started using a Beta version of Word and I've had the release version since mid-February. There are still a few bugs, but hopefully Microsoft will have them all ironed out soon and send all the patient explorers a fixed version at no cost. Even with Word 3.0's problems, however, I've put my old Word 1.05 out to pasture permanently.

Since I mentioned the problems, I should describe them briefly. First, while the program disk includes the Boston font, it doesn't print well. You'll think your ribbon suddenly wore out. New York seems to work the best. Old versions of MacPaint won't work at all; you get a message saying "MacPaint is having trouble reading the scrap." The most recent MacPaint version works fine, however. Another minor problem is that Word 3.0 from time to time has problems storing graphics in the scrapbook. In general, I recommend saving more often than usual because the system crashes more frequently than you'll like and for no specific reason that I've been able to figure out.

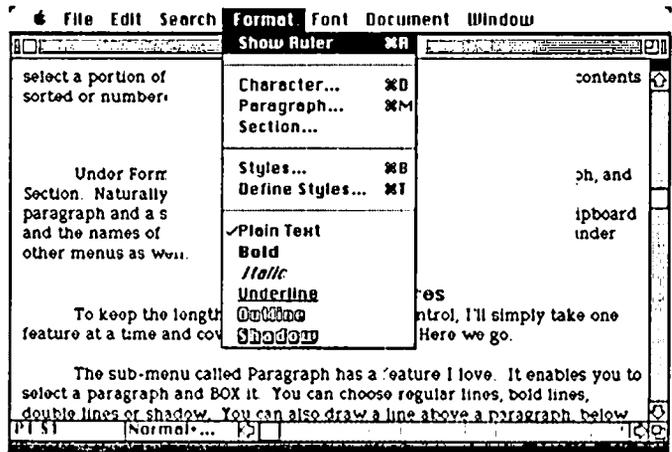
Word 3.0 can be purchased on both 400 and 800K disks so you can use it on a 512K. I've been using it on a MacPlus, and I believe that users with an 800K drive will be more satisfied. In this review I'll just describe a few of Word 3.0's most exciting new features. It is hard to say which ones you'll like best, but one characteristic of Word 3.0 that everyone will appreciate is its speed. Everything happens so quickly that you'll think you dozed off and missed something. You didn't.

New Menus

First, the menus have changed somewhat. The old Word had Menus called: File, Edit, Search, Character, Paragraph and Document. Word 3.0 has: File, Edit, Search, Format, Font, Document and Window. Most things under Document affect the entire document—headers, footers, footnotes, repaginate, outlining, spelling, indexing, and so forth. However, you can also select a portion of the document and have its spelling checked or its contents sorted or numbered.



Under Format, there are three possibilities: Character, Paragraph, and Section. Naturally, you can make changes that affect a character, a paragraph and a section. The menu section called Window has the clipboard and the names of the open windows. There are a few new features under other menus as well.



My Favorite Features

To keep the length of this review under control, I'll simply take one feature at a time and cover the ones I like best. Here we go.

The sub-menu called Paragraph has a feature I love. It enables you to select a paragraph and BOX it. You can choose regular lines, bold lines, double lines or shadow. You can also draw a line above a paragraph, below it, or put a bar on either side of it.

Here is an example of how BOX works. Unfortunately, you can't BOX a list without a box around each word because it recognizes the return character as the end of a paragraph.

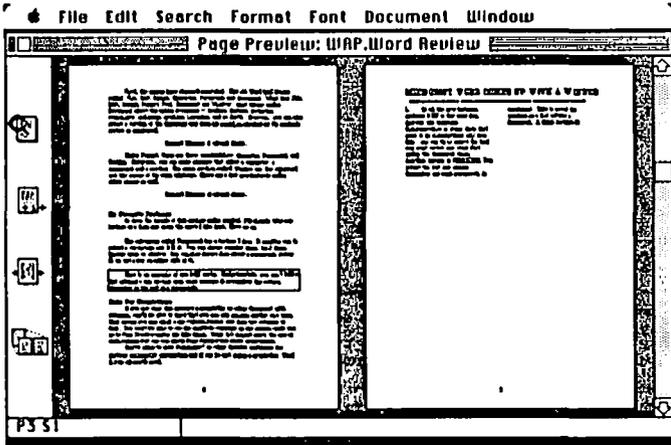
What You See is What You Get

Now more than ever before you can see exactly what you'll print out. Select Page Preview, under the File Menu and you can see exactly how the document will print out. It even shows the double column format. Headers and footers appear exactly as they will when you Print. If there's anything you don't like, make adjustments and then check with Page Preview again.

Help For Newsletters

If you use your Mac prepare a newsletter or other document with columns, you'll be glad to know that you can mix column widths on a page. That means you can print a one column banner and then two columns of text. You won't be able to see the multiple columns on the screen until you go to Page Preview under the File Menu. Word 3.0 doesn't mark the end of each column but you can check Page Preview and make adjustments. You're going to need Pagemaker™ or other desktop publisher for serious manuscript publication but if you're just doing a newsletter, Word 3.0 is all you'll need.

contd.



Sort, Renumber and Calculate

Of all the new features, perhaps SORT is the most fun. Anyone who prepares bibliographies or other lists that need to be alphabetized will love this. All you do is select the text you want sorted and click Sort under the Document Menu. Another feature is RENUMBER. You select the text and choose Renumber and each paragraph is numbered. This is great for numbering a list within a document. Or you can have Word number your outline or table of contents using as many levels as you choose.

A third feature that will amaze you is CALCULATE. Select text containing an equation and type Command =. Select PASTE from the Edit menu and Word prints out the answer. Best of all Sort, Renumber, and Calculate work in an instant.

$$3 + 2 = 5 \quad 7 - 1 + 2 / 2 = 4$$

Outlining, Index and Table of Contents

Outlining, Index, and Table of Contents under the Document menu will be a boon to anyone preparing reports, proposals, and the like. Just type your outline and then return to the document to enter each part of your paper. One slightly dangerous aspect of the outline, however, is that deleting a part of the outline deletes all the text with that section. If you create an outline, then you can have a Table of Contents in a few seconds with all of the proper page numbers.

Creating an index is a bit more work because you must mark the words you want to be included in your index. You can create a Table of Contents the same way if you didn't create an outline.

Spelling Checker

The best thing about Word's spelling checker is that it's there. It's as convenient as a desk accessory type such as MacSpell Plus™. It's fast and has a fairly large dictionary. You can't add to the dictionary but you can create your own User Dictionaries.

Saving Files

Microsoft's new Word (Version 3.0) is really a brand new program. It will read your documents from the old Word, from MacWrite, or other text files and convert them into new Word documents. You have a choice of saving Word files as text only or text only with line breaks. I've already used this feature once to mail a manuscript via MCI mail and it worked perfectly.

Complaint Department

Naturally, it's a little disappointing to pay \$100 for an

upgrade, no matter how great it is, and know that Microsoft surely will have to release another version soon. Everyone I've talked to has had problems and system crashes. At the same time everyone I've talked to is impressed with Word 3.0's power, speed, and amazing features.

The only other big complaint is the poor showing of my favorite font "Boston." Microsoft's customer relations department couldn't explain why this particular font which is packaged with Word 3.0 would print so lightly.

Recommendations

If you don't own Word, wait a little while before purchasing Word 3.0. If you already purchased an upgrade and have problems, be sure to write to Microsoft and tell them. They need to know what's happening so that they can make repairs. In the meantime, you might want to install the desk accessory Saviour that automatically "saves" your file every so often for you.

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MacNovice Column

by Ralph J. Begleiter

Family Tree

Here's a project you can undertake with two Macintosh programs you probably want to learn more about. And it's one of those projects which will create something useful while helping you explore the software you're using on your Mac. Create a Family Tree... using "MORE" and "MacDraw."

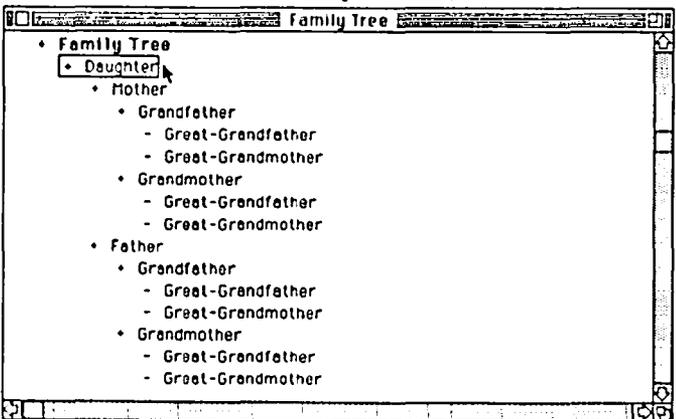
Building a family tree is something you may have considered at one time, but abandoned when you realized how complicated and time consuming it would be. With the help of your Mac and these two software programs, the job is a lot easier and more rewarding, because the finished product looks quite professional. The tree you create will also be easy to expand when you "discover" relatives you never knew you had!

What makes the job easier is MORE's ability to create an organization chart automatically from the text you enter in its outline format. But you'll need MacDraw to put finishing touches on your tree, and to accommodate the complexity of your family's heritage.

First, for MacNovices who haven't yet met MORE, a brief description. Living Videotex calls MORE an "idea processor" and "presenter." It's a variation on word processing which allows computer users to enter text in chunks, then manipulate that text in a variety of ways. It may be moved, edited, reorganized and used in a variety of "presentation" formats such as organization charts and flashcard-style bullet charts. It's a big step forward from the "outliners" available for the Mac and other computers.

To get started on your family tree, open a NEW document in MORE. It'll open automatically in the "outline" format. That's fine. Give your tree a title, then start thinking randomly about your relatives (no—just their names). As you think of names, type them into the MORE outline. Don't worry about keeping them organized. Just think of everyone you can.

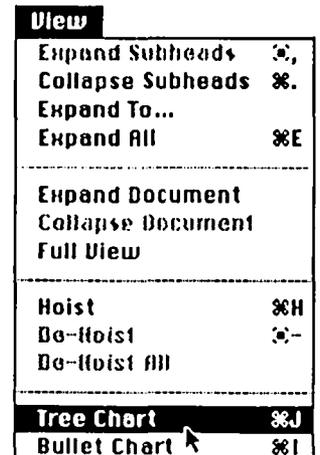
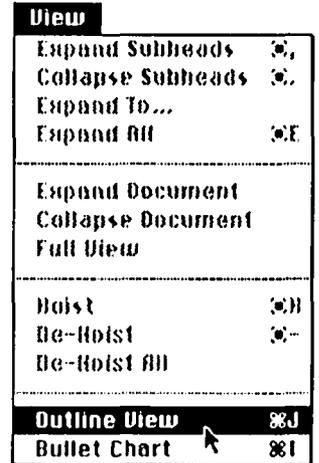
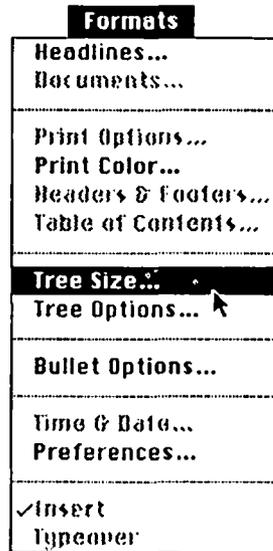
Once you've got a basic list of family members, organize them. Start with the youngest members of your family. Move your daughter's name to the top of the list. Move your



own name, and your spouse's, under hers. Next, move your parents' names under yours—and your inlaws' names under your spouse's. Keep going as far as you can. Always place appropriate relatives "under" their younger kin. Your outline will become quite deep, if you have a good memory.

Now, before you continue, go back to each name and use MORE's text-entering "windows" to enter a brief description of each individual. You might include information such as birth and death, location, and perhaps a brief description of each relative's background. Remember, with MORE you can get as detailed as you like. The text you embed with each name will stay with that name no matter where it's moved in the outline. And you can always add or delete information later.

Creating this narrative text about each relative will help you answer your children's questions later, and it can even prompt more memories and lead to a more complete family tree. Meantime, the text will remain hidden with the names, and won't clutter your effort to build the tree. Don't forget to SAVE your MORE document often. You'll avoid having to

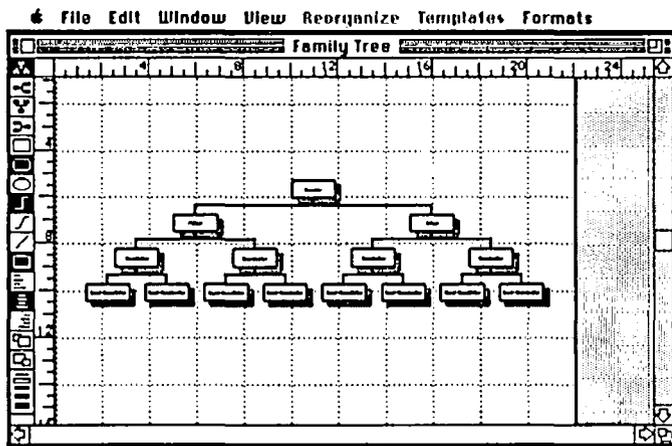


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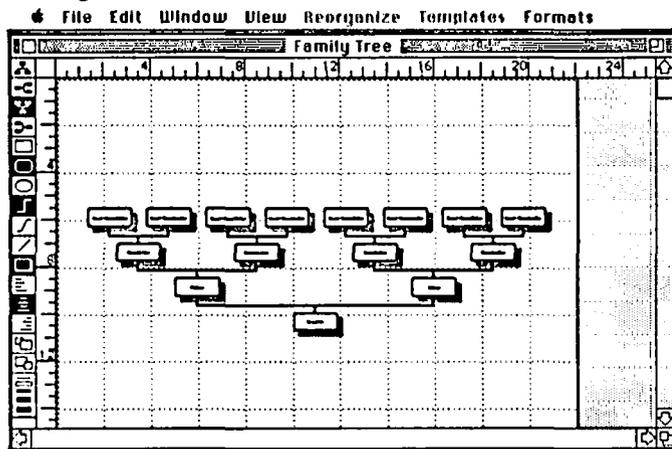
re-enter all this information if your computer crashes for any reason.

Now for the magic: Select your daughter's name (or the name at the top of your outline) by clicking on it. Move to the VIEW menu and choose TREE.

MORE will automatically create an organization chart with your family's names in boxes, with the youngest on top.



That's not, strictly speaking, correct for a family tree's appearance. But that's no problem. Make some adjustments in the way MORE presents your tree. Move to the menus at the left of your screen. Choose the tree icon which flips your chart upside down. Suddenly, your daughter's name appears at the bottom of the display, just as it should. And the rest of the family tree "grows" upward from her! Now you're cooking!



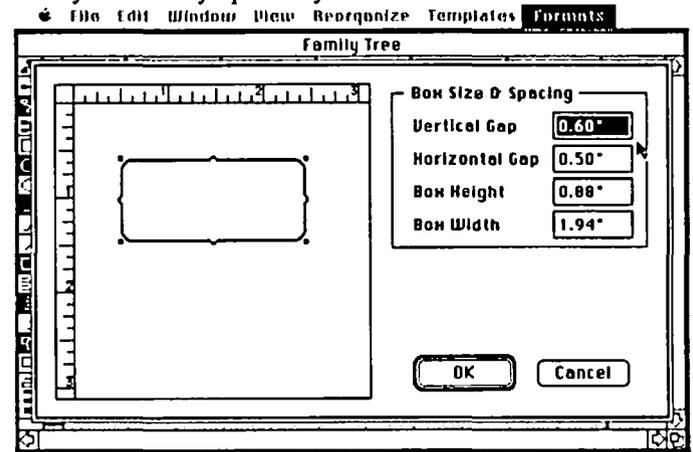
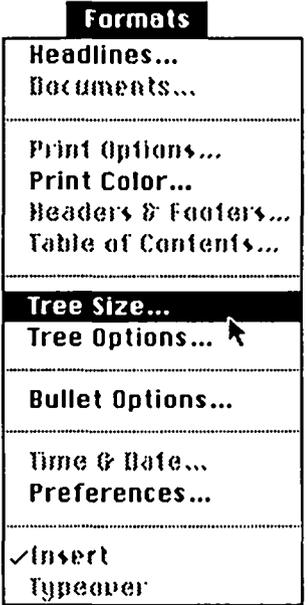
I've found it easier to read the family tree if the boxes are separated from one another by a bit more space than MORE instinctively includes (and it'll be easier to make changes later in MacDraw if you space things out a bit now). From MORE's FORMATS menu, choose TREE OPTIONS. Set the SPACING somewhat higher than the default setting chosen by MORE. Experiment a bit. See what looks pleasing to your eyes. Then, set it and SAVE your document.

Now return to the menu at the left of MORE's screen. Experiment with the options available there, too. Choose rounded rectangles with shadowing, for instance, for a pleasing look. Or, if you like, choose ovals. Vary the type of lines you choose between boxes. (I prefer straight lines rather than diagonal ones—and you'll find straight lines easier to edit later

on in MacDraw.)

Once you've got the "look you like, SAVE your document, because it'll be important later on to keep all your choices of format consistent. You won't want to "mix'n'match" different style boxes or different style connecting lines.

If your family tree's a simple one, you're finished already. You can simply print out the tree you've created. But, its likely your tree is more complicated than MORE can handle automatically. MORE is designed only to create simple organization charts. Only one set of connecting relatives can stem from each box. But your family probably in-



cludes some complicated "branches" so you'll have to give MORE some help. For instance, your parents may have siblings, so you need a line of boxes on the same level (generation) as your parents, each with its own "tree" of relatives.

Return to the OUTLINE format in MORE. Create a new outline of each sibling's family, again being sure to place children and parents in their correct relationship in the outline. Don't worry that you find yourself repeating the names of your parents or grandparents. You'll remove duplications later.

Develop a new "branch" for each relative who has his own family. (This is where you'll have to decide how complex to make your tree. Do you really want to include everyone?) MORE makes it easy to reorganize once you've created your family outline. Even after you convert each outline into a "tree" you can check for errors in placement of each individual and make adjustments back in the outline format.

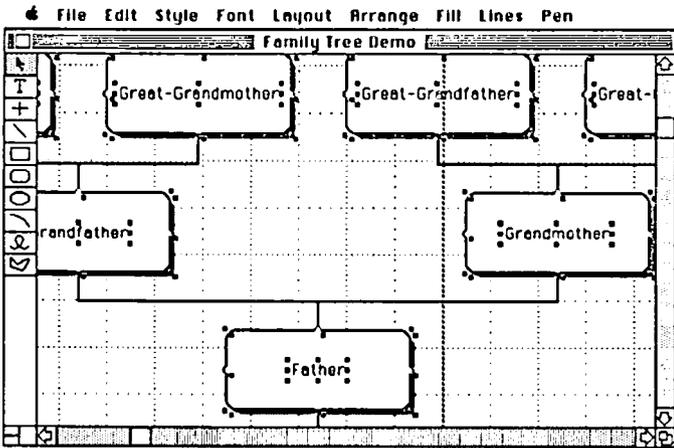
Once you've got all your family tree's branches developed in MORE, switch to the TREE view. Check your trees one more time, to be sure spelling and relative placement of each family member is correct. Now, with one branch on the screen (in its "normal" size view—even though you can't see it all on the screen at once) choose COPY from the EDIT menu. Open your SCRAPBOOK and PASTE the branch into the scrapbook. Return to MORE and cut-and-paste each of your

contd.

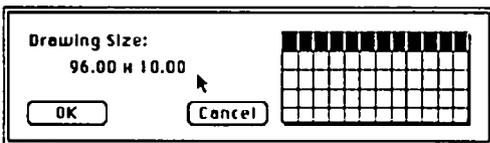
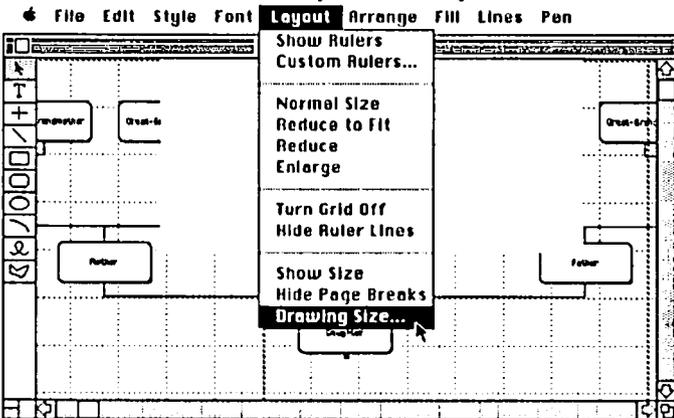
family branches into the scrapbook.

Now it's time to QUIT MORE. Before opening MacDraw, be sure the SCRAPBOOK you just used will be accessible to you on the disk with MacDraw. You can do this by temporarily renaming any other scrapbook on the MacDraw system disk. Then COPY the MORE-disk scrapbook onto your MacDraw disk.

Open MacDraw and start a new document. Give yourself plenty of workspace by choosing DRAWING SIZE and selecting a document one page deep but several pages wide. Choose PAGE SETUP and select the WIDE orientation for your pages. You'll need it! (My first tree covered a full eight feet of paper!)



Give your document a name by choosing SAVE. This will also save the size and layout choices you've made.



Now enter the MacDraw document itself and open your SCRAPBOOK. Choose the first branch of your tree and COPY it from the scrapbook. Back to MacDraw. PASTE the branch into MacDraw and you will see the tree exactly as you created it in MORE! But each segment of the MORE tree will be "selected" when you first paste. Notice that each box, each line segment, even any shadowing you chose in MORE will be selected as a distinct object in MacDraw. This is what will make editing and fine-tuning your family tree easy.

Before clicking your mouse anywhere, choose GROUP from the ARRANGE menu. Suddenly, the entire branch

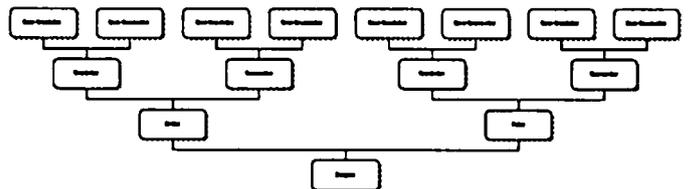
becomes a single object, easy to maneuver on your page. Move this first branch into its approximately correct position for your family tree. (If it's the "main" branch containing you and your children, place it at the center of your MacDraw layout.) SAVE your document to preserve the paste and grouping you've accomplished.

Return to the SCRAPBOOK and select the next branch of your tree. COPY it and PASTE it into your MacDraw document. GROUP the branch, just as you did with the first one. Maneuver this branch into its correct position relative to the first segment of your tree. Do the same with each of the succeeding branches, getting them all into MacDraw. SAVE your MacDraw document again.

Now it's time to eliminate the duplication you probably have in some names (because of MORE's inability to accommodate a truly complex tree.) UNGROUP each branch, one at a time, in MacDraw. Select line segments, names and boxes which you don't need and delete them (using BACKSPACE). Now REGROUP the remaining pieces of the branch. Do this for each branch.

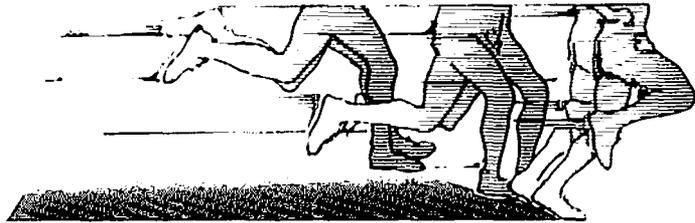
Decide where each branch of your tree belongs relative to the others and move them there. You may have to SELECT, UNGROUP and separate parts of some branches to make room for inserts into the tree. Line segments are easy to extend or contract in MacDraw to accommodate additions and deletions from each branch of the tree. But the advantage of doing all this in MacDraw is that you can select portions of your tree and move them easily around the page, without disturbing their relationship to one another.

To complete your family tree, add a title and perhaps a legend at both left and right ends of the tree identifying each "generation" of your family, perhaps with approximate dates. You may also change fonts and font styles. (Simply select and choose fonts and styles for the boxes you want to change.)



This project will take longer than you might expect. That's because you'll discover more relatives than you imagined! And maneuvering all of them around MacDraw into their correct positions becomes a bit of a logistic nightmare when your tree is large. But it's fun to see your family tree grow. To keep things easy at first, you might start with just a simple family tree, omitting many of your relatives, just to get the "feel" of how to use your Mac to accomplish this project. Later, when you're familiar with the process, you can write to older relatives and ask them to make additions and corrections to your tree.

You'll be surprised (maybe even overwhelmed) by their enthusiasm when they see how neat and interesting your family tree can be after its creation on the Macintosh!

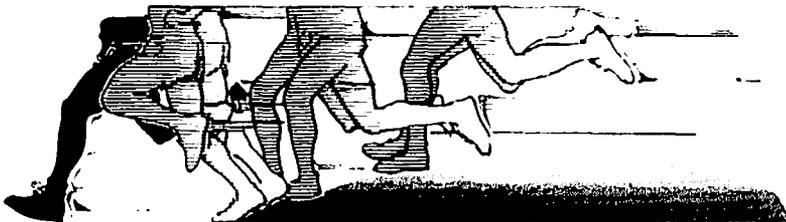


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APPLEWORLD '87—A SPECIAL REPORT: Part 1

by Tom Warrick

The second annual AppleWorld—Apple's name for its two-day working session and party that brings together Apple's principal constituencies—was held in Los Angeles March 2-3, 1987. This year's festivities were special for two reasons: the commemoration of the tenth anniversary of Apple Computer, Inc., and the introduction of two new members of the Macintosh family and a number of other Apple products.

Part I of this report describes the opening session and my experiences playing with the Macintosh SE and Macintosh II. In Part II next month, I will describe what happened at the rest of AppleWorld, which consisted of working sessions of special interest to computer user groups like Washington Apple Pi. That report, which will include summaries of presentations by Apple Vice President for Product Development Jean-Louis Gassée and others, should be very interesting to all Pi members.

The Presentation

Three thousand guests attended this year's Apple World, representing User Groups, Educators (both K-12 and Higher Ed), Dealers, National Accounts (i.e., the large corporations like Westinghouse, General Electric and the like), Value-Added Resellers, Government (added just this year), and International. The opening session was held in the Universal Amphitheater at Universal Studios. (Why this AppleWorld was held in Los Angeles, rather than San Francisco or somewhere else in Northern California, is something of a mystery, but it may have been due to the inability to get suitable convention facilities anywhere in California north of Los Angeles. Incidentally, the Universal Amphitheater was made famous as the place where Pepsi was filming the infamous commercial where Michael Jackson's hair caught fire.)

The opening speaker was Apple Chief Operating Officer Del Yocam, who spoke about Apple's history and philosophy, with the aid of a few lavishly produced videotapes. Del has improved considerably as a public speaker since last year's AppleWorld. Next, the beloved Steve Wozniak came out on stage and said a few words about the very early years of the company. (Alas, he was constrained by circumstances from telling us stories about his Dial-a-Joke days!) Woz was, to the surprise of many, actually wearing . . . a tie! Following the Woz, Apple Chief Executive Officer John Sculley gave a somewhat lengthy talk about Apple's goals. He gave a few tantalizing hints about Apple's future plans, the most significant of which (to me, at least) was a commitment to higher-resolution screens with more than the 72 dots per inch of the Mac.

The Macintosh SE

All this was very nice, but most people were interested in the highlight of the morning's program—Product Development Vice President Jean-Louis Gassée's introduction of the Macintosh SE and Macintosh II. The SE was rolled out (literally, in this case, as it slid across the stage on a curtained cart) first as the fulfillment of Apple's goal to perfect the details, that is, to improve on the Macintosh Plus. Apple has configured the SE with either two built-in 800K drives or one 800K drive and a 20-megabyte SCSI hard disk. The SE also

has an expansion slot built in the back into which you can insert an MS-DOS coprocessor board, a full-page screen or some other peripheral. The SE ROM is larger—256K, of which about 160K is actually used, according to Hardware Product Manager Randy Battat—with the increment over the Plus's 128K used principally to give the SE an improved SCSI manager and to support the slot. Also, the SE power supply has been improved from the earlier Macs, which should reduce the problems associated with opening the case to do repairs, upgrades, and the like. But the overall appearance of the SE is virtually identical to the Macintosh Plus—except for the color, which is a light gray that Apple calls "platinum," and ventilation slots in the front for the extra disk drive. The keyboard on the SE is the "new" Apple keyboard, which will be Apple's standard for the IIs. It is a lower-profile keyboard than the Mac Plus keyboard, and many will no doubt prefer the Apple keyboard to the Mac Plus keyboard, although few things are more a matter of individual taste than how you like your keyboard to "feel." The keyboard costs extra, as you have the option for \$100 more of getting a keyboard with a key configuration closer to the new IBM keyboard.

The Macintosh II

If the SE is evolutionary, the Macintosh II is revolutionary. It differs greatly from all other Macintoshes in that it is modular. The central box is, I believe, just a little bit smaller than the IBM PC AT (if this is true, it had to be deliberate). The II uses the Motorola 68020 microprocessor operating at 15.7 megahertz, roughly twice the clock rate of the 68000 in other Macs. The 68020 is a full 32-bit microprocessor. In contrast, the 68000 has 32-bit data registers (and so is as much a 32-bit computer as the original IBM PC was a 16-bit computer, which is to say not to a purist) but the data bus on the 68000 itself is only 16 bits. Going from a 68000 to a 68020 is roughly equivalent to doubling the number of checkout lanes at the world's busiest grocery store. (A number of third parties are offering 68020 upgrade boards for older Macintoshes.)

The Mac II also includes as standard equipment a 68881 floating point coprocessor, a specialized chip that allows the Mac II to perform many complex mathematical operations even faster than it could using only the 68020 itself. Making the 68881 standard equipment rather than an option was a wise marketing move, as it will encourage developers to follow Apple's guidelines in writing software to take advantage of the power of the 68881. Version 1.03 of Microsoft Excel, for example, is already designed to take advantage of the 68881.

One disappointment in the Mac II is that it comes standard with only a megabyte of RAM, the same as on a Mac Plus. This, I suspect, is due to the high price of megabit RAM chips. The recommended maximum internal memory is eight megabytes. Incidentally, you will soon be able to buy an Apple-brand memory upgrade for the Plus, the SE and the II, but it is currently priced at just under \$1,000 for two megabytes. The Mac II has a number of disk drive options, all of which include one 800K floppy drive. The basic Mac II

contd.

will have a 40-megabyte hard drive, with 20-megabyte and 80-megabyte models as options.

The sound on the Mac II beats even the IIgs. But the real excitement from a technological standpoint is the color. With the basic video board, you get either 16 colors or 16 levels of gray-scale, e.g., black, slightly less black, still slightly less black, and so on through white. Color and gray-scale are handled with the same video board. The real "wow," though, comes from the Video Card Expansion Kit, which allows 256 colors or shades of gray *per pixel*. When you mix adjacent dots, Apple claims a color palette of 16 million colors. The video card works with a variety of monitors and video projectors, including a variant of the RGB monitor sold with the IIgs.

Other important new features are six NuBus slots (one of which most Mac II owners will use for the video card, so the effective number is five). NuBus is a powerful and flexible architecture that is designed to free users from worrying about what goes in which slot. Also, the Mac II is designed to be a godsend to UNIX users, as it contains space for a 68851 PMMU memory management upgrade chip that will allow multitasking under *UNIX*. I talked at one of the AppleWorld '87 parties with a consultant who works with UNIX systems a great deal, and he tried to persuade me that this was the dawn of a new era. My own personal attitude toward UNIX, I must confess, is "What, me worry?" but I respect this fellow's views on the subject, even though they were uttered after several drinks and a small fire caused by an overly energetic crepes chef. These AppleWorlds are hard work.

Some Reflections on What To Do

I was able to play for several hours with Mac SE's and, particularly, with Mac II's. Based on what I saw, here are my reactions:

The *Macintosh 512E* will soon disappear from retailers' shelves. If you buy a 512E in the next few months, drive a hard bargain.

The *Macintosh Plus* will likely become the standard machine for the university market, for those who have other Macs at work and want something compatible at home and, to a lesser extent, for those business users who run software off of networks and do not need a hard disk. Apple did not reduce the price of the Mac Plus with the introduction of the SE. Apple will probably lower prices around September 15 or October 15, 1987 (this is not based on inside information; it's just a guess based on Apple's Christmas-season marketing patterns and the day of the month that Apple traditionally makes price changes), and the Mac Plus will probably drop a few hundred dollars at that time. But don't look for the price to go much lower than that, as Apple will not want to squeeze the price differential between the Plus and the IIgs.

The *Macintosh SE* will for the next year or two be *the* machine for *business*. The built-in hard disk and the slot that gives the SE MS-DOS compatibility (interestingly, fewer people are calling it "IBM compatibility" these days) allow the Mac to do what an AT clone can do, and the ease of use of the Macintosh interface makes it a clear winner. Additionally, the more powerful and complex software that will prevail in the marketplace of 1987 and 1988 (e.g., Microsoft Word 3.0 and Excel 1.03, and Aldus PageMaker 2.0) coupled with the need to have many fonts to use with your LaserWriter make a hard disk almost a necessity in business today. I am very

pleased with Apple's marketing decisions on the SE (except, of course, for the lack of an upgrade path, particularly for the ROM's).

I have somewhat mixed feelings about the *Macintosh II*. Lust is clearly one of them. This is *the* machine for *power users*, or those that aspire to be. The clock rate on the microprocessor and built-in 68881 make for a dream machine, even if you regard the color and sound as a giveaway, as I suspect most people will. (Ask your colleagues who use MS-DOS machines how often they really use color.) And, of course, there are slots. The Mac II is also *the* machine for *software developers*, for the same reasons. Apple has finally come out with a good professional development system on the Macintosh, the Macintosh Programmers' Workshop, and the tools are now available to make serious software development much easier than it has been until recently. This system should really sing on a Mac II. And as for you UNIX fans, well, have at it.

But the Mac II is not without its drawbacks. Price is the most obvious. The list price for a reasonably configured system that includes the Video Card Expansion Kit and RGB monitor is around \$7,000, more than twice the price of a Mac SE. Availability is another. The Mac II will not be available until May, and a deadline such as this is not easy to meet. Sources I talked to at AppleWorld all said that the Mac II would not be available in quantity until the fourth quarter of this year.

Then there are a few more troubling things. The Mac II's I saw at AppleWorld all had little problems that appeared to be hardware or ROM-related. All were connected with the video. For example, the vertical image size oscillated for a couple of seconds when you reset the machine (it does this on the Mac Plus but only for an instant). This may be a feature, not a bug, as they say, but it struck me as unnecessary and disconcerting. Also, there were color bleed problems in some settings. For example, you know that the Macs we all have "highlight" text in, for example, dialog boxes by showing it as white text on a black background, instead of black on a white background as we normally see. One of the Mac II's I saw highlighted text using black letters with a streak of yellow over them ("*highlighting*," get it?), but the yellow extended outside the bounds of the edit field that should have contained the highlighting.

These problems are not insuperable and may represent, as I have said, bugs in the ROMs that can easily be patched. The ROMs in the Mac Plus went through three revisions before stabilizing, and the improvements in the Mac II ROMs, which occupy about 230K of the 256K of ROM space available, are much more significant—full color support and arbitration of six slots, among many other things not done on the Plus or the SE.

Also, the Mac II will require a rewritten Finder and System (as will the SE, but the differences are not as great as in the Mac II Finder and System). MacPaint will not work on the Mac II, and I have been told by someone that MacWrite will not. Apple is in the process of revising these applications, and by May a new version should be out that will work with the Mac II.

What to do? Frankly, unless you really need a Mac II for some special purpose, I counsel you to wait until the fourth quarter of the year before buying a Mac II. You may not have

contd. on pg 57

VIEW FROM THE HILL

by Rich Norling

How could I start writing a column on March 9 without saying something about the two new models of Macintosh that Apple announced on March 2?

New Macintoshes

Apple seems to be taking its latest marketing lessons from Detroit. Why have only two models of a major product when you can have more? On March 1, Apple was selling two models of the Macintosh: the Macintosh 512K Enhanced (with the 128K ROM and 800K double-sided floppy disk drive), and the Macintosh Plus. Now there are four. And some of them are named like cars, too.

Last week's top of the line, Macintosh Plus, is now described by Apple as an "entry-level personal computer for business professionals, students and faculty." Despite its new label, the Macintosh Plus is still a productive, powerful machine, especially when coupled with a hard disk.

The Macintosh SE is like a Macintosh Plus with a slot for add-on cards and the option for an internal hard disk. It will be the machine of choice for people or businesses that need connectivity to other types of machines (like the IBM & clones family) or to fast networks like Ethernet.

The Macintosh II is the much-awaited "open Mac." It is a much faster and more powerful machine, initially targeted by Apple at the desktop engineering market for CAD (computer-assisted design) and other applications that demand high computational speed and precise graphical displays.

The Macintosh SE is available now. The Macintosh II is expected to be available in May, but will probably be in short supply until next fall.

Macintosh SE

The Macintosh SE seems to be a redesigned Macintosh Plus, with the most noticeable additions being a slot for add-on cards and two Apple Desktop Bus ports for connection to keyboards, mice, and graphics tablets. The Apple Desktop Bus is Apple's new way for other manufacturers to connect input devices they make to the Macintosh.

Several companies have already announced they will make cards to go in the SE's single slot. AST Research will make a card with an Intel 8086 chip on it and a connector to an IBM PC-style disk drive, which they say will provide performance equivalent to an IBM PC/XT. Another company will make a card that provides a high-speed connection to Ethernet networks. It's probably only a matter of time until someone announces a card that has a cable out the back of the machine to a box that lets you plug more than one expansion card into the machine's single slot.

The Macintosh SE has the same 68000 central processor chip, 800K floppy disk drive, built-in screen, and standard 1 megabyte of RAM (expandable to 4 megabytes) as the Macintosh Plus. The keyboard is separate, with two available from Apple: a IIGs-style that looks to me like a curved dish, or a larger one that is described as IBM PC/RT-style including 12 function keys. The Macintosh SE's case is large enough for a second disk drive, either a second 800K floppy disk drive or a 20-megabyte SCSI internal hard disk.

Mainframe on a Desktop

You can call the Macintosh II the "open Mac" if you wish. I prefer to call it the "mainframe on a desktop." I call it that because I'm thinking of taking some of the early mainframe software I wrote and putting it on the Macintosh II (with the addition of a graphical, Macintosh-style user interface, of course!).

The Macintosh II uses the Motorola 68020 central processor chip and a 68881 floating point coprocessor, running at a clock speed of 15.7 MHz (compared to the Macintosh Plus and Macintosh SE at 7.8 MHz).

Speed

While the clock speed of the Macintosh II is only double the clock speed of the Macintosh Plus, the actual speed in executing existing programs is almost 4 times as fast. That's because the 68020 chip contains an instruction cache that saves it from having to pull instructions from memory every-time they are executed in tight loops, and the 68881 coprocessor chip significantly speeds up floating point computations.

I ran two timing tests on an early version of the Macintosh II, and found that both tests ran 3.7 times faster on that machine than they do on a Macintosh Plus. That is 3.7 times faster without rewriting any code to take advantage of any special features of the new machine. I would expect applications written specifically for the Macintosh II hardware to run 5 to 7 times faster than on a Macintosh Plus.

These speed increases apply, of course, to the parts of programs that are executing in memory. If a program runs slowly on a Macintosh Plus because it is waiting for a slow input or output device, the program will run just as slowly on a Macintosh II unless you find a faster device.

OK, so it's faster. It also has better sound, color, six slots for expansion cards, and you can choose a 20-, 40-, or 80-megabyte internal hard disk. You'll need to use one of the six slots for your video controller card. The card Apple offers drives a 640 by 480-pixel display on either a 12" monochrome monitor or a 13" color monitor. I'm sure there will be several larger screens from third parties by summer.

Unix, too

The Macintosh II will also run Unix. I never fell in love with Unix myself, but those who have grown accustomed to Unix seem to think that any machine without Unix is a wimp. The Macintosh II is not a wimp. An optional upgrade using the Motorola 68851 memory management chip will facilitate Unix virtual memory and multitasking operations.

Much existing Macintosh software runs on the Macintosh II with little or no difficulty. Since the release of the original 128K Macintosh, Apple has been urging software developers to follow its guidelines for compatibility with future hardware. The guidelines include things like not assuming the screen size will always be 512 by 342 pixels. Software developers who followed the guidelines will now find that their software runs on the new machines with little or no problem. Those who did not follow the guidelines will have problems.

Particular things to watch out for are software that is copy-

contd.

protected, and games. Many copy protection methods rely on patching into Apple's disk driver or use some special feature of the hardware. And many games are written using low-level access to the screen. If these were not done carefully, the software will not run on the Macintosh II. Software that runs on both the Macintosh Plus and the Macintosh XL (remember the renamed Lisa?) is likely to run on the Macintosh II also.

Cricket Graph and StatWorks both run on the Macintosh II without change. Now, for the first time, you can see them on the screen in color (I put the color codes in there a long time ago, but never had a chance to see them on a Macintosh screen until now). Flight Simulator and Fokker Triplane both crash (no pun intended?) on a Macintosh II with a system error while the program is starting up.

Software developers will be happy to know that the Macintosh II contains a 256K ROM, with a lot of additional ROM calls you can make. The 256K ROM includes color QuickDraw, of course, and a lot of other things as well. There are now at least half a dozen more Managers to learn about—including the Color Manager, Slot Manager, substantial additions to TextEdit, and a Script Manager. *Inside Macintosh*, Volume 5, will contain all the fascinating details.

What to Buy?

I used to think of myself as a software person, rather than a hardware person. The question may be in doubt, however, when I look around at all the hardware I have put into my office to support my software writing. When Apple released about one new Macintosh model each year, I purchased each new model immediately so I could test my software on every variety of Macintosh. I finally broke down and sold the 128K Macintosh at last December's garage sale.

So now there are two new machines. Should I buy both of them, to keep my collection complete? No.

Financial considerations aside, even if I bought both of them it will no longer be possible to test my software on every major type of Macintosh hardware because of the expansion slots. There will always be the possibility that some new company's add-on card will react with the software in a funny way. Programming the Macintosh will now become more like programming the Apple // in the sense that the programmer will always have to keep in mind that one of the slots may contain some snazzy new card that didn't even exist when the program was written.

When I write software I am particularly interested in getting the full performance that the hardware is capable of producing. So I shall opt for the most capable hardware. My decision will be to purchase the Macintosh II, complete with color monitor and the video controller card add-on that makes available 256 colors for use on the screen at one time. Besides, I really would like to have some of my former mainframe things running on a Macintosh, in color (I'm not saying what they are yet, because I don't want to tip off possible competitors).

No Inferiority Complexes, Please!

If you have a 512K Macintosh or a Macintosh Plus and the machine you have was sufficient for your needs on March 1, then you might consider whether the machine is still sufficient for your needs. Did Apple's announcements on March 2 really change your needs, or just your hopes?

To come back to the Detroit analogy, most people don't

run out and buy a new car (or two) every year just because Ford or GM or Chrysler adds more models to their product line. What we tend to do is to buy a new car when the old one wears out or no longer fits our needs. Once we've decided to buy a new car, then we compare all the models and choose the one that's best for us (or, I should say, the best one we can afford).

What I am suggesting is that the computer industry is maturing just a little, and companies like Apple are expanding their product lines. That trend is good, because it means that when you need to buy a computer you will be more likely to be able to find a model that closely matches your needs and pocketbook.

A necessary result of that trend, however, is that most of us will have to give up our past habit of wanting to own the latest and greatest, with all the bells and whistles. What would we do in five or ten years when Apple expands its product line to supercomputers? Do we all need a Cray on our coffee table? (I, of course, ...)

If you plan to keep your existing Macintosh instead of buying one of the new ones, you should not let yourself get an inferiority complex about it. You still have a very powerful machine whose potential is just beginning to be tapped. Besides, you can smile smugly while Macintosh II owners ask "Why aren't there any good games?" After all, you can run Flight Simulator!

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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a choice—I suspect that there will be more than enough people disregarding my advice and keeping supplies tight. But by fall, Apple should have worked out any problems in the ROMs and the hardware that aren't solved by May, and there should be enough Mac II's in dealers' stores that there will be some price competition. And, as noted above, if there is going to be a price drop, it will probably occur in September or October.

But the bottom line is—get one. ☞



DEVELOPER'S VIEW...

Programming the Macintosh II, "Make Your Own" SCSI Hard Disks...

by Jim Lanford

The Macintosh II.

The Macintosh II is GREAT. It is very fast and somewhat compatible. How compatible? At Micro Dynamics, we have been using our Mac II to develop software. This does not leave much time to determine which software packages work.

Software which we have run on the Mac II: Excel 1.03, WriteNow, ReadySetGo 3.0, CricketDraw 1.1, MacDraw, GraphicWorks, MacScan, SuperPaint (1 bit per pixel only), MazeWars+, and MindWrite (I like MindWrite). All of the software we've developed runs: MARS2, PostHaste, and MacLabeler Plus. Some software we have found which does not work: MacPaint, MacWrite MacTerminal, and Red Ryder. I have seen MacPaint and MacWrite working on a Mac II at Apple, so I suspect that upgrades will be available by May. The only problem with MacTerminal and Red Ryder is the keyboard does not type. I suspect that these programs bypassed the tool box calls and called the keyboard driver directly. The Mac II uses the new "desktop bus" along with the Mac SE and Apple IIGs. I would guess these programs will not work on the Mac SE either. As Jon said at the last WAP meeting, it is good that the Mac II will not ship until May since it gives developers time to fix compatibility problems.

The programming environment.

I can comment on the programming environment. It is wonderful. It is what the Lisa should have been. We program in 68000 assembler, Forth, and C. The Macintosh Programmers Workshop (MPW 2.0) has hooks for Color QuickDraw and other Mac II enhancements. MacForth Plus works very well on the Mac II. The new color window routines are built-in, making interactive color programming easy. Light Speed C 2.0 works well on the Mac II. However, you will have to write your own color routines until Think Technologies releases the upgrade. The Macintosh II is such a nice programming (and working) environment, our goal is to eventually have one on each of our Macintosh programmers desks.

How fast is it?

On my "wall clock" it is four times faster. I like to measure computer performance by the "clock on the wall" because that is how long we have to wait. Micro computers often out-perform ultra fast mainframe computers on the "wall clock" because the mainframe is so overloaded. One of our large programs compiles in 8 minutes on the Mac Plus and in only 2 minutes on the Mac II. One of my CCITT/FAX programs that decodes a worst case image in 60 seconds on the Mac Plus now takes 15 secs on the Mac II. In order to obtain a four times improvement on your watch, the processor is probably running 7 times faster. The 68020 used in the Mac II uses a 16MegHz clock speed (about twice that of the standard Mac). It also has a four byte (32 bit) data path which is also twice that of the Mac.

These speed increases should only give a two to three times increase in "wall clock" speed. The extra speed performance is caused by the 68020's instruction cache. This 256 byte cache is inside the chip itself and eliminates the need

for the 68020 to access RAM to fetch the next instruction. Clever programming can use this to get a full seven times performance from a routine. We use this feature for our 68020 based real-time systems. Also, benchmark tests have shown the Mac II to run 40% faster than a Compact 386. It is also less expensive. Gee, too bad the Macintosh is just a "toy".

The SCSI port on the Mac II is actually somewhat faster, but that is only because Apple fixed a timing bug in the Mac Plus. I have been told that the fix is in the 256K ROM's so that the Mac SE SCSI is also faster.

So who needs color?

So what is Micro Dynamics' going to do with a color Macintosh? MacLabeler Plus was the first program we ran that showed us color on the Mac II. John Bennisson had the old QuickDraw color installed to print colors to the ImageWriter II. PostHaste also ran the first time we tried it, but until someone tells me why an interactive PostScript editor needs color we will leave it alone. We will keep adding color scanner drivers and color printer drivers to MARS2 as those devices become available. Our Satellite Ground Station (SGS) software already runs on 68000's with color monitors and is porting over very quickly. The Mac II is four times faster and four times less expensive than the hardware that SGS now runs on. (Isn't technology wonderful?)

Color QuickDraw.

You will be hearing more about Color QuickDraw. It has a very nice color model which will help prevent instant obsolescence when more powerful hardware becomes available. For instance, Color QuickDraw allows 32 bits of color information per pixel. That is four bytes or 4 billion colors per pixel! All you have to do is plug in a color card which will support it. Today the cost would be prohibitive, so the card Apple uses has 8 bits or 256 colors per pixel. This color is mapped into a color table with 16 bits of Red, 16 bits of Blue and 16 bits of Green information. The Apple card has 640 pixels by 480 pixels resolution with NO flicker. The Commodore Amiga flickers like crazy at 512 by 400 resolution. Super-Mac Technology has announced a large color monitor and card with a resolution of 1024 by 787 with 8 bits per pixel.

Hooking up a SONY MultiScan or NEC MultiSync.

Apple did not have very many color monitors to lend developers. Like most developers we were sent a monochrome monitor. We did find out about a tech note which showed how to hook up a NEC MultiSync monitor. We hooked ours up and it looked pretty good. We then hooked up our SONY MultiScan and it looked even better, but not as nice as the color monitor SONY is building for Apple. For the record here is the hookup:

MacII	SONY (NEC)	Signal Name
*1----	*6	Ground
*2----	*1	Red
*5----	*2	Green (sync)
*9----	*3	Blue

contd. on pg 59

THE NEW MACS IN ENGLAND

by Peter Trinder

Hello from England. I am writing this on the Sunday after the Apple 10th Anniversary celebrations which were held for the British press and dealers in the splendid Anugraha Conference Centre near Windsor. The event coincided with the launch of the SE and MacII on your side of the Atlantic, but was rather lower key I guess. I attended the technical seminars for dealers, and whilst the heating was non-existent in the hall, (all the heat was upstairs in the Sales and Marketing seminar!), we were entertained to a detailed demonstration of the SE and MacII. There was no opportunity to ask questions but Apple laid on a room where they had a stripped MacSE and other items like the SCSI Tape Streamer.

We also had 2 Macintosh II's and several SE's set up in a hands-on area. One MacII was driving a SuperMac 19" (?) Colour Monitor and I tried Cricket Draw. The other MacII had the Mono Monitor and I was really struck by the grayscale graphics. I like colour but until it can be printed to the same quality as the screen I will stick with b/w. PageMaker 2.0 was running on the MacII and very fast. The version I saw was v24 (Engineering). I do hope it is not delayed. Quark Xpress was also demoed and I think this is by far the best competition for PageMaker. However no one else seems to use the cutting table idea. I do like to be able to throw my bits of graphics and text to the side if I need to design a page layout. Adobe Illustrator was shown on the SE by Paul Towner from Adobe Systems. I asked him about whether they would include Fountains like Cricket Draw, and he said they were working on a different way of doing that sort of thing, but not in the present version, so far as I could understand.

Isn't it interesting that the new Macs have auto sensing power supplies? Just like the HD20. Now you can all bring your Mac to Britain and plug them in without smoke (Steve Jasik please nota bene!). It also raises the point about grey markets. An SE 800 costs £2495 and the SE 20HD 800 is £3195. This compares with \$2898 and \$3698, a difference of £625 & £809.

Apple really excelled because at our shop we had an SE delivered the day after launch and 5 more arrived on Friday. I am typing this on the new keyboard. I seem to make fewer typos. The keyboards all came with the ` and \ keycaps the wrong way round. Same as the IIgs keyboard in that respect.

I saw AppleShare working at the Which Computer Show in Birmingham. Interesting story here is that Apple's European solicitor had drafted a contract which needed the approval of a manager who was at the show. It was sent via AppleLink to Hemel Hempstead HQ of Apple UK who had AppleShare running connected via a Hayes 2400 modem and InterBridge to the show. The document was dropped into the correct folder, read and returned to Paris within ONE hour!

On the SE the System is 4.0, the Finder 5.4, with LaserWriter 3.3 and Imagewriter 2.5. Be careful using the Installer on existing disks because there is a new scrapbook and it will delete your old one, so rename the old one xScrapbook or something BEFORE update, then trash the one that gets installed (I mean the file not the DA). Finally rename your

XScrap to Scrapbook. There is a Universal Installer Script and I have installed this system on to my HD20 under my Mac with 128K ROMs and it works a treat.

I ran MacID on the MacSE 20SC and was amused to be told it was a Macintosh II and the ROMS where ????? Have I got a bargain? The new 256 ROMs won't work in the MacPlus. I found that Stepping Out does not work either but assume Berkeley will soon fix that. This program is a poor man's Mega Screen. Although we distribute Megs, I will use Stepping Out 'cos I can't afford a Mega!

Other incompatibilities that I have discovered concern LaserServe and the LaserWriter 3.3—Infosphere knows about this and is sending me version 1.2b. Apparently, all the Spoolers have got caught out. I will have to see what MacTutor says about it. ☺

Developer's View contd. from pg 58

Set the SONY to analog mode. Set the NEC to analog and manual mode. Now all you need is the extra dual ported video RAM to allow the increase from 4 bits per pixel to 8 bits per pixel. The NEC 41264 RAM chips are in short supply. New Image Technology (301/464-3100) has them at a very good price. The Fujitsu 81461 RAM will also work as a replacement for the NEC part.

SCSI Hard Disks.

If you are going to start building a SCSI drive from scratch, I recommend the Seagate ST225N-9. This is a 20Meg hard disk with the SCSI port built into the drive itself. Other sizes of Seagate hard disks with built in SCSI controllers should work as well.

With many of the IBM PC owners upgrading their hard disks, I recommend purchasing a used drive at a very low cost. Used ten and twenty Meg drives are available at low prices. I would suggest that you not buy a drive made by CMI. Most other manufactures should be OK if the disk is working and quiet when you buy it. For a SCSI controller, many WAP members are buying the Adaptec 4000A. This is a very reliable controller with a good data separator, full track buffering and an intelligent formatter which spares out bad sectors on a per track basis.

We have converted five hard drives with the Adaptec controllers. We've had no problems running them full time over the last two months. We are planning to convert four more drives.

WAP will have a group buy on disks, controllers, cases, power supplies and cables. WAP will then have a "drive assembly party" to put them all together and help those who have never done this type of mechanical work before. Contact Jay Heller for more information (301) 984-7440.

Jim Lanford is the architect of MacLabeler™, MARS2™, Postllaste™, and other "yet to be announced" software for the Macintosh II. He has implemented ground stations for Spartan I and other real-time 68020-based testing systems for various satellites. Jim is president of Micro Dynamics, Ltd., a D.C.-based consulting firm specializing in custom Mac software and advanced training. ☺

MAC Q & A

by Jonathan E. Hardis

The Mac SE and Mac II are out, and so is the first wave of technical information. What I've seen is sometimes contradictory, and there are still major gaps in what has been published. But in this month's column I take a first stab at going beyond the hype that you can read in MacWorld, MacUser, and InfoWorld.

Q: What is the difference between the MacPlus and the Mac SE? Which do you recommend that I buy?

A: I view the MacPlus and the Mac SE as having essentially the same capability, for the same buyer, at the same price. When you add to the cost of the MacPlus the extra disk drive that comes standard with the SE, they cost within 10% of each other.

The SE has the touted "System Expansion" socket, but on the Plus a 68000 clip does about the same thing. It should come as no surprise that the first companies to sell SE cards are those that sold Plus upgrades. I expect that many of the new entrants to the market will not only make SE cards, but will do the marginal additional work to make Plus products, too. The SE has a redesigned power supply (Hallelujah!), and it runs a bit faster since the video display circuit "looks" at a larger chunk of RAM memory each time it gets its turn (leading to fewer turns required).

Clearly, the SE is intended to be the replacement product for the MacPlus. All previous Macs have had a lifetime of two years. When the Plus turns two next January, I predict it will be discontinued as well. I see the SE as the base design for the next few years, and the original Mac design is history. I predict there will be no more upgrades offered for it, just as old owners can't today upgrade to the SE. On the other hand, the SE starts a new series of upgrades that are waiting to happen. 16 MHz 68000s, 68020s, 1.6 MByte floppy drives, 1 MBit SIMM memory cards, and even perhaps a color monitor are potential improvements which could be offered in the next few years. Never before have the two Mac products been so close in price and performance, and I would assume that when the SE becomes the entry level product, there is a "super SE" waiting to hit dealer shelves.

Where I see trouble on the horizon is in the area of software compatibility. The ROMs on the SE contain software enhancements, such as a new version of TextEdit (the Toolbox routines that put words on the screen) and heirarchical menus. While it is technically possible to add this software to the older models, either through a ROM change or a new System file, Apple officials including Jean-Louis Gassée (the head of R&D) have declined to publicly commit themselves to this sort of compatibility. This raises the possibility that future software will be written for the SE that won't run on the Plus. Remember, the Mac XL never got a revised MacWorks (to give it the features of the 128K ROMs), or the HFS file system.

So, if "keeping current" is important to you, the SE is the right choice. If you are buying equipment for a professional work environment, the SE would likely be worth the extra cost. However, if today's MacPlus is everything you want in a computer, take advantage of the price difference. I'd keep an eye out for bargains in about 6-9 months when the backlog of SE orders subsides.

Q: Can MacPlus memory upgrades be used on the SE?

A: The SE memory capacity is the same as the Plus: 1 Meg with 256K SIMMs, 4 Meg with 1 Meg SIMMs. While the SIMMs are the same, the piggy-back boards used to hold more than one 256K SIMM on the Plus won't fit in the SE.

Q: How can I reduce the "sticker shock" of the Mac II?

A: The Mac II is an entrepreneur's dream. Third parties can sell all but the base unit, which you must get from Apple. There will be memory vendors, such as Dove, that will sell you the SIMMs. (You can have up to 8 MB, using 8 of 1 Meg SIMMs.) There will be disk drive resellers that will distribute the same hard disks that Apple does, for about half the price. (The 20 MB Seagate ST-225N costs \$370-400 mail order. Cables and a mounting bracket will add to the cost.) The \$89 "Universal Monitor Stand" can be found in ads for PC owners for about \$20. The color monitor is manufactured by Sony. And so I would expect it to be similar (if not identical) to the Sony Multiscan which you can buy from other sources. The NEC Multi-sync will also work, though not as well, and other brands will also find a niche. Watch for third parties selling their own video cards. And if you buy Apple's 4-bit video card, you can make your own "8-bit video expansion kit" by putting 8 NEC 41264 or Fujitsu 81461 chips into sockets on the card. Finally, the keyboard is unbundled, and so third parties can offer alternatives there, too.

Q: Explain the 4-bit vs. 8-bit video cards.

A: Current Macs use one bit of memory for each dot on the screen. That dot is either on (white) or off (black). The standard video card on the Mac II has 4 bits of memory for each dot on the screen. With that much information, the dot can be 16 different things: white, black, and 14 shades of grey or 14 different colors. By adding more memory to the card, you can have 8 bits of memory for each dot on the screen. Then, the dot can be 256 different things. That's far too many shades of grey for the eye to tell apart, and so the only reason to spend the extra money is if you have a color monitor. But don't expect 256 colors to make the picture look like television ... it will look like a "paint by numbers" exercise. 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.

contd.

A: The system was set up with an eye toward using a video coprocessor on a card at a future date. In particular, they designed toward using the Texas Instruments TMS34010.

Q: What disk options do I have with the Mac II?

A: The Mac II has space internally for two 800K floppies (only one is standard, but there are cutouts in the bezel for the other) and one hard disk. There is a SCSI connector on the back to add more hard disks (up to 6 of them), just as you can do on the Plus. However, there is no socket for an external floppy drive.

Q: What is NuBus?

A: It is a way of connecting together dissimilar microcomputers so that all have symmetrically equal access to each other, and to other components in the system. It is reasonably fast and simple. NuBus started as an idea at the MIT Artificial Intelligence Lab in 1979. Western Digital Corporation, Lisp Machine (Inc.), and presently Texas Instruments have held development rights to the architecture. Apple says that they are attracted by the idea of having concurrent coprocessors on the same bus.

In Apple's implementation of NuBus, the (up to) 8 Megs of memory on the Mac II motherboard can not be "seen" by other NuBus boards. In that sense, DMA and block transfers are not supported. However, one can put additional memory on the NuBus itself and do DMA to that, in parallel with the Mac II's computations. However, it takes a bit longer to access any memory on NuBus.

Q: Are the add-on cards the same for both the SE and the Mac II?

A: No. Only the Mac II has NuBus, the SE does not.

Q: Is there a program to convert Multimate files on a PC to Microsoft Word or MacWrite?

A: Multimate can save files in IBM's DCA format. Word 3.0 comes with a conversion utility for that format.

Q: What are the current versions of System and Finder?

A: System 4.0, Finder 5.3, and other newer versions have been released to developers for compatibility testing. They have also been posted on the national BBS systems. Apple does not recommend that users (other than those with Mac SE's) use these versions, and they refuse to license them to commercial software vendors for sale to the public.

For the time being, System 3.2/Finder 5.3 is the current recommended combination for all owners of the older Macs, except owners of the 128K Mac. (128K owners are stuck with Finder 4.1 forever.) MacServe users should use the system software that comes with it. Better-tested replacement software will follow in a month or so. The test versions do fix some bugs (while adding others), and so you are free to experiment with it, at your own risk.

Q: Is the audio on the Mac II CD (compact disk) quality?

A: No. While the Mac II can generate a wide spectrum of

frequencies (tones) (up to 22 kHz), the dynamic range (the number of volume steps) is much less.

Q: Where can I get technical information on the new machines?

A: ADPA (800-426-3667) can supply draft versions of three manuals that will eventually be published by Addison-Wesley.

Quickies: SuperMac has a LaserWriter spooler now for Dataframe owners ... SuperMac's works with PageMaker, LaserSpeed won't ... Double Helix 2.0 is now forecast for mid-May ... Hayden has been sold to Spinnaker Software of Lowell, MA ... Sidkick version 2.0 has shipped ... Interlace owners should ask Borland about upgrading to version 1.01 of Reflex. ☺

MindWrite: A Review contd. from pg 47

and poorly executed.

My Sentiments Exactly.

Andy Hertzfeld, Boy Savant of Apple's rouge engineering corps, was interviewed in a no-holds-barred interview in February's MacWorld. When he was asked, "Are there any products for the Mac that you don't like?" he responded, "...One of the word processors that recently came out is a disgrace." Now, we can speculate all day about this one, but so far my candidate for Worst Word Processor of the Decade is surely MindWrite.

MindWrite, version 1.0, written by Cary Wyman and Linda Moncrief, MindWork Software, P.O. Box 222280, Carmel, CA. 93922. ☺

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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 continue to meet on the fourth Tuesday of each month at the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, MD at 7:30 PM. Mac owners in the local Frederick area are welcome. Call Lynn R. Trusal at (301) 845-2651 for details.

New FAC Meeting Location, Date and Time

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.

Apple II Upcoming Programs

April 11 - Apple sector editing and Macintosh comparison of Macpaint, SuperPaint, Full Paint, and Comic Works

SIG MAC Upcoming Programs

April 28 - Apple IIgs Special Demo
 May 26 - MORE & MacLightning Demo

MACINTOSH BITS AND BYTES

by Lynn R. Trusal (Frederick Apple Core)



Macintosh Disks

Like many of you, I receive unsolicited magazines, newspapers and advertisements dealing with Macintosh products. So far I have received two copies of the Diskette Gazette published by International Datawares, Inc., of San Jose, CA. They apparently sell disks and disk-related products but their most recent Newsletter also had ratings of Macintosh disks based on hundreds of thousands of disks used in a disk duplication environment. They rated both single-sided and double-sided disks as best, excellent, good, poor, or bad. The following table details their results.

Single-sided	Problem Rate	Quantity Tested	Rating
Sony	1/5,000	> 175,000	Best
JVC	1/4,000	> 30,000	Excellent
Fujitsu	1/2,000	> 15,000	Excellent
Maxell	1/3,000	> 20,000	Excellent
BASF	1/2,000	20,000	Good
3M	1/1,500	> 5,000	Good
Memorex	1/50	500	Poor
Verbatim	5/500	500	?
Dysan	1/100	100	?

Double-sided

Sony	1/5,000	> 50,000	Best
JVC	1/3,000	> 10,000	Excellent
Fujitsu	Not tested by company, but about to be certified by Apple		
Maxell	Not tested by company. Initial reports of others are good.		
3M	Not tested by company.		
BASF	Not tested by company. Initial reports is very good.		
Memorex	60/1,000	1,000	Poor

It appears that Sony is the best maker of both single- and double-sided 3.5" disks for the Macintosh. They also mention that Sony is the primary supplier of Apple brand floppy disks. Keep in mind that you can save a considerable amount of money by getting together with two or three friends and buying disks by mail order in deference to purchasing them from local computer stores. I know of one local store that sells Apple double-sided (DS) disks for \$44 for a box of 10. You can buy 50 DS-Sony disks in boxes of 10 for about \$17 per box including shipping or about \$12 a box for single-sided disks. These prices will be even lower by the time this article

contd.

appears. Even if you only order one or two boxes, the savings are considerable. Just check the Macintosh magazines for the current ads and use the 800 number that most companies have for ordering.

Don't stock up on large quantities that you can't sell since the prices are dropping all the time. You may find that when you call the company the prices are even lower than their current ad. If you and your friends don't mind buying in bulk, you can save even more by ordering 50 disks in a single bulk box and dividing them up. Disk labels are often not included for these bulk disks.

dBASE for Macintosh Delayed

Ashton Tate has delayed its release of dBase for the Mac until the second quarter of 1987. The delay is apparently the result of unacceptable performance of the current version of the program.

Graphics Coprocessor

Intel's 82786 graphics coprocessor is apparently bug-ridden and this may cause manufacturers to use the Texas Instruments 34010 processor instead of Intel's. The rumor is that Apple may be interested in the 34010 for use in the new Laser-Writer to achieve 600 dpi resolution. A note in the "Micro-bytes" section of *Byte Magazine* (Jan 1987) stated that a number of hardware builders are showing a preference for the TI chip over the Intel one. The TI graphics chip is apparently more programmable, powerful and versatile compared to its competition.

The Army versus the Macintosh

An article in the December 5, 1986-issue of the *Government Computer News* touched a cord near and dear to my heart. It was entitled, "Apple Challenges Reg Limiting Army Buys." Some Army research agencies have no problem obtaining Macintoshes because of specific regulations which govern purchases of ADP equipment in research environments, but this is not true for the rest of the Army, Navy, or Air Force. The MS-DOS standard has been largely successful in keeping Apple products out of government offices and activities. It is possible to obtain exceptions such as the recent awarding of a contract by the Army Training Technology Agency at Fort Monroe, VA for the purchase of portable Macintosh computers. The Macintosh has even penetrated the Pentagon from the top down instead of from the bottom up. It is an ideal computer for staff officers who need to produce useful output on short notice without long learning curves. I wonder how many Zenith microcomputers sit unused on Pentagon desks or still in their original boxes because without daily use the MS-DOS commands are often forgotten?

The U.S. Army, like any large organization, is concerned about compatibility, and the need for efficient interfacing of equipment and systems is often deemed more important than user-friendliness or decreased training costs. Although I understand this overall need, I believe the need for compatibility is best addressed on a local decentralized level and is not best served by a unified, centralized policy. For functions such as comptroller or contract management, I see a distinct need for compatibility based on the need for scattered government agencies to have a common reporting format which may entail disk to disk compatibility. I don't have a problem with MS-DOS being chosen for such a standard if it is the best solution. When no such need for compatibility

exists, which is often the case, a forced standard is counter-productive and not cost effective.

Mr. Dennis Straiter, Apple's national account manager for the Army, pointed out in the article that an extensive support and training industry has grown up to support the need for MS-DOS training. He says, "That industry does not exist with Apple because the products are easy to learn yourself." I know of one small government agency that spent \$60,000 for IBM training in 1986 and nothing for Macintosh support! The numbers speak for themselves. The ease of use of the Macintosh compared to MS-DOS computers has been estimated to be 8 to 1 in favor of the Mac by the First National Bank in Seattle, WA. Training is the hidden cost of micro-computers and it must be considered along with hardware and software costs when purchase decisions are made.

Several years ago the decision to buy only one make of microcomputer made more sense than it does now. With TOPS, 3Com Ethernet, MacCharlie, FT-100 and other solutions, there is little reason why both MS-DOS and Macintosh machines cannot be mixed in the same office environment and files be shared when the need occurs. Too often the decision to enforce one so-called standard, is made by the MIS director or company president who will not even use the computers. In this manner, the actual day-to-day users are often shut out of the decision process, and it is they who must live with the decisions of the non-user. Instead, I would like to see users have the choice of either an MS-DOS computer or the Macintosh in the office place. Allow the user who will interact daily with the computer to choose. MIS directors counter that they will have to "support" two dissimilar machines and operating systems. This is understandable if they are used to supporting an MS-DOS environment which requires extensive support and training. I have found that one Macintosh resource person in an office is usually all that is needed and no extensive support or training network is required. Therefore, the argument of supporting two operating systems is mostly a hollow one.

I applaud MIS personnel who are open-minded enough to consider integrating both systems in the same office. I may be preaching to the converted by making my point in the WAP Journal, but I sincerely hope personnel making buying decisions will do so based on a company's specific needs and not out of artificial loyalty to a so called "industry standard." I predict that 1987 will be the year that MS-DOS is joined by Macintosh as a second standard in the business world. If IBM adopts proprietary technology in its new machines, there may be three standards. MS-DOS is too firmly entrenched for even IBM to kill it off.

I also hope that the Army and other government agencies will do away with a mandated MS-DOS standard. It no longer makes sense for such decisions to be made centrally for an organization as large as the Army. The increased ability of MS-DOS and Macintosh computers to communicate over local area networks also argues against one set of standards. Local commands and installations should be able to make decentralized decisions that best fit their own needs. If that decision is Apple, IBM, or a combination of both, so be it!

Just What Obligation does the Computer Store Have Anyway?

I often hear complaints about local computer stores acting like car dealers in that, once the merchandise goes out the

contd.

door, they no longer have any interest in the customer. I think this comment has both justified merit and unjustified condemnation written into it. Just what is the obligation of the local computer store before and after the sale?

My opinion may or may not reflect the majority but this is how I see it. First the store has an obligation to sell to the customer the best hardware, software, or peripherals, regardless of make, that fit the specific needs of the customer. Every store has sales people who feel more comfortable selling IBM, Apple, or some other third-party computer because that one is what they know best. If you go into a store and the sales person immediately talks of only one make of computer without first listening and then defining your specific needs, find another sales person or another store. The proper way to sell and buy a microcomputer is to ask yourself, what are my needs and then find, with the store's help, what software and hardware best solves that need. If you decide to buy IBM only because a friend says that you need to have IBM compatibility or Apple only because your child uses Apple at school, you may make the wrong purchase decision.

Once you have gone through this process and make the purchase, what, if any, obligation does the store have to you as a customer? There is no inherent right to have the store teach you how to use a particular software package or to install your computer unless that is specifically negotiated at the time of sale. Do not expect the store or the salesperson to spend hours with you holding your hand through a computer learning curve. You didn't pay for it and if you expect it, you will be sadly disappointed.

Each software company provides different levels of customer support, from paid to free, with 800 telephone numbers. If you feel you will need extensive support, you should consider this aspect in your buying decision. Many computer stores provide several hours of introductory courses for IBMs or Apples purchased in their stores. This is usually free and they may offer additional instruction on pay-as-you-go basis. If you think you need this, this should play a role in your decision. Keep in mind if you are paying for a computer course, it really shouldn't matter if you bought the computer from that store or not. Local high schools and community colleges also offer microcomputer and software instruction at reasonable rates. Check in your local area for such instruction.

If you are a member of WAP, there are many persons available to help you solve specific problems, but keep in mind that you are not paying to take up hours of their time. It is not their responsibility to teach you how to use the software but only to answer limited questions about specific problems. Another alternative is paid, private instruction which is available from many salespersons who do instruction on the side or hard-core Apple users who do so because they enjoy it.

Remember that the ultimate responsibility for learning how to use hardware and software resides with the user and not the store or salesperson who sold it to you. They have an obligation to provide limited, but not extensive, support.

Macintosh Rumors of the Month

The Apple personal laser printer, dubbed "Solo", is reported to be faster than the LaserWriter Plus but it cannot work with the new AppleShare Network software and requires at least 1 megabyte of RAM in the Macintosh to manipulate the graphics. It is also reported to work with a new version of

TOPS by Centrum Systems West. Update - I have been told by a source that Apple has decided to kill the so called "Solo" or personal LaserWriter and will *not* be bringing it to market. Part of the reason is apparently centered around the need for PostScript to make it a viable printer, and the increased cost of including it made a price of \$1,995 impractical. If this proves to be true, we will have to wait for the reasons to surface later. I understand that the upper-end LaserWriter, which uses the 68020 CPU, is still on track. By the way, the deal to have 3 Com acquire TOPS has fallen through and Centrum Systems has agreed to be purchased by Sun Microsystems, Inc., for approximately 20 million dollars in Sun stock.

Apple Iigs Rumor

Sales of the Apple Iigs have been slowed by Apple's inability to produce enough machines. At the heart of the matter is the unique sound chip that is only available in limited quantities because of problems with its high failure rates. Not failure after the chip is put in the Iigs but failure during the manufacturing process. Japan's semiconductor industry can out-compete the U.S. semiconductor industry in part because it has a higher production rate of viable chips compared to the U.S.. In other words, while 50 to 60% of Japan's chips are good coming off the production line, only 40 to 50% of the U.S.-made chips are OK. It is rumored that the percent of Apple Iigs sound chips that are viable coming from the production line is less than 5%. In all fairness, this chip is not made by Apple. Nonetheless, the end result is the same; fewer Apple Iigs's.

New Macintosh Products

Apple has finally announced several new products for the Macintosh line. Three of the new products were a LaserWriter print spooler, an IBM 3270 file transfer utility, and Apple DCA Filter Software. The 3270 file transfer utility (\$99), known as AppleLine, will be available in the second quarter of 1987, and will permit downloading of IBM files from a mainframe, manipulation on the Macintosh, and then uploading back to the IBM main frame. It will function over the AppleLine protocol converter which has been available for some time. The Apple DCA Filter software will be distributed free of charge and permits translation of MS-DOS word processing documents to and from MacWrite. This will also be available in the second quarter of this year. The Laser Spooler (\$299) allows users of AppleTalk to spool print files while going onto other tasks. It queues print jobs to the AppleShare file server, but I don't know if it will function with other hard disks in the absence of AppleShare. The Spooler will not be available until (you guessed it!) the second quarter.

The two major products were the AppleShare file server software and its long-awaited IBM/AppleTalk hardware card. This is not to be confused with the still long-awaited, MS-DOS hardware card for the open Macintosh. The \$399 AppleTalk PC Card is a half-card and permits MS-DOS microcomputers to connect to AppleTalk and use the LaserWriter printer. The new IBM PC hardware card comes with software which provides file transfers from MS-DOS to Postscript for programs such as Wordstar, Lotus 1-2-3, Multimate, Diablo 630, and ASCII. Other PC requirements are DOS 3.1 or higher, 256 K bytes of RAM, and two disk drives. The card will be shipped in February 1987.

contd.

LETTER TO THE EDITOR

13 Shakespeare Gardens
London N29JJ England

Dear Editors,

I was pleased and surprised to see that the Youells had beaten me to a "report from London". Actually, WAP has heard reports from others earlier in 1986 that the Mac, especially, was becoming quite popular and well-accepted here in England. The Macs sold here are manufactured in Ireland (more on that later...).

Unfortunately/fortunately, the big microcomputer news here of late is the AMSTRAD IBM PC clone. The base price for a single drive, monochrome machine was (until January 1987) 399£, and even the hard disk colour versions are selling for under 1000£. Since most computer hardware and software here is priced in the same number of pounds as USA prices in dollars (even though one £ is exchangeable for \$1.50 or so...!), these are revolutionary prices; if Amstrad can keep up with the demand, they will probably monopolize the medium-sized machine market here in no time at all. Actually, calling the Amstrad a clone is unfair. It's a whole lot better than the IBM; it uses an 8086, comes with a mouse and GEM, built-in interfaces, 512K, etc.

The good news is that Amstrad for now is probably "stealing" sales from the market base of IBM or other major (and minor) clones such as Olivetti (except of course that businesses will continue to buy IBM, Olivetti and sometimes Compaq). After all, why would anyone now buy a "no-name" clone when the Amstrad is selling at the same price? The bad news is that with the IIs not really available yet, and with Apple prices for the //e, //c and IIs being what they are, Apple could likely lose the upscale-home, small business market to Amstrad. Apple IIs are well entrenched in schools (so is the BBC/Acorn micro), but that's another story. I don't think that the Amstrad and the Mac address the same markets, although I must admit that my brief exposure to GEM/mouse showed an uncanny similarity to "driving" a Mac (and remember, you can have it in color...).

A few comments on the Youell's words regarding transformers and converters. Most computers and peripherals today are manufactured with dual voltage power supplies, and can be internally converted. The Mac+, however, is a major exception. The Macs coming out of Ireland, for example, have 220-240 volt power supplies ONLY. So, indeed, a transformer is required. Since there are many Americans here in London, transformers are easy to find. Also keep in mind that if you buy a 240V item here, a step-up transformer back in North America will let you use it there. Electronics buffs who buy their own unpackaged transformers will be able to wire these to go either way (step-down or step-up).

Beware of the voltage converters such as the Radio Shack item. Unfortunately, they are sometimes sold as "transformers". They are NOT!!! Using such a converter is guaranteed to damage most electronic equipment. The key words are that they are for "heating appliances"—that's exactly what your computer will become if you use such a converter.

A reasonably heavy-duty transformer is itself an excellent surge suppressor, so one of the latter isn't necessary, but do be

contd. on pg 67

The major announcement concerned AppleShare, which consists of \$799 file server software. It requires a dedicated Macintosh Plus and a file server to function. By dedicated, I mean the Mac Plus can only be used for the network and cannot be used as a free-standing computer to run other applications. This does not preclude it from running background applications such as print spooling or electronic mail. AppleShare also allows IBM PCs to exchange files in working groups of up to 25 computers. More information is needed on this important point. The software supports Apple's new AppleTalk Filing Protocol (AFP) which describes the method by which a Macintosh application can obtain files from the file server. The hierarchical filing system is not sufficient to keep track of all files located on a remote disk. In this manner, the entire file server and its information is available to everyone on the network unless precluded by password protection. The AppleShare technology also makes use of "byte-range locking" which lets several users open a single file simultaneously. Therefore, a range of individual bytes can be protected from multiple simultaneous access rather than an entire file. Unlike the other announced products, AppleShare is shipping now (February 1987).

Microsoft has stated that it will support the AppleShare filing protocol with the new 3.0 release of Word and later Excel. Other companies announcing support for AppleShare include Tangent Technologies, Alisa Systems, AST Research, General Computer, Supermac Technology, Reach Technology, Odesta Corp, and 3Com Corporation. Some 30 new products supporting Apple's AFP were announced or demonstrated at the Seybold Conference.

More recently, MS-DOS software with PostScript drivers (i.e., new version of Word Perfect) have been able to print to the LaserWriter by using AppleTalk and network software such as TOPS. It is reported that use of Word Perfect's PostScript utility running over TOPS requires the LaserWriter to be re-initialized by turning it off and on before and after use. This is hardly satisfactory! TOPS Print software is also supposed to permit MS-DOS software to get the full capabilities out of the Apple LaserWriter but it may not be shipped yet.

Apple has also reaffirmed its plans to support other network environments such as Logical Unit (LU) 6.2 for peer-to-peer communications, the Open Systems Interconnection (OSI) reference model, IBM token-ring, and IBM's System Network Architecture (SNA). This year appears to be the year of "connectivity."

New Megascreen Announced

A cheaper version of Micrographic Images Corp.'s Megascreen has been announced. It will be compatible with the Macintosh SE but will not have the NTSC video interface or a slot for a math coprocessor. It will retail for \$2,495 and be called the Megascreen II, while the original Megascreen will be renamed the Megascreen Plus and will continue to list for \$2,995. Installation time has also been reduced to 15 min for the new screen.

Lynn R. Trusal, Ph.D. 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. He is also the organizer of the Frederick Apple Core Macintosh Special Interest Group. ☺

MACINTOSH AND BUICK: NEW WAYS TO SHOW OFF A PRODUCT

by Chris Sandberg

I recently saw an advertisement by Buick in an auto-buff magazine (besides computers, cars are one of my major vices), which offered to send a computer disk of information about their new models. The Macintosh was one of the formats offered, so I sent away for the free disk. I expected some text screens, plus a pitch to go into a dealer and actually see the cars. The disk came about two weeks later, and I was completely wrong.

Rather than a simple listing of models and features, this is a very exciting new way of showing off the facts, technology, and prices of the entire range of Buick cars. I have no relationship to Buick whatsoever (I don't work for GM, don't own any GM stock, and I have never owned a Buick), but I was so impressed with the method of presentation, and the ideas for creative communication that it contained, that I want to share those ideas with others who see the Mac as opening new ways to communicate.

The disk offers six functional programs:

- Technology—describes the general systems and features of the cars;
- Specifications—provides interior, exterior, and drivetrain data;
- Choose—suggests appropriate models based on your answers to a few questions;
- Compare—matches prices and features of various models against competing cars;
- Purchase plan—prepares a retail price and monthly payment;
- Sticker—prints out a facsimile window sticker for the car you choose.

In addition, there is a program that prints out a "special invitation" to visit your local dealer.

The fascinating part of the disk is the very effective way in which it integrates text, graphics, animation, and data processing into a compelling presentation. For example, in the Technology program, you can display information about the engine. Along with a block of text, the program shows an animated cut-away of the engine, with the pistons and crankshaft moving, the fuel injectors spraying fuel, and the turbocharger spinning. See Figure 1.

The display of the suspension features a rolling car, with the front suspension moving up and down over bumps. The instrument panel section replicates a digital dash display. See Figure 2.

In the Specifications program, choosing a particular car and asking for the interior dimensions brings up a display that shows a car in cut-away and overhead views, with the primary dimensions laid out. See Figure 3.

The Compare program is plain text, but you can bring up the standard features and optional features of any car, and see the retail prices for the list. See Figure 4. Then the Purchase Plan program works as a spreadsheet to figure the total retail price of the car and monthly loan payments, depending

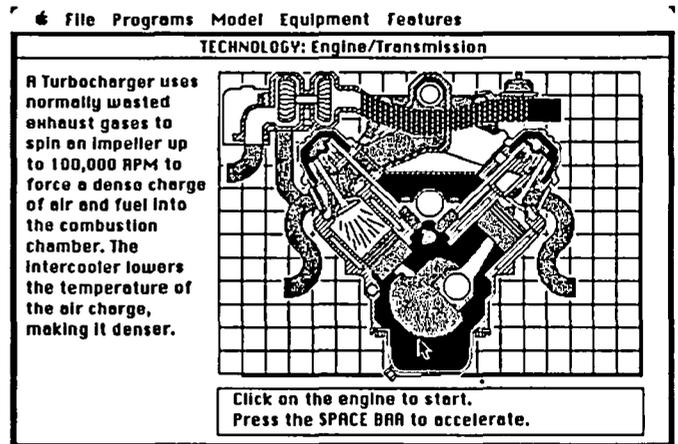


FIGURE 1

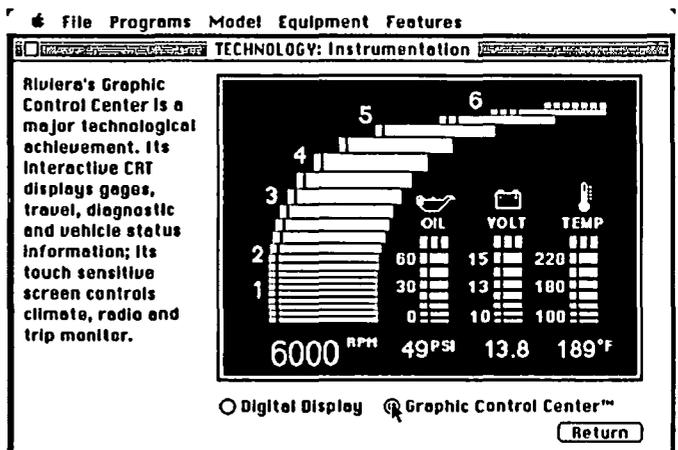


FIGURE 2

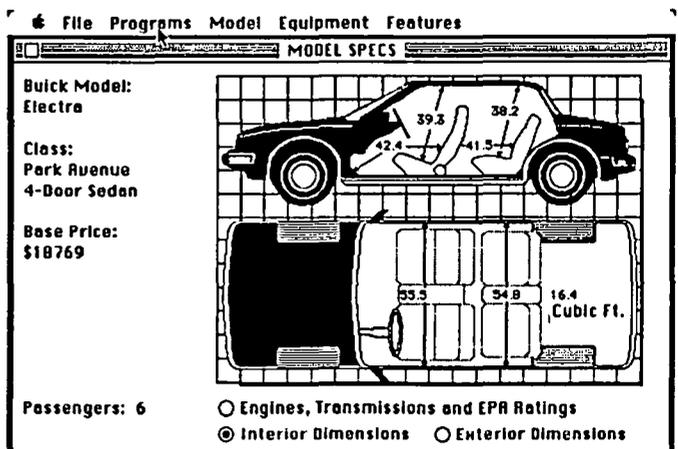


FIGURE 3

upon the variables (price, trade-in, down payment, interest rate, term of the loan) you input. Finally, the Sticker program turns all that into a very realistic window sticker.

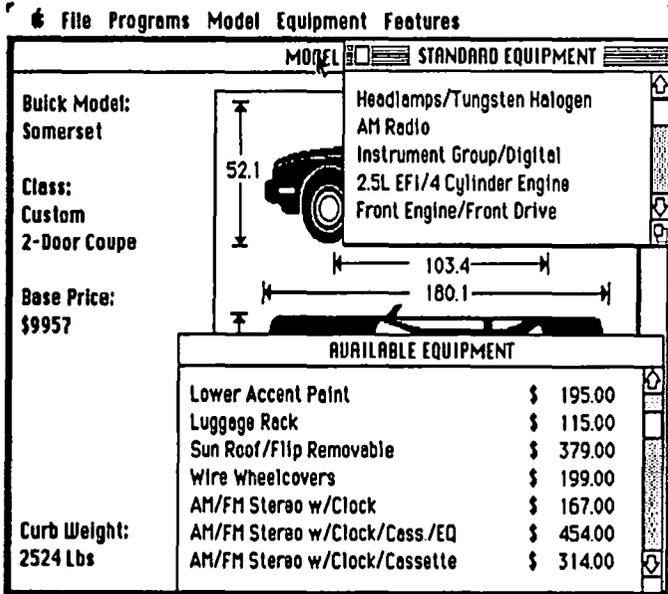


FIGURE 4

I don't mean to write an advertisement for a particular car manufacturer. But I think Buick (with the help of the SoftAd Group, Inc. for the creation and production and Beck-Tech for the programming and animation drivers) has found a unique and very effective way of putting its products before a new audience. I'm sure that many Journal readers have had unpleasant experiences with new-car salespeople. Many of my friends have told me they dislike shopping for a new car and having to deal with salespeople just to get basic information about cars in which they may be interested. These friends much prefer auto shows, where they can browse and pick up printed materials without being subjected to a "hard sell" from a salesperson. Some auto manufacturers have tried to meet these customers' needs by putting interactive computer terminals into dealerships, where they supplement salespeople's efforts.

The promotional Mac disk is another, large step towards giving these car buyers a way to investigate potential cars without having to go into a dealership to start the process. A car shopper can learn about the features of a complete line of cars, can compare those cars with each other and with competing models, and can get an good idea of options and pricing in the privacy of his or her own home. At the same time, the Mac disk is much more effective than a printed brochure could ever be: it moves, it reacts to choices, it responds to the person using it. Even without the color that a printed handout could have, the Mac version opens a new dimension in presenting a complex and expensive product in a non-threatening manner.

This certainly is not limited to selling new cars. Any area where the product has numerous potential variations, or where it can be customized to a customer's needs and preferences, should be a candidate for this form of promotion. (Ed. Note: Perhaps selling computer systems...) It provides a way to interactively sell a product without a live salesperson; it lets the customer go a long way towards selling him or herself. I hope Buick finds success with this promotional venture, because it opens another "mainstream" use for the personal computer.

This leads me to the philosophical portion of this article.

I think the true potential for the Mac (and personal computers, in general) is their ability to allow people to communicate in new ways. So far, personal computing has mainly given us more efficient ways to communicate in traditional methods. Word processing programs are an example of this: we are still writing sequential words (and occasionally images) on sequential sheets of paper, but we are able to write them more easily or quickly.

As a lawyer, my job is to persuade other people that the positions I take and the claims I make on behalf of my clients are reasonable, and should be preferred over my opponents' positions and claims. I use my Mac to try to be more persuasive, but I have been frustrated with the traditional forms of communication. I want to be able to show people my ideas and concepts in other, more effective ways. The Buick demo disk gives me encouragement that those new ways of communicating are out there. The hypertext program, Guide, recently released by Owl, Inc. for the Mac, also holds the promise of a new and very different way to communicate complex ideas. Both programs offer the possibility of "customized" communications, where each reader can access the same information in the way that is most useful to that reader, without the distraction of unnecessary information or the frustration of unavailable information.

If we have moved into an "information age", we will more than ever need more imaginative and more personalized ways of creating, organizing, and sharing information. As users, developers, and critics of personal computers, I believe we need to find those new ways.

Chris Sandberg is a WAP member, llc and Macintosh owner, who lives and practices law in Minnesota. ☺

Letter to the Editor: contd. from pg 65

sure that the 240 volt line plug has the proper U.K.-approved fuse (the plugs are sold with 13 amp fuses, but that's way too large for protection—5 amps should be adequate for transformers in the 250-600 watt range).

Modem prices here are exorbitant! It is possible to get modems which will inter-operate with both the CCITT (non-US) and Bell (North America) standards. But there are no bargain brands in 1200 or 2400 baud (at least not yet). Remember what I said about prices in pounds = prices in dollars? A 1200 baud modem sells for around 300£! (No ADC "Ducks", Volksmodems, or Taiwanese modems, yet.) Telephone equipment has to be approved, like in the US, but of course FCC approval is not the same as British Authority approval. The telephone plugs are also different. Still I did manage to make myself an adapter, and have called trans-Atlantic at 1200 baud with my trusty old Anchor Mark XII, and the connections were error free.

I would have sent this letter electronically if I could only remember my WAP TCS password, and if I were sure that the XModem uploading protocol is functional on it. But since I have to mail you the tutorial update anyway, off it goes by post.

I've been receiving the Journals quite efficiently by air mail, probably sooner than some of the local membership. Thanks!

Best Regards,

George Kinal ☺

	A
1	Excelling on Your Mac
2	Part 11
3	by
4	David Morganstein

This month we'll continue talking about the creation of your own formats and then we'll discuss database criteria. One of the formats we'll describe helps with a problem associated with tables. For a review, we'll go back over database functions showing you how to use them in a table and then we'll move on to defining criteria. First, however, a warning followed by some quickies.

Bugs??? I have had several people report problems with the new 1.03 release. Unfortunately, there seems to be no real pattern to the incidents other than the keyboard locking up. Making it even more difficult to track down, the errors are not repeatable. Many of the problems seem to occur when editing a formula at the top of the screen. If you are having problems, please call me. I'd like to maintain a list in case a pattern should emerge, allowing us to contact Microsoft to resolve the issue.

Quickies. If you have used Excel for long, you no doubt have discovered the Preview check box in the Print Dialog Box. This little gem allows you to view your results as they will appear on whatever size paper you requested. When the box is checked, and the OK button clicked (or the Enter key pushed) you see on screen a reduced version of each page of your output. As you move the cursor into the preview area, it becomes a magnifying glass which you can use to expand the image to full size simply by clicking on the display in the area you wish to view. Up until I read "the Macintosh Bible" by Dale Coleman & Arthur Naiman (from Goldstein & Blair, Box 7635, Berkeley, CA. 94707), I thought that examining other parts of the same page required returning to the previous condensed view and clicking the magnifier elsewhere. Guess what? Remember the old Mac Adage, "When in doubt hold down the Option key and try again"? If you hold down the Option key while viewing the full-size display, the cursor becomes a "hand" ala MacPaint which can be used to move the display around!

Rolling Your Own Format. Last month's column ended with a note on displaying five-digit zip codes. If you recall, someone observed that codes with leading zeros had the zeros truncated. One awkward solution is to enter the codes surrounded by double quotation marks, that is, as strings (e.g. = "00099") This requires three unnecessary key strokes. A faster and more elegant approach is to create a new format, "00000", for the cells containing zip codes. This suggests a powerful option, the ability to create new formats. Using this feature, you can hide cells and build a data entry template for data items such as telephone or social security numbers. As an aside, if you have to move the zip codes to another file and plan on doing a Copy from Excel and a Paste into something else, be sure to select the option for saving formatted values when Excel notifies you that you are saving a large clipboard and it wants to know how to save. By saving the clipboard

values as formatted, the leading zeros will be retained.

To format cells for entry of phone numbers, enter the following new format: "("000")"000"-0000. As you can see below, when a 10-digit number is entered in a cell with such a format, it inserts the text between the double quotes around the various digits identified in the format as zeros. By now, you should be able to create a format which inserts the dashes needed for social security numbers, right? Pages 127-131 of the User's Guide contain a long list of symbols which can be used to create other valuable formats. Be aware that the formats you define (which you can see added to the end of the scrolling list of formats) are sheet-specific. If you open a new sheet, you will need to re-create these special formats.

The screenshot shows a portion of an Excel spreadsheet. Cell A1 contains the number 1234567890. A dialog box titled "Format Number" is open over the cell. The dialog box has a list of format options: mmm-yy, h:mm AM/PM, h:mm:ss AM/PM, h:mm, h:mm:ss, m/d/yy h:mm, and "("000")"000"-0000. The last option is selected and highlighted. Below the list, the "Format:" field contains the selected format: "("000")"000"-0000. The dialog box also has OK, Cancel, and Delete buttons.

Before moving on to a discussion of criteria, let's look at another use for these "roll your own" formats which is connected to databases and criteria. Have you ever created a one- or two-way table? In the screen below, you see the beginning of a two-way table which counts the number of records in a database which fall into a cross-classification of two of the database items, company and product. Since we've covered this subject before, we'll just highlight the details to refresh your memory.

After setting up a database (ours contains fields like Date, Company and Product), enter a line containing the field names (below they appear in B1:D1). These names and the cells just below them will be used to set the criteria. Next create a table shell with a column, here A4:A7, containing the possible values of one variable (company names) and create a row, here B3:D3, containing the values of another (product). Within the table we can get counts of all Zenith records of Cogs, of Widgets and of Sprockets and similarly for each company listed. We do this with the DCOUNT function entered in cell A3. (Of course we can use Excel's other "D" functions such as sum, average, min, max or stdev to obtain additional statistics).

contd.

A3				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	=DCOUNT(Database,,Criteria)
				Widgets.db		
	A	B	C	D		
1	Criteria	Date	Company	Product		
2						
3	base Criteria	Cogs	Widgets	Sprockets		
4	Zenith Ltd.					
5	Acme Inc.					
6	Apex Corp.					
7	Best Co.					

The area from A3 to D7 is selected and the Tables command given. A "Table" window appears (see below) into which we must enter the location of the criteria cells used to define the DCOUNT criteria. I find the language "Row Input Cell" a bit vague. What Excel is asking is this: in a two-way table there is a row of values at the top of the selected area (here Cogs, Widgets, etc) which must be fed, one at a time, into a "dummy" cell in order to compute the required table contents. At the same time, there is a column at the left of the selected area which is to be fed into a second "dummy" cell for the same purpose. For each combination of row and column entries, the formula in the upper left corner of the selected area (A3) will be evaluated for all combinations and the result placed in the appropriate row and column position of the table. In our case, since we are using the table command to create different criteria for each cell in the table, the "dummy" cells are the ones which define the criteria, that is, the two cells below the field names Company and Product which have been included in a Set Criteria statement.

Table		
Row Input Cell:	\$D\$2	<input type="button" value="OK"/>
Column Input Cell:	\$C\$2	<input type="button" value="Cancel"/>

As you see below, these steps result in the desired table. Note, nothing appears in cells C2 and D2, though they were used by the Tables command as place holders where the twelve combinations of row and column headings were fed in order to complete the table. However, notice that cell A3 contains a number—the total count of records. When the criteria cells, here C2 and D2, are empty Excel assumes the criteria is interpreted as all records. In this example we have 204 records. (As a check, you can cross-foot the table entries.) If you don't want the "204" to appear in A3, what can you do? You can't blank out the contents of A3 since this cell contains the DCOUNT statement needed to define the table.

	A	B	C	D
1	Criteria	Date	Company	Product
2				
3	204	Cogs	Widgets	Sprockets
4	Zenith Ltd.	24	8	20
5	Acme Inc.	16	29	19
6	Apex Corp.	8	16	20
7	Best Co.	21	5	18

Right now you are saying that we were on the topic of creating your own formats. You no doubt are wondering if there is a solution in there somewhere, right? Well, there is! Select A3 and choose format number. In the space for

entering formats, type a single space and click OK. Voila! The "unsightly" number disappears since the format for the cell is a blank. If you prefer a label for the table, change the single space to a label enclosed in quotes. Some people like to enter the formula here or the word "count" to help remind them of the table contents. Just enclose the text in double quotes.

Setting Criteria. Criteria are used for two purposes. First, they convey to Excel what records are to be included in an Extract from the database. An Extract copies selected records from the database to another location in the worksheet. You tell Excel which records you want by establishing a Criteria. Second, as we saw above, a Criteria statement is required in a Dfunction to tell Excel which records to include in the calculation.

Criteria are poorly described in the Microsoft manual. I found Cobb's description (Excel in Business, pp.465-482) to be far more helpful. In the earlier discussion, we showed two variables used as criteria. One entry was used to define the permissible values of each of the two database variables. What the Dfunction did was to compute the required statistic for every record which had the first entry for the first database variable in the criteria and the second entry for the second database variable in the criteria. Note the underlined "and". Areas defined as Criteria can be more complicated than two "and" statements. Additional variable names can appear to "and" together three or more conditions. Also, the Criteria can contain more than two rows (the first being the database variable name and the second being one value for it). If you want "or" together more conditions, just add the additional test values into a third, fourth, etc. row beneath the variable names.

By the way, have you ever tried to compute a database function using a Defined Criteria and then entered a different database function into another cell and changed the criteria condition? If so, you noticed that the first cell changed to reflect the new criteria definition. To be more specific, you have a database containing people's salary and tenure. You first wanted the total income for everyone in department A and then wanted the average seniority for everyone in department B. You put the total income in one cell using a DSUM function and you defined a criteria which selects anyone whose department is A. Then you put the DAVERAGE function into a different cell and change the entry under the criteria variable department to a B. The results of the DSUM function change because both the DSUM and the DAVERAGE cells are using the same cell for their criteria and you changed the criteria! The solution to this puzzle is quite simple though, as before, the manual may have lead us down a primrose path. Since Excel offers such a simple Define Criteria option, it's natural to always use it to build every criteria statement. This is not only unnecessary, it would prevent us from handling our problem.

In the screen below, you see a small database (in A7:C15), two different criteria in cells A1:B2 (one in A1:A2 and one in B1:B2) and the DAVERAGE and DSUM computations, the former in F7 and the latter in F8. The DAVERAGE syntax appears at the top of the shot. Notice that the criteria is shown as Criteria1. This label was not created with the Set Criteria command; rather, it is the result of using the Define cond.

Name command, just as you would name any set of cells. Similarly, Criteria2 is the label given to B1:B2 and will be found in the DSUM command which defines the cell F8. As you see, you can put any label in the third parameter of a Dfunction so long as it represents a group of cells which can act as criteria.

F7		=DAVERAGE(Database,"Tenure",Criteria1)				
Worksheet1						
	A	B	C	D	E	F
1	Dept	Dept				
2	A	B				
3						
4						
5						
6						
7	Dept	Salary	Tenure	Ave. Tenure in A:		3
8	A	\$25	1	Total Salary in B:		\$72
9	A	\$30	2			
10	A	\$35	3			
11	A	\$20	4			
12	A	\$40	5			
13	B	\$22	2			
14	B	\$24	4			
15	B	\$26	6			

Let's continue with further refinements in Criteria statements. Criteria can be established for both numeric variables and for text variables. While the earlier examples showed exact matches used to select records, either type of variable can be used for criteria which contain other logical comparisons defined with the <, >, >=, <= or <> symbols. These symbols mean less than, greater than, greater than or equal to, less than or equal to and not equal. The following criteria says select records whose amount is less than or equal to 100.

Amount
<=100

This criteria says select records whose Company is not "Best Co.":

Company
<>"Best Co."

You may have noticed the absence of the equal sign in the list of logical operators. To select records that match a numeric quantity exactly, you can enter the number under its variable name either preceded by an equal sign or without an equal sign. However, if you want text to match exactly, enter the desired text without an equal sign. The inclusion of the equal sign with text, as you see below, causes Excel some consternation. If you really want to use an equal sign (as you see, you don't need to), you must enter the somewhat contorted expression "=>Best Co."

=>Best Co.	
WidgetDatabase	
B	D
	Company
Count of Records	*NAME?
0	

As was said earlier, criteria in two or more columns are "anded" together, while additional rows of the criteria are "ored" together. The following criteria says to select all records from either Apex or Acme. The Define Criteria area

had to be expanded to D1:F3. Note that the actual company names contain more than four characters while we entered only four in D2 and D3. When doing a text match, Excel will find matches on the number of characters you supply. You only have to enter enough letters to define a unique selection. Since there are no other "A" companies other than Acme Inc. and Apex Corp., we could have entered a single line criteria consisting of the letter A. Alternatively, we could have used a logical statement "<B".

WidgetDatabase				
B	C	D	E	F
Count of Records		Company	Product	Amount
416		Apex		
		Acme		
Date	Company	Product	Amount	Price
1/07/85	Zenith Ltd.	Widgets	100	\$9
1/15/85	Apex Corp.	Widgets	100	\$9
1/18/85	Acme Inc.	Sprockets	200	\$8
1/22/85	Apex Corp.	Sprockets	200	\$8
1/22/85	Best Co.	Widgets	200	\$7

Our last topic will be the use of wildcards in entries for text variable criteria. A wildcard is a kind of "I don't care" designation. It allows you to specify some, but not all, of the text to be used in the search for a match. In this discussion we are relying on the "expression" approach which provides and exact match. Excel offers two kinds of wildcards when defining text criteria. The first is the "?" which designates unknown individual letters and the second is the "=" which designates unknown groups of letters. For example, "Sm?th" would locate both "Smith" and "Smyth". That is, it would find anything that begins with "Sm", connected with "th" by any single letter. Alternatively, "S=h" would find both "Smith" and "Smyth" as well as names of any length beginning with "S" and ending with "h". Cobb points out that you can use these wildcards with logical operators other than an exact match but you may be surprised at the result. Simply typing Sm?th will locate Smith and Smyth but it will also locate Smythe, Smithsin and Smithsonian since in this mode, Excel is looking for records that begin with the five letters Sm?th. Entering the expression *th will find any entry containing a "th", not only those that end in "th".

Enough for one month! Enjoy...



LIBRARY LOOKUP PROCEDURE IN EXCEL

by Richard J. Byrd

Often the user of a powerful system like Excel™ fails to use the system to its fullest in his or her application, simply because the utility of a certain routine or procedure doesn't come to mind. Let's dwell for a moment on the great power of a library lookup procedure, a useful tool in many spreadsheet applications. If you are using Excel for any application involving checkprinting, letter and envelope addressing, customer lists, part-name and part-number identification or using databases in which you need to search for entries, you may find a library routine most useful. It is especially desirable when the system can be designed to find the entry even when the user may not remember the whole name, or may be a horrible speller, or when the entries are long or complex or where several aliases or nicknames may be used to indicate a single entry in the database. For example, remembering a twelve-digit part number is very difficult, but the name of the part is much easier to picture and once the part name is assigned to the number in the database the name then can be used to look up the number in a library. Even if the user cannot remember the whole name, the lookup can still be successful by using only an embedded piece of the name, if a routine using wild-card lookup methods is used. Since Excel supports this useful technique, the procedure outlined here will make extensive use of it.

In my own Excel application, a real estate settlement processing system, each settlement results in ten to twenty checks being composed by the system and printed on check-stock. Each check requires the payee's full name and each attached voucher requires the name and address of the payee for window envelope insertion. A number of suppliers of services who are paid out of settlement are common to many of our settlements. Therefore it is useful to maintain a library of such common suppliers as termite inspectors, lenders, real estate agents, delivery companies, surveyors, etc. such that the full name and address can be looked up and printed on the check by using only an alias or nickname for the lookup. The user then is freed from having to manually look up and type in the full name and address. The design parameters for this system are a relatively small database library of about fifty entries, a need for easy addition and deletion from the library, a broad wild-card scheme and relatively fast lookup. Let's see how to accomplish this in Excel with a macro procedure of about thirty instructions including error traps. The procedure shown here is a complete macro program and runs fine for demonstration use, but it would have little utility standing alone. However, built into a macro which controls a database and spreadsheet system, it can do great things for you.

Figure 1. CHECKPRINT shows a portion of library and a sample place to paste the result of the lookup procedure. The first column is for the ALIAS, that is the nickname or common name that the user may think of to remember the payee. Excel is insensitive to case with the FORMULA.FIND command, so capitals or lower case can be mixed in any fashion. As we will see when we look at the macrocode, actually the entry can be found by using any embedded portion

	A	B	C	D	E	F
1	FIGURE 1. CHECKPRINT					
2	ALIAS	FULL NAME	NAME & ADDRESS			
3	Screwball Savings & Loan	Lawrence R. Loophole, Esquire	10268 Main Street			
4		Screwball Savings & Loan	Fairfax, VA 22030			
5						
6	C-21 Ustagent Realty					PastePlace
7		C-21 Ustagent Realty	Screwball Savings & Loan			Speedy Delivery Service
8			3200 Old Pickett Rd.			329 Fastrip Lane
9	Lawrence R. Loophole, Esquire		Fairfax, VA 22030			Annandale, VA 22003
10		Lawrence R. Loophole, Esquire				
11	Larry Loophole		Speedy Delivery Service			
12		Lawrence R. Loophole, Esquire	329 Fastrip Lane			
13			Annandale, VA 22003			
14	Speedy Delivery Service					
15		Speedy Delivery Service	Charles Samovobienkskie			
16	SDS		4014 Arlington Blvd.			
17		Speedy Delivery Service	Fairfax, VA 22031			
18						
19	Charlie Samovobienkskie		Doe, Dunn & Diddle, P C			
20		Charles Samovobienkskie	977 Chain Bridge Road			
21			Fairfax, VA 22030			
22	DoeDunnDiddle					
23		Doe, Dunn & Diddle, P.C.	C-21 Ustagent Realty			
24	Accountants		2969 Househunt Way			
25		Doe, Dunn & Diddle, P.C.	Washington, D.C. 20087			
26						
27						
28						
29						

of the alias. For example, the user can use "Loophole" or even "loop" or "hole" or "Larry" to find our nefarious lawyer, Lawrence R. Loophole, Esquire. Since nobody can ever spell the name of poor 'ol Charlie Samovobienkskie, you can look him up under "Charlie Samo" or even just "Samo". In the case of the accountants, Doc, Dunn & Diddle, P.C., if the operator remembers any one of their names, the system will find the entry, or if she forgets all of them she only needs to enter "accountants" and the proper name will be found by Excel. However note, "Biddle" will not find the accountants; "Loopole" will not find the lawyer; "Screwball S & L" will not find the bank. The text given by the operator must in every character position match a subset of the string of characters in the alias name as given in the ALIAS column.

In overview, the macrocode works like this. The alias given by the user is called "CurPayee" and the macro converts this to "*CurPayee*", the wild-card version. By use of the FORMULA.FIND function this wild-card alias is compared to each entry in the ALIAS column and when a match is recognized, the macro offsets one cell to the right and one cell down from the matching cell, which puts it in the FULL-NAME column, selecting the proper full name of the payee corresponding to the alias. It takes this name, calls it "RealPayee", and then looks down the NAME & ADDRESS column until it finds the match with RealPayee. When the match is found, the macro selects the cell containing the name and the two cells below it and performs a COPY and PASTE.SPECIAL to the PastePlace.

Now lets look at the macrocode which performs this for us. Figure 2. LIBRARY LOOKUP shows the macro. The first item is a cell location to store the operator's input, CurPayee, and the next cell is where the system will put the name of the RealPayee when this is identified. Instruction 1. opens a dialog box asking the operator for the alias or common name. Next the message block which Excel uses above the menu bar is cleared. Then we stop the program if a

contd.

	A	B	C
			FIGURE 2. LIBRARY LOOKUP
1			"SOS"
2		CurPayee	Speedy Delivery Service
3		RealPayee	=SET.VALUE(CurPayee, INPUT("Name of Payee for Check", 2, "NAME OF PAYEE"))
4	1	NextCheck	=MESSAGE(FALSE)
5	2		=IF(CurPayee="", RETURN())
6	3		=SET.VALUE(CurPayee, "&CurPayee&")
7	4		=SELECT(ALIASCol)
8	5	Find	=ERROR(FALSE)
9	6	CurPayee	=FORMULA.FIND(CurPayee)
10	7	In Alias	=IF(OFFSET(ACTIVE.CELL(), 1, 0) = "ALIAS", GOTO(NotInLib))
11	8	Column	=SET.VALUE(RealPayee, OFFSET(ACTIVE.CELL(), 1, 1))
12	9		=IF(OR(RealPayee="FULLNAME", RealPayee="", RealPayee=0), GOTO(Error1))
13	10	Find	=SELECT(AddrCol)
14	11	RealPayee	=FORMULA.FIND(RealPayee)
15	12	In N&A	=IF(OFFSET(ACTIVE.CELL(), 1, 0) = "NAME & ADDRESS", GOTO(Error2))
16	13	Column	=SELECT(OFFSET(ACTIVE.CELL(), 0, 0) - OFFSET(ACTIVE.CELL(), 3, 0))
17	14		=ERROR(TRUE)
18	15		=COPY()
19	16	Copy	=SELECT(pastePlace)
20	17	N&A to	=PASTE.SPECIAL(3, 1)
21	18	PastePlace	=GOTO(NextCheck)
22	19		=BEEP()
23	20	NotInLib	=MESSAGE(TRUE, "Name "&CurPayee&" not found in Library.")
24	21		=GOTO(NextCheck)
25	22		=BEEP()
26	23	Error1	=MESSAGE(TRUE, "ERROR - Improper Entry in FULLNAME Column")
27	24		=GOTO(NextCheck)
28	25		=BEEP()
29	26	Error2	=MESSAGE(TRUE, "ERROR - Mismatch between FULLNAME and NAME & ADDRESS")
30	27		=GOTO(NextCheck)
31	28		=RETURN()
32	29		
33			

blank, or null set, is entered for the alias. This is the way the user will terminate the operation of the demo macro, by entering a blank for the name of payee.

Instruction 4. gives us the wild-card version of the lookup name. Adding the asterisks to either side of the name will cause Excel to look for the wild-card version as any embedded subset of the actual alias. Next the ALIAS column of the Library is selected, followed by a nifty little trio of commands. Instruction 6. says that if Excel hits an error, such as would cause an error dialog box (e.g. "NO MATCH" when performing a FORMULA.FIND), then instead of returning such an error alert and breaking the operation of the macro, it will ignore the error and go on. Next, the FORMULA.FIND instruction does the linear search through the ALIAS column, stopping on and selecting the entry in which the lookup name is embedded. It is this instruction which would return the error if no match were found, but we are trapping out this error. In Instruction 8., the error trap is set by knowing that if the lookup search fails to find a match, then the cell left selected is the first cell in the ALIAS column, Cell A1. Therefore if the cell just below the active cell contains "ALIAS", we know the system failed to find an entry corresponding to our input name.

Next, assuming that a match was found in the ALIAS column, the macro selects the cell one down and one right of the active cell, which is the cell with the proper, formal name; then with Instruction 9. our program sets the value of RealPayee to the name in this cell. If the value of RealPayee is an error value such as FULLNAME (which it would be if there were no match found in the ALIAS column), or a nullset or zero, the system jumps to the Error1 procedure and tells us that we have an improper entry in the FULLNAME column. Next we do our linear search for the proper name and address using the RealPayee search argument. If no match can be found (which would be a bug in the library!), the macro jumps to the Error2 procedure, and we are alerted that there is a mismatch between the name picked up in the FULLNAME column and the names in the NAME & ADDRESS column.

When the match is found for RealPayee, the cell containing it and the two cells under it are selected, copied to the clipboard and then the name and address are pasted into the PastePlace. The PastePlace repository for the results of the lookup procedure is merely shown here for demo purposes. In any real system the pasting would most likely be to a check or billing or parts list or envelope or some other item which requires a name and address or other database element.

It is fun to watch the procedure work. Always have the worksheet, not the macrosheet, as the active window when you start. Pull down the MACRO menu, choose Library Lookup and double-click it (or strike Option-Command-I). Choose an alias when the dialog box asks you to and watch the macro work. While fun to watch, the screen refresh takes valuable processing time and you would be wiser to use the ECHO (FALSE) command at the beginning of any real application to suppress this operation.

Adding entries to the library is very easy, because there is no matching or aligning of the cells containing aliases with those containing entries, nor is any alphabetical order required. It is best to use Copy-Paste for the formal names in the ALIAS, FULL NAME and in the NAME & ADDRESS columns since an error of a period, comma or even a stray "space" could prevent proper matching on lookup. Choose the aliases carefully after consultation with your users in order to choose the nicknames recognized by the users and have a printed list of names next to the Macintosh for easy reference for learning and in case of question.

The macrocode should be easy to incorporate into your application, but here are some words of caution. If your library is long and/or the names tend to be similar, the double-ended, wild-card operation shown here may cause problems. If the user attempts to find a library entry using too short or too common an alias or nickname, and it turns out not to be unique, the system may find it embedded in more than one alias entry and therefore not choose the correct formal name. Judicious selection of aliases, the instructions to the user, and printed lists of the library may all be helpful in overcoming possible ambiguities.

Richard Byrd is an electronics engineer, and now an attorney in private practice. He and his wife, Nancy, have developed and are marketing vertical application Excel software.

MUSEMENTS

by Fred Seelig

Something old, something new, something borrowed, something... Naah, I'd better not say it. There's something here for the whole family. First off, I'd better eat some crow: Rich Norling's *Cricket Graph* does do full-page semi-log graphs. How could I have doubted it? There's more on MORE, more on MindWrite, a review of three books, a review of Personal Training Systems' Excellerate tutorial series, and a few anecdotes that might amuse you. It's been a busy month. I'm not even going to mention the Mac SE or the Mac II *once*, even though they've already made their debut. Surely there will be articles that describe these *wunderkinder* of the Mac in enough breathless detail. But Bernie's screaming for copy so I'd better close and put this in the mail.

Business Images, Inc.

Bob Marks was a Xerox marketing executive up until a few years ago. Then he formed his own printing company, called Business Images, Inc. I talked with him in November, because I wanted to talk to someone who was relying on a small cheap computer like the Mac to do major business graphics work.

He started out as a marketeer working the Washington area. Back then, the closest thing to desktop publishing was the Xerox Star system. Back then it was a \$30,000 system. The equivalent Macintosh system today is \$10,000.

He owns a medium sized print shop in Vienna, off Maple Ave. The quality of his shop's work is high, and he admits to preferring the more complicated jobs rather than the easy ones. The shop has the usual assortment of offset presses and expensive copying machines. It also has a huge Xerox photographic machine that does remarkably sharp image enlargements or reductions. It's a modern office with new equipment, and the average age of the staff there is young. Bob's staff uses a Macintosh for fast page layout and graphics generation. He has two Macs and a LaserWriter.

Bob sat down with me over his lunch hour and talked about the printing industry and the Macintosh. Some of his observations follow.

On digitizers: Current digitizers that are Macintosh compatible are not good enough. Most of the low-end digitizers like ThunderScan digitize at 75 dots per inch, or dpi. That's great for small newsletters, but it's unacceptable for commercial print shops. The LaserWriter prints at 300 dpi resolution. Digitizers that scan at 300 dpi minimum are required for print shop quality work.

Cutting and Pasting: For raw speed, nothing will replace having a cutting board. For certain things there is nothing faster than an artist cutting and pasting an illustration into a report or brochure master.

On Full Page Displays: They're too expensive. Bob would like to see them sell for \$800 before he buys one.

Background Printing: A must.

Business Images, Inc., Suite 117, 501 Church Street, N.E., Vienna, VA. 22180 (703) 255-2667

Personal Training Services' EXCELLERATE Series Review

Personal Training Systems' Excellerate self-training series on Excel was mentioned in last month's column. I have reviewed Personal Training Services, Inc.'s Excellerate tape and disk series. For completeness I sat down and listened to four of the six PTS tapes and followed along with the examples on the disks. I looked for style, completeness, ease of use and accuracy of the instructions.

To give you some idea of my background, I knew about 40-50% of Excel's capabilities before listening to these lessons. I was familiar with Excel. I knew the basic functions. And I hoped that this tape series would qualify me to be a Morgansteinian Excel power user, able to leap tall macros in a single bound, and link spreadsheets faster than a speeding bullet. It didn't do that, for me, but it's still a good self-teaching series you might be interested in.

When you open your package from PTS you get a molded folding plastic container with a disk, an audio tape, and a Command Summary card. The disk contains Excel files that are titled Lesson 1, Lesson 2, etc. Excel is obviously not included with the package. It is assumed that you will already have Excel on hand. The instructions recommend that you have a tape player with a resettable counter. You set the counter to zero at the beginning of the audio portion of the lesson. You mark the number in a box provided with each lesson in case you need to repeat just a specific lesson, or in case there are multiple people using the tape series. There are typically ten lessons per package.

The tone of the audio soundtrack is congenial. It's almost voice Musak. Some guy is talking for a while, and then he says "Oh by the way, I'm Dave. I'll be introducing each lesson to you, then reviewing what you've learned at the end of each lesson." Then a woman talks. "And I'm Liz, your guide. I'll be helping you every step of the way." Fine. Kind of like Hi I'm Bruce Your Waiter. But it's a minor quibble. The lessons are structured along classic education theoretic lines. You tell them what you're going to tell them, then you tell them, and then you tell them what you told them. This is not bad. It's very very good for that person that has absolutely no idea what Excel is all about.

The tape series is almost perfect. I caught two mistakes in the Business Graphics tape, but I was amazed how few and how minor the mistakes were. The words describe exactly what you see on the screen. The instructions are clear, unhurried, and delivered in a calm manner. The PTS series is a most relaxing and painless way of learning Excel. So the PTS people have really done their homework. This is a polished set of lessons.

Greatly appreciated is the error correction along the way. For example, after learning how to create a column chart out of spreadsheet data, the tape instructs you simply to make a column chart out of some data in a more advanced lesson. Just in case you forgot, the tape reviews how to make a column chart. The few times I was confused, the voice said
contd.

something like "Confused? Forgotten how to make that column chart?" It was eerie how accurately the lesson designers anticipated that sort of thing.

The downside of this tape series is that it only covers about 20% of Excel's capabilities. For example there is no tape covering function macros. *Excellerate* is not for the user that knows Excel and wants to learn its features in-depth. I have written Susan Barton, the president of Personal Training Systems, and suggested that she build on this base of lessons by developing another six lessons that deal with command and function macros.

Having said that, however, I still maintain that *Excellerate* is adequate to train 70 to 80% of the people that will be using Excel. Businesses that should consider *Excellerate* are accounting departments, small businesses, graphics and word processing departments, and general home users. Word processors definitely ought to use Excel, since Excel makes numerical tables far faster than any word processing program. Tables printed out on the LaserWriter are a knockout, too. Guaranteed stun ability.

Figure 1 summarizes the continuum of Excel users and which tutorial material they need. *Excellerate* is best for beginners. Douglas Cobb's 695 page tome on Excel is good for getting started and will be good until you begin having serious questions. His book is much better than the manuals that Microsoft ships with Excel. Finally, Douglas Hergert's book is for advanced users. Advanced means macros. His book is the best around.

Summary: *Excellerate* is a good introductory course to Microsoft's Excel. Since Excel will be the dominant Macintosh spreadsheet for the next few years, I would recommend it as a valuable learning tool for beginning users.

Up the EXCEL Learning Curve

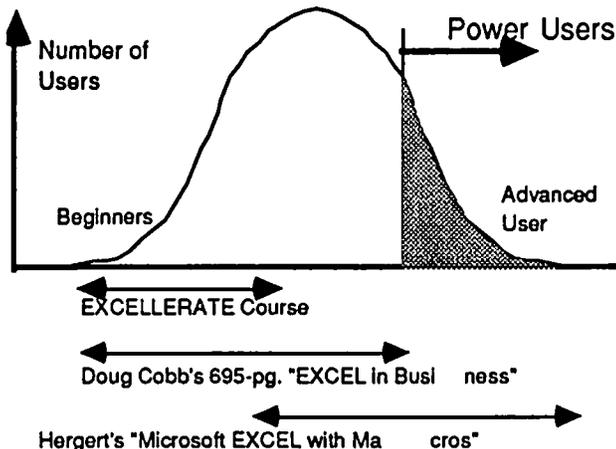


Figure 1. The distribution of Excel users. Beginning users would benefit by the *Excellerate* training series. Douglas Cobb's book is a beefed up version of the Excel manuals, except that there are a lot of examples included. Adequate for beginners to moderately experienced Excel users. Douglas Hergert's book is for middle-level to experienced Excel users. Personally, it is my favorite book on Excel. David Morganstein isn't even shown on the chart.

Personal Training Services, Inc., 14842 Nelson Way, San Jose, California, 95124. Toll-free (except in Utah): 1-800-453-6500 (Collect phone calls accepted): 1-408-559-8635.

Mac Plus Armatron

I got a chance to play with a Radio Shack Armatron over the Christmas holidays. It was during a boozy New Years' Eve party. Most of the buffaloes had bellied up to the bar to knock down some drinks. I took one look at the Armatron, though, and knew my calling for the evening. The host was a financial boy genius who worships the ground Ivan Boesky walks on. This was one of his toys, like the Targa Porsche in his driveway.

The Armatron is a robot arm with two or three levers that control up/down, sideways, rotate right/left, and open/close claw movements. It's one of those overpriced things from Rip-'em-Off Shack: \$39.95 for a few plastic parts, D cells, tiny motors and two knobs. But it was a robot arm that had something like 6 degrees of freedom and I was hooked. I just had to pick up pretzels and beer nuts with the darn thing. When Ivan, Jr., accosted me with another round of Jim Beams straight up, I tried to choke him with his own robot arm but alas it was too puny. But it was incredibly fun to work this arm. Deceptively hard, too. A few minutes at the controls and I came away with the impression that writing software that automates robot arms in factories is a LOT harder than it looks.

It got me to thinking about the possibility of some inventive and very bored electro type coming up with a clever scheme of interfacing a Mac to the Armatron. Conceptually it would be very simple: The computer would send signals digitally out of one of the ports in the back of the Mac. These signals would be latched into a data register and drive a D/A converter, perhaps being multiplexed between six or so motors. Add a few filters and you've got yourself the computer-to-Armatron link. Feedback would be a tricky part. The Armatron has no feedback signals, like pressure sensors in its claws, so that there is no feedback path to the Mac. So that would have to be kludged. And there would have to be a software interface that would allow a user to, say, write a Macintosh PASCAL program that would drive the arm's motions.

But make it cheap and fun and you may be surprised to find how many people would want to buy them for their favorite Macophile for Christmas or birthday.

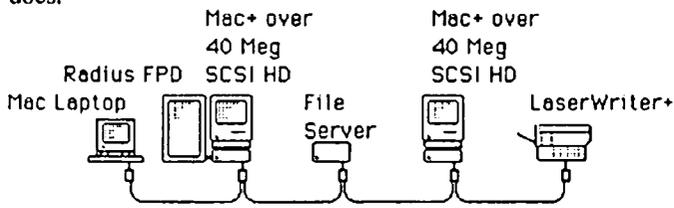
Build one and then I can go back to Ivan, Jr., and hook his Armatron into my Mac, and then I would fiendishly laugh and say, "A HA! Your robot arm is now under *my* control! A hahahahaha!" And then I could get the MacArmatron to dial a phone. "Hello, Securities and Exchange Commision? I have a friend..."

The Dream System

You have to understand... This was written before hearing about the Mac II. Here's my dream system: A Mac-like machine turbocharged with 2-4 Megs of no-wait-state RAM memory, a 68881 coprocessor, a graphical coprocessor that speeds up handling windows and QuickDraw graphics and bitmapped text. A nicer keyboard, like the Tangent Technologies one. A DataFrame 40 Meg XP hard disk. The DataFrame sits next to the Mac, not under it, as shown in the conceptual drawing in Figure 2. This just got a fantastic review in a recent issue of *InfoWorld*, which said that it was the fastest hard disk that they had ever tested on any personal computer. Except it was too noisy. Oh well. A 600-Mbyte optical disk with file server software. A laptop, of course. I

contd.

wish that it would sit under the Mac, as the Apple HD20 does.



A fast AppleTalk network

Figure 2. Here's my dream system, pre-Mac II, based on Mac Pluses. You got yer Macs with a few megs of memory, you got yer scuzzy drives, 40 Megabyte variety, you got yer file server with perhaps a tape streamer backup gadget, you got yerself a LaserWriter Plus with about a zillion fonts, you got this here Mac laptop that does everthang but make coffee in the morning, and you got yer local area network. I mean a *real* AppleTalk LAN that transfers data at Ethernet speeds. Now you got yerself a kickbutt system. Put some plastic flooring between the Macs and get a chair with wheels and you can slide between machines just as easy as you please.

MindWrite Redux

What the...? I open up the Feb. 2 ish of *InfoWorld*, and I read the "First Look" column by a person who shall remain nameless. And he's reviewing MindWrite. *And he likes it!* And I am thinking to myself, "Is this guy doing drugs? Does he live in some parallel but not-quite-the-same universe?"

It's like this guy has bought the ads for MindWrite, hook, line, and sinker. I can't tell that he ever used it, ever Broke Cellophane. Ah, but wait a minute. Here's a clue. At the very end of the column, it says, "First Look examines new personal computer products before they have been through a formal review." So that's it. He used MindWrite to knock out a paragraph or two and decided that that was enough material upon which to judge MindWrite. So much for responsible journalism.

And then, a week later, *InfoWorld* does an in-depth review of MindWrite. Based on their score (an acceptable 5.8 out of 10) and what they said, I have lost all confidence in the validity of the test procedures. Not one mention about the frequent system bombs. Or the weird and mystifying screen spectaculars that a user is treated to when trying to write a large heavily formatted document. Now wait, you say, of course a document is going to act funny when you push an application's capabilities, especially for a large document. But, I reply, the only reason I would switch from MacWrite is to employ precisely those features that MindWrite claims to have that makes it superior to MacWrite. I'm going to use the outliner, I'm going to insert rulers, I'm going to insert graphics, well of course I'm going to do all of that, and I don't expect to be penalized for doing them all.

In all fairness to them: According to the review in *InfoWorld*, MindWork Software will send a new version of MindWrite to all registered owners of MindWrite version 1.0. The update is supposed to happen in February or March, and it's free of charge. Let's hope that they clean up their act.

More on MORE

Living VideoText has repented of its sins. The new release version (v1.1) allows multi-level bullet charts. I

haven't seen the new version yet so I can't comment on the user interface.

⊗ Another bug I have found: When you hoist a portion of an outline, make it into a tree chart, and print the resultant tree chart on a LaserWriter, several things happen: 1. The dimensions shown on the rulers are not as printed on the Laser-Writer, and 2. The window contents appear to be fragged when the AppleTalk dialog box goes away. Hitting the Enlarge or Reduce box in the tree chart menu seems to help redraw the screen.

Another feature: Draw a tree chart. You want to snazz it up. You wish you had MacDraw to do the sprucing up. No prob. Simply export the tree chart to MacDraw format and do your editing and refining there.

I hope that LVT takes these complaints constructively, since they are intended as such. MORE is a fantastic piece of software. I unhesitatingly commend it to anyone who uses an outliner for writing or for briefings or presentations. I especially do so because of Living VideoText's policy of shipping free upgrades as MORE becomes more bug-free. This helps a small business preserve its software investment.

By the way, the MORE manual is among the best ever written for any Macintosh software. My compliments to Ronald G. Kirchem, the author of the superb manual.

Cricket Graph Faux Pas

Rich Norling called. Cricket Graph does do full page semilog plots. Communications systems engineers can all sleep a little better tonite knowing that they can get their precious waterfall graphs to print. That is, providing that they have Cricket Graph instead of MS Chart. Here's how you get a semilog plot full page: Draw your scatter plot as usual. Double click on the y axis. Select the log option. When you go to print the plot you will see a full page display on the screen. Click on the graph. A Size box appears. Resize the graph's outline so that it fills the page. Print.

Unfortunately when saving a graph the print setup options aren't saved. So any time you open an existing graph and want to print it you have to resize the graph. Rich N says that that will probably change in version 2 of Cricket Graph.

"Advanced Macintosh Pascal"

Anyone who loves Macintosh Pascal ought to buy this book. It is not for the casual programmer. It goes into the kind of depth that I had wished that Carmony and Holliday's classic book *Macintosh Pascal* went into. Topics include Macintosh System and Memory Overview, Advanced PASCAL Structures (records, variant records, sets, set operations and pointers), Files and File Programming, Events, QuickDraw Programming Techniques, the InLine Routines—Accessing the ToolBox, and Advanced QuickDraw (including GrafPorts, regions: drawing them, disposing them, and calculating with them), SANE, and MacPASCAL version 2.0. I only wish that this book had given an example of an animation program using pictures in overlapping regions. Other than that, a perfect book.

Advanced Macintosh Pascal, by Paul Goodman. © 1987, by Hayden Books [a division of (gasp!) Howard Sams & Co.] 287 pages., \$19.95.

"C Primer Plus"

This book is possibly the most novice-friendly introduc-
contd.

tory text in the C programming language. There are lots of examples, the style of writing is friendly and congenial, and the drawings are pretty funny. At the end of each chapter there are programming problems with answers. Especially useful are the problems that show you a line of code and ask you what's wrong with it. If you want to learn C, then buy this book.

I love the examples. When the authors explain variable types, they use the following examples:

unsigned players
unsigned short ribs
charitable, latan
charisma
interns

Sometimes humor is used to mask the shallowness of a textbook's contents. Humor here does not. In fact, in view of the fact that C is such an austere language, I think that it is almost necessary to maintain the reader's interest. The book is a good read. This book and your LightSpeed C manuals and you, too, could be living the exciting and rewarding life of a highly paid C software designer.

C Primer Plus, by Mitchell Waite, Stephen Prata, and Donald Martin. ©1984. Howard W. Sams & Co. 531 pages. \$22.95

But Don't Buy This Book!

It's extremely dangerous to call Kinko's Academic CourseWare Exchange, at 1-800-235-6919, and ask for the Fall 1986 Catalog. It contains descriptions of Apple software, mostly for the Mac, mostly at student prices, which is to say in the \$10-30 price range. This software is being used in a variety of ways in universities throughout the country. Some software is tutorial in nature: Some is utilitarian, like the Drexel Plot graphics plotting package. Some is for test-writing and tutorial-writing: Lesson Writer (\$30), which accompanies Lesson Writer for Chemistry Lessons (\$34). My favorites are: the SmallGol compiler (\$16.50), Signal Operations (\$25) and Transforms, Windows and Modulation (\$40). The last two packages ought to appeal to anyone who's learned about digital signal processing recently and gotten used to the funky Oppenheim and Schafer type drawings of digital signals.

Don't do it. Do not send away for this book. Your wallet will never forgive you. Ten dollars here, twenty there. Oh look, honey, this one's only \$7. We'll buy it for the kids. Yeah, sure, buddy. You'll have to join SoftWaHolics Anonymous. You'll have to go cold turkey, and never have to buy another software package again.

Kinko's Academic CourseWare Exchange, 4141 State Street, Santa Barbara, CA. 93110-1891. 1-800-235-6919.

New Operating Systems and the Mythical Man-Month

Remember System 3.0? It caused major disastrous bugs. System 3.0 was created to *fix* bugs, of course. Why is it that updates to the System introduce more bugs than they clean up?

I had occasion to reread Frederick Brook's masterpiece, *The Mythical Man-Month*. In Chapter 11 he writes a section entitled "One Step Forward and One Step Back."

"Lehman and Belady have studied the history of successive releases in a large operating system. They find that the total number of modules increases linearly with release number, but

that the number of modules affected increases exponentially with release number. All repairs tend to destroy the structure, to increase the entropy [amount of disorganization of a system. FWS.] and disorder of the system. Less and less effort is spent on fixing original design flaws; more and more is spent on fixing flaws introduced by earlier fixes. As time passes, the system becomes less and less well-ordered. Sooner or later the fixing ceases to gain any ground. Each forward step is matched by a backward one. Although in principle usable forever, the system has worn out as a base for progress. Furthermore, machines change, configurations change, and user requirements change, so the system is not in fact usable forever. A brand-new, from-the-ground-up redesign is necessary.

And so from a statistical mechanical model, Belady and Lehman arrive for programming-systems at a more general conclusion supported by the experience of all the earth. 'Things are always at their best in the beginning,' said Pascal. C.S. Lewis has stated it more perceptively:

That is the key to history. Terrific energy is expended - civilizations are built up - excellent institutions devised; but each time something goes wrong. Some fatal flaw always brings the selfish and cruel people to the top, and then it all slides back into misery and ruin. In fact, the machine conks. It seems to start up all right and runs a few yards, and then it breaks down."

A perceptive man, this Frederick Brooks. He's commenting on what will surely be one of the most important phenomena of this new generation of computing machinery: system software updates. And why it's harder and harder to write adequate software for large computer systems.

The Power User's Manual

MacUser's Power User's Manual has been published and released by the folks that bring you MacUser. It contains over 1000 tips culled from reader suggestions. The TCS bulletin board has been buzzing with complaints about the long delays for the book's arrival. The book was free if you just became a subscriber or if you gave a Christmas gift subscription to a friend (like me). Faithful charter subscribers complain that they ought to have been offered this book, too.

My copy arrived in late January. It's a mixed bag. It's fun to read. You learn a lot. But it doesn't go into much detail in any one area. For example, the MacPascal section has only 5 items listed. I would have expected 20 or so items.

The format I would have preferred would have been sheets bound in a 3-ring notebook binder, much like IBM software manuals. This way, you could have easily added tips and hints on an ongoing basis.

The organization leaves something to be desired. Right now it's organized in an alphabetical manner by topics. I would have preferred that a more hierarchical organization had been imposed on the topics. A suggested hierarchy is properly the subject of another month's column...

The best feature is the 17 page Major Category Index in the back of the book. It is divided into four columns, entitled Category, Subject, Page and Title. An example is MacTerminal, Cursor Movement, page 89, Simulated Cursor Keys. A glance down the Title column, which is composed of a 6-8 word synopsis of the tip, is usually sufficient to find a tip quickly.

The Power User's Manual, compiled by Randal Kottwitz. © 1986, by MacUser Publications, Inc. 162 pages., \$19.95.

contd.

Recommended Midnight Programming Music

Music To Program By. Here's this month's Fave Rave: We're Ready, by Boston. Put on those headphones. Crank each side's volume knob up to 10. Set equalizers (to Stun) so that lots of bass pounds through. Now, very carefully, place the needle in the groove preceding the song. And brace yourself when Schotz & Co. kick in. GoTo musical nirvana.

If Alexander Haig Knew About Software

I woke up in a cold sweat one night. It was Alexander Haig, and he knew about software. As usual, he was extremely dangerous. This was the conversation I heard:

"Vis-a-vising the operating systems of the Macintosh and the Amiga, after careful bubble-sortizational analysis, we find that, byte-wise, the Amiga operating system is executed in a less logical manner. Kerneling down to the graphics primitives... The Event/Crisis Management software receives prioritized interrupts. A high priority interrupt equivalences to 'Gentlemen, if you'll recall your software prioritization lookup table, it authorizes me to say that / am in charge here.' The ECM Crisis/Command Center ROM then receives authorizational provision to begin a general disk removal strategization, targetizing IBM-oriented and clonal elements." Gaaawd. Please keep computers away from Al Haig. There's no telling how our language would change if he found out about HFS, icons, and disk drives.

Non-Apple Card Hangs AppleTalk?

An IBM PC AT was attached to the AppleTalk local area network at work. A Tangent Technologies AppleTalk card was used to do the electrical (and software?) interfacing. It has hung the LAN while using the LaserWriter to print MS Word (IBM version) documents. I did not do fault isolation, so I cannot say whether it is the fault of the Tangent Technologies card or the IBM MS Word software. I rather lean toward suspecting the Tangent Technologies card. But Mac sysops ought to be cautious about integrating IBM machines onto AppleTalk. As a reference point, we had this hanging problem manifest itself within a week of the IBM integration, while we have never had strange problems in the five months that our Mac Plusses have been hooked up to AppleTalk.

The Icon Font

You say that the Mac has revolutionized your life? That you can barely communicate without reference to something about the Macintosh? Buck up, lassie, you can use the Icon font to enliven letters home to Mummy and Daddsie.

 dear mom, I tried to  but you weren't home. Nothing much has been happening at Boring State U. Janie and

I have been listening to the Beastie Boys on the  and

my  class has been a real  to bear. I wasn't doing

too well in it so I  it. My  class has been so boring, I don't know how Daddsie stands to add those numbers all day. Next week we're going to have a test in it and I think

that I'm going to die  We've been having all-night 

parties. Don't worry, Mum, I've made almost enough to pay for next semester's tuition. There was that frat party that

my friends and I went to. They got maximally  ed, but I stayed straight as an . That's when I met this really cute

. He's nice and Daddsie would like him since he loves

his . Actually, I think he loves it more than he does me! But you know how that goes. Oh my gosh, would you look

at the  ? I've got to go or I'll be late to my  at the

cafeteria. I'll  more later.

The Icon font is found on the Mac disk #23. It works equally well on the LaserWriter as it does on the Imagewriter printers.

Answers

In the last ish I had some games and puzzles. Here is the answer to Puzzle #1.

Game #1 had a screen dump of the Macintosh with the words "Help, I'm Trapped!" written in cursive on the DeskTop. The secret is using FullPaint. First create a PICT file by taking a screen dump of the DeskTop without the words, that is, CMD-Shift-3 (check this). Open this file, called Screen 0, using FullPaint. Write the words on the DeskTop using the Paint Brush tool. Select the Hand tool. Then remove the Tools and Pattern palettes, as well as the menu bar, by selecting the rightmost box under the Tools icons. This causes the Mac screen to be filled with the contents of the current file. Use the Hand tool to exactly fill the screen dump with the screen. Do CMD-Shift-3 again. Hit the Space bar to return the palettes to the screen, and select the middle screen option to return the menu bar to the screen. Open the second screen dump file, called Screen 1, and remove any remnant of the Hand cursor. Again fill the screen with the screen dump. The screen is now filled with what looks like the DeskTop, as shown in Figure 1 of last issue's Musements column.

Hurried addendum: Mac SE. *Whew!* That was to ensure that I didn't mention the Mac SE once. Also, the Bob Marks interview occurred before the raft of 300 dpi digitizers hit the market. Abaton, Princeton, and a few other companies do now make 300 dpi digitizers and interface boxes for the Mac.

Not much is known about Mr. Seelig. He leads a dull and boring lifestyle in some nondescript Northern Virginia suburbs. The Seeligs just had a second daughter, who keeps the same hours as he does. The first daughter, Julie, is possibly the most beautiful and smartest girl ever, making him, of course, doubt her paternal origin. Mr. Seelig is the president of Mac Consultants, an organization dedicated to helping small businesses with Macintoshes. 

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MAC ASSEMBLY: Two Book Reviews

by Bruce F. Field

There are a number of books on the market describing 68000 assembly language programming; however these are generally less than adequate for use with the Macintosh, as the key to using the Macintosh is learning how to use all the routines built into the ROM Toolbox. For example, the programmer may know how to move bytes, add numbers, etc. but how do you get a window on the Mac screen? This article reviews two books which describe how to program in 68000 assembly language and explain the operation of the ROM routines in the Macintosh.

Assembly Language Primer for the Macintosh was written by Keith Mathews and published by Plume/Waite. This book is intended for the amateur, one that has no experience in programming in assembly language, but does have some experience with a higher level language such as BASIC. The intention of the author is not to teach the reader how to program, but to teach assembly language on the Mac. I was particularly attracted to this book initially because all the examples are done using Apple's MDS Assembler. The author starts at the very beginning: how to use the Assembler, what files to create, how to assemble a program, and other details. Walking you through these steps is much easier than deciphering the MDS reference manual. Unfortunately, that is the last good comment I can make about the book.

I have three major criticisms. Least importantly, I did not care for the author's *style* of writing. He introduces a subject, gives a very abbreviated description, and then says it will be covered in greater detail in a later chapter. I understand his desire not to initially overburden the reader with too many details, but I was left with too many unanswered questions that were often not answered later. He also uses a large number of simple analogies to poorly describe elementary concepts. The following is the introduction to the section on the major parts of a microprocessor. "A computer's microprocessor is like the headquarters of a large business. The head office clears all messages coming in or out, reports on the conditions of the company, and keeps track of all production. It also keeps track of where inventories of equipment and supplies are kept and knows how much money is being spent and earned. Decisions are made moment to moment that affect the business' success." Well, I'm glad that I know how the headquarters of a large business works, but I don't know anything more about the microprocessor.

The following narrative is used to describe the operation of a program. "In this chapter we'll explain the program you wrote in Chapter 2, ... from several different points of view. The method of explaining a program that we'll be using throughout the book is a spiral approach. It is roughly synonymous with exploring Mars. First, we will look at the pictures and charts made from a respectable distance, as through a telescope. Then we will send a probe or two to get some data about the subject to be explored. Then we will send a manned spacecraft around the planet a few times to get some opinions and firsthand descriptions of the territory. Finally, satisfied that it is safe enough for humans, we'll

approach the subject planet, land, and step outside. Once the first few steps prove safe, we'll explore a bit on foot, picking up rocks and soil samples for later study." It goes on, but you get the idea—this has nothing to do with programming. Granted criticisms of style are subjective and with many years of assembly language programming experience (not with the 68000 though) I may not be the typical reader, but anyone with a desire to program in assembly language will most likely be already familiar with the computer and poor analogies don't help.

I also felt the writing was confusing, ambiguous, and unclear in many places. The author explained that routines, clusters of routines, and variables could have two names, one for one purpose, another for the next purpose, and that this could be confusing. True, the author did appear to be confused by this; the important Mac concept of "pointers" and "handles" was not explained clearly and the author used the term pointer several times when he meant handle.

The 68000 instruction PEA -4(A5) was first described on page 120 thusly, "The PEA instruction causes an effective address to be calculated, then pushes that address to the destination operand (in this case, address register A5)." On page 121 the same instruction was described differently, "The PEA instruction causes the address currently in A5 to be decremented (subtracted from) by four long-word addresses, which adds the four addresses to the stack, in sequence." Also on page 121 the instruction is described in yet a different way, "The final value of address register A5 will be four fewer than when the PEA instruction began." Two more descriptions appear on page 122 that are different from each other and the first three. Not only are all the descriptions inconsistent, they are all WRONG! This brings up my third and most important criticism.

Descriptions in the book of Macintosh ROM routines and 68000 instructions are frequently wrong. Not slightly wrong, not minor picky wrong, but totally wrong, as in not a grain of truth. This makes the book nearly useless. On page 175 the author describes the action of the ROM routine HiLite-Menu when called with a zero argument. "Action: Tracks the mouse movement while mouse button is down in the menu bar; highlights a menu when mouse button is down inside its rectangle; unhighlights all menus when mouse moves out of rectangle or mouse button is released." Actually all this routine does when called is unhighlight the menu; it has nothing to do with mouse movement or clicking.

There are several simple example program listings included in the book to demonstrate how to setup windows, handle desk accessories, use the menus, etc. These programs (at least the first three that I typed in) work correctly. I get the impression, however, that someone other than the author wrote these programs. The author's step-by-step explanations of the programs operations are often seriously incorrect. He appears to have a flawed comprehension of exactly how the programs work.

After plowing through about half of this book I was more
contd.

confused than when I started and gave up and went out and bought a different book. *Assembly Language Primer for the Macintosh* by Keith Mathews, is recommended—for the trash can.

The second book, *Programming the Macintosh in Assembly Language* by Steve Williams, is published by Sybex. Do not confuse this book with another book by Sybex on general 68000 programming. This book at 779 pages appears quite substantial at first, but large portions are devoted to discussion of each 68000 instruction and listings of sample programs. The remaining portions of the book are quite readable. The author starts with a very brief description of algorithms, programming languages, flowcharts, and basic computer operation. Experienced programmers can skip this. Next, all the 68000 instructions and their addressing modes are discussed. This can be treated as a reference section and skimmed through by experienced programmers. Now we're up to page 259 already and ready to type in our first program. See that was easy.

This book also uses the Apple MDS Assembler for all the examples; however there is a little less hand holding than with the previous book. It is assumed that you are already somewhat familiar with the operation of the Assembler. It does give you an introduction to the Macintosh debuggers. Now comes the shock. In order to run any of the example programs, you must first type in and assemble a set of utility routines described as a Run-Time Library. These routines make it very easy to setup a program with a window and setup a File and Edit menu (one macro call), open, read, and write files, scroll text on the screen, handle events, and take care of a few other Mac things. For the novice Mac programmer these are really a very handy set of routines that can be linked to any program. But, you must either type in the listings (2834 lines of code) or purchase a disk for \$20 which contains the Run-Time Library and all the example programs. Being reasonably cheap (as well as impatient and not willing to wait the claimed 6-8 week delivery time) I typed in the Run-Time Library code in about 20 hours.

Once the Run-Time Library is taken care of, the author moves on to thoroughly explain several simple examples—binary to ASCII conversion, reading keyboard input, and reading a file. Several advanced programming topics such as data structures, sorting, searching, and recursion are briefly discussed and then the author moves on to Mac specific topics and programming in the Mac environment. Finally he describes in detail the operation of the Run-Time Library and the required calling sequences for the routines in the Library.

Also included are three brief descriptions on how to link assembly language programs to Microsoft BASIC (as a Library), Consulair C, and Lisa Pascal. I tried the BASIC example but couldn't get it to work.

The last programming example is a fairly complex application which features drawing with QuickDraw, text entry, window scrolling and size control, and printing. This example is not described directly in the text but is copiously commented and runs to 3935 lines of code. I haven't typed this one in yet; I just might spring for the \$20 disk.

Programming the Macintosh in Assembly Language by Steve Williams is a good introductory book for assembly language programming on the Macintosh. It doesn't

describe all (or even many of) the Mac Toolbox routines. For that you will need *Inside Macintosh* or one of the other books on the market, but all the 68000 instructions are described and you end up with a set of handy utility routines. ☺

Editorial contd. from pg. 3

recent recapture of the America's Cup by Dennis Connors might very well be the result of applying a film which emulated porpoise skin to the victorious Stars and Stripes, and indications are that future planes may very well be similarly equipped with drag reducing riblets. What next? Biochemical computers?...

A question for you. When is a computer user a power user? (Answer next month.) ☺

GraphicWorks contd. from pg 44

Most of the MacPaint tools are here, and they work as expected, with some improvements. For example, the mar-quee can be used to "scale" the selected item(s). Simply holding down the Command key while dragging a corner of the rectangle will change the size and proportion of the surrounded items. The shift key can be used to constrain the scaling to proportional only. The familiar spray can is replaced by an adjustable air brush. The spray area can be adjusted from 1 to 96 pixels across. I didn't actually count them, but that's what the manual says. Holding down the CapsLock key while using the Air Brush sprays transparent paint. The "About GW" information box

Another main heading on the menu bar is called Layout and holds the tools necessary to re-arrange panels and balloons in different layers on the drawing. Centering, reformatting, and reshaping are also valid choices.

FatBits was not forgotten, but improved in GW. There are now several ranges of magnification for FatBits. They are two, four, and eight times the normal size. There is also the reverse of FatBits—ThinBits. ThinBits allows working on a miniature copy of the document. All of the tools are available and work as they do in standard mode.

Included with GW is a disk of templates and borders. They serve as examples of the kinds of things that can be accomplished with GW. All or parts of them may be copied into a current document and modified.

If you are considering an alternative to MacPaint, GraphicWorks might be just what you are looking for. GraphicWorks, Mindscape, Inc, 3444 Dundee Rd., Northbrook IL 60062. \$79.95 list. ☺

ANOTHER LOOK AT "MAC"AZINES

The Search for "True Scoop"

by Mike Ward

In reading the February "Views and Reviews" by Raymond Hobbs, I am reminded of the dynamic nature of technical information, as well as the volatility of publishing. As a fledgling fire department paramedic in 1977, I had subscriptions to six magazines, joined three national emergency medical service organizations and was buying almost every reference or trade book that had the slightest application to pre-hospital care. (If you had stock in Mosby, Lippincott or Brady publishing now you know why your dividends increased.) The "cost-per-piece" of information was high. Much later I discovered that the real need was to find appropriate original material that directly related to what I was doing. In 1982, I donated the results of my efforts to the fire academy library—47 books and about 100 pounds of magazines, handouts and notes. The obsolete books, magazines, handouts and notes filled up about one-fourth of the academy dumpster.

When I bought my Mac in April of 1984, I was at the same level of information about microcomputers as I was about paramedicine in 1977. Prior to buying the Mac, I spent about six months reading anything I could find about microcomputers. One of the first valuable magazines I found was Washington Apple Pi.

So, after three years of reading everything I could get my hands on about Macintosh, I would like to share with WAP members what I feel are valuable 1987 information resources for those of us who don't care to write programs, hotwire logic boards or spend good money on poor goods. This information is found in three resources, newspapers, user group publications and trade publications.

Infoworld. Weekly newspaper. \$100/year. \$2.95 an issue. Yeah, it's expensive, but I have saved the subscription price in not buying poor performance software or bullied into panic hardware buying. (I never anticipated the annual thousand dollar dilemma I have gone through *twice* in raising my 128K Mac into a 1Mb +.) A "hard news" periodical marketed for the corporate buyers of microcomputer products, it features a well researched "theme" every month that both explains the device, the market and then compares the available items. The February 16th issue that is on my desk has a product comparison of high-resolution, large screen monitors. The regular sections include NEWS, SOFTWARE, HARDWARE, COMMUNICATIONS, SUPERMICROS, MACINTOSH NEWS, INDUSTRY, MANAGEMENT, REVIEWS and COLUMNS. The reviews include three or more software programs and two or more hardware items. All items reviewed are finished, available items (no beta versions or pre-release items). This is different than the magazine's approach, all of the Macintosh trade magazines review "beta" versions of software. About 300 software items are reviewed annually, with an increasing amount of Macintosh items each year. Both software and hardware get a report card.

The newspaper reflects the IBM dominance in the business

environment. It covers all manufacturers and in 1987 started a new section on the Macintosh to reflect the market penetration Apple has made. Jerry Pournelle writes a bimonthly column that is similar to his "Chaos Manor" articles in Byte.

With magazines having a lead time of three months or more, the timeliness of this newspaper and the accuracy of their reports is the reason I consider Infoworld the most important source for information. For example, the February 16th issue reports that Microsoft announced last week that they have just started manufacturing and shipping Word 3.0. So, despite my cancelled check for \$99, a postcard from Microsoft stating "Mac Word 3.0 should roll out the last week in January—Expect your personal copy by mid February", a February MacWorld review and a March MacUser that features twelve pages on Word 3.0, I know not to run home every day to wait for the UPS delivery truck.

The user's group magazines are the next best published resource. Washington Apple Pi is one of the best. The series on Excel applications and the earlier reviews of statistical packages were very valuable, and Lynn R. Trusal's trials with a hard disk saved me some \$Sensive experience. (Hey, how come *you* are still buying this magazine in a store? You are missing valuable information, opportunities and contacts by not joining the Pi.)

MacA.P.P.L.E. \$3.00 an issue. This is a publication of the Apple PugetSound Program Library Exchange, a cooperative venture in Renton, Washington. In addition to public domain software, cooperative members can purchase software, hardware and accessories for a discount, although a comparison shows that their items sell at the same price as offered at MacConnection. Their reviews are profusely illustrated with window snapshots showing examples. Their columns include MacScience, the use of the Mac in science settings.

The last group is the trade magazines. This has been the most volatile group. The two magazines I will tell you about are not the same ones you would have bought in 1985, and may not be the ones you will buy in 1989. Both magazines share a common characteristic—their value is in direct relationship to the type of people they have writing for them.

MacUser. (Ziff-Davis) \$27/year. \$3.95 an issue. The thickest of the Macintosh trade publications (March issue had 192 pages), reminds me of the IBM trade magazines, with a lot of ads. Features 250 product reviews in the Minifinders section, one paragraph descriptions and a one to five mouse rating. A more extensive review of five to eight programs is found in Quick Clicks, taking about a third of a page. Far less comprehensive than Infoworld, but they ferret out some of the turkeys early. Some of the regular features I like include a Tip Sheet for getting things done faster, smarter or through an undocumented feature; Answers from the Mac Team by Dan Cochran; New on the Menu brief news bits, updates, rumor manager and the "bug of the month"; and their Directory. Reviews are fairly

contd. on pg 89

BEST OF THE MAC ITEMS FROM THE TCS

by Bill Baldrige

(Contd. from last month)

Other Hardware

BOB MASSO ON 12/02

Apparently Dyan has come out with improved (& less expensive) models of their MacCharlie Mac-IBM co-processor hardware—less than \$800 for 256K RAM and one disk drive. So I have a question—DOES that big MacCharlie box contain IBM slots? If so, it seems to me that a Mac with MacCharlie and an Apple Turnover card installed would give you the capability to directly read both IBM & Apple][5 1/4" disks into your Mac. Any comments from MacCharlie owners out there?

DAVID GURSKY ON 12/02

MacComer sells MacCharlie. Give them a call (330-9116 in DC and MD, 340-7032 in VA. 330 number is long distance from NoVA). Let us know the results!

ALLAN BALLIETT ON 12/29

Well, I've barked up about every electronic tree AT&T can reach and the general consensus is that the MAC+ UPGRADE 800K internal drive is not "User serviceable"—it is inherently junk—replace it now or replace it later. Anyone out there have any luck getting Clinton or (chuckle) Apple to give them a break on the \$\$ of replacing their drive? Several people on C!\$ told me they know people who got their out-of-warranty drives replaced for free. Some had to pay around \$100. I ask because Clinton has given indication that the price is silly putty. I want to know where to step for the best leverage.

BILL BALDRIDGE ON 12/30

I've seen similar problems related in Infoworld and MacUser. This is the proper medium (ie., Board). I will be interested to see if there are any others experiencing similar problems out there. I have held off having mine upgraded for this very reason...

ALLAN BALLIETT ON 12/31

I'm not taking it in until Monday. CAN'T afford the down time! (Running off the Dataframe for the time being.) Hopefully, come Sunday or so, I will crack it and find out why the disks are not being positioned properly. Hope somebody out there has more information on this problem.

DEACON MACCUBBIN ON 12/31

I've only had one 800K upgrade done so far but it works like a charm. I have heard that some of the very first drives provided for upgrades had problems and that Apple had authorized replacements at no charge. But my feeling is that the current upgrades are fine. (Just an opinion, so take it for what it's worth.)

BOB MASSO ON 01/07

Agreed, my internal drive failed JUST before the warranty on my ROM/Drive upgrade did. Clinton replaced it sans money.

So anyone out there planning to upgrade their Mac to a +, DO NOT do so just before leaving on vacation. Plan to use it intensively, so that if it does fail, it fails within warranty.

Misc. Programming

MARK WILLCOX ON 12/16

Yo ALL! Does anyone know where the debugger TMON can be gotten? Is it public domain/shareware or is it published? Have you used it? Was it good? Is it fun? Does it beat RAID? Much help to anyone who can give me any thanks on this....

TOM WARRICK ON 12/17

APDA sells it. Also, check the ads in MacTutor, available at many computer stores and some bookstores.

MARK WILLCOX ON 12/16

I understand that the MDS PASCAL compiler will put routine names into compiled code when the debug option is used. Debuggers such as TMON and MacsBug will find those routine names and tell you where you are. (Oh to be able to compile, link, and debug one's life.) My question(s) is(are) this(these): Where does the routine name go? After the RTS at the end? Is it in a PASCAL string? Or how is it coded? Eh? My C compiler doesn't have this debug option, but I can get at the assembler output and scrunge in the names somehow. If I get this info, I'm going to write up something to do this real soon now. Anyone want a copy?

Pascal Programming

JOHN VESEY ON 10/31

I am new to the Mac, but ventured to write a program (as yet unfinished) using TML pascal 1.2 and a 512 old ROM. I had a clickable application. I have a Mac Plus and 800K drive. Copied my source and TML to 800k disks, change to HFS as per documentation, and voila! Compiles and Links fine. But—when I launch the application, the menu bar appears briefly, then disappears, and the whole screen turns white. I discovered the menu bar is still there, as I can pull down menus out of the void, and if I select an item, the program works as normal. Return to the desktop, and white out! Using the old 400K disks works just fine. Using the 800K TML and the 400K old disk works also. Using the 400K TML and the 800K source, white out! Copying the source to a 400K initialized with the Plus, and I cannot even edit a character without an immediate bomb! Any ideas? solutions? commiserations?

TOM WARRICK ON 12/03

I've had real problems with TML's Linker 2.0. After linking all the code segments, it freezes while linking the resource file. After a time, vertical black bars appear on the screen. Failure to reboot at this point will trash the disk (I know, I've done it twice). I think the problem is tied somehow to the Set Paths file. The problem, interestingly, doesn't manifest

contd.

itself on a freshly created pair of disks for quite some time. But when it starts, it occurs with increasing frequency until it happens all the time. Then I have to reinitialize the disks and start over. Any thoughts?

MICHAEL HARTMAN ON 12/06

Hmmm, very interesting. Why do you think it's the Set Paths file? Do you have the problem with just one of them, only when certain files are in different folders or deeply nested, or what? One thing you might try (at least if it's a floppy that's getting trashed), is rebuilding the desktop file periodically and see if that staves off the problem. If it does, that suggests that something complex and valuable like the HFS B-trees are getting slowly corrupted.

GAVIN HEMPHILL ON 12/07

Do you have the most recent version of setpaths? Versions prior to 1.3 are known to trash the system heap. If this is the problem I have the most recent version—just give me a call.

TOM WARRICK ON 12/09

Set Paths seems to crash 100% of the time if I try to get it to recognize folders on different disks. I've cut back to having only one path, and it seems to work—sometimes. I have reinitialized my floppies several times, and the problem eventually comes back.

GAVIN HEMPHILL ON 12/18

I've been using SetPaths 1.3 with multiple disks without problems. In fact I'm currently using it with paths set to the hard disk, the internal drive and the external drive. I have noticed that the system file (damn I can't remember the name, but it's the one with the ball and chain icon) that came with the LoDOWN causes crashes (and disk trashing) when left in the system folder while you are using SetPaths.

JOHN VESEY ON 12/27

When I get those vertical bars, I have always assumed it was the Redit compiler causing the problem. When I re-compiled, I would have no problem. I only got the problem (sometimes) when I edited and compiled my Resources. The problem seemed to occur when I tried to compile my object code to a different disk (folder?) than the one Redit was on. I had thought v.2.0/2.1 was supposed to correct this, as it corrected (?) the problem of Transfer with the .R file open. Anyway, I always close my .R source file now before using Transfer. I always compile to the same folder as Redit, then move the compiled Rsrc.Rel file to the folder with my application for Linking. In my case, these are on disk 1 and disk 2, respectively. If I am careful to do this, I have no Linker problems.

JOHN W. AILES ON 12/26

Ok folks, here is an obscure question, so put on your thinking caps: What does the "B" in "B-tree" stand for? In school, we were always taught that "B" stood for "balanced" as in "Balanced M-ary Tree." I have also heard others say such diverse things as "binary" and even that "B" stands for "Bayer", as in R. Bayer the man who thought the whole scheme up. Any comments (with references please).

EDMON J. DONNELLAN ON 12/27

"A binary tree is a finite set of nodes which is either empty or consists of a root and two disjoint binary trees called the left subtree and the right subtree."—Elias Horowitz and Sartaj Sahni, FUNDAMENTALS OF DATA STRUCTURES (Rockville: Computer Science Press, 1983) 223. This seems to make sense in terms of the way b-trees are used to facilitate sorts and searches.

JOHN W. AILES ON 12/27

Ed, I appreciate your reply very much. Horowitz and Sahni definitely is a very reputable source. One thing I continue to notice though: they never mix the terms "B-tree" and "Binary Tree." Any node of a Binary Tree has at most two children whereas a node in a B-tree may have many children. So, this leads me to believe that a Binary Tree is a B-tree, but a B-tree is not necessarily a Binary Tree. So then what does the "B" stand for?

MARLON NELSON ON 12/27

"A B-tree is a special kind of balanced m-ary tree that allows us to retrieve, insert, and delete records from an external file with a guaranteed worst-case performance." This is from "Data Structures and Algorithms" by Alfred V. Aho, John E. Hopcroft, and Jeffrey D. Ullman, p. 369. There are several pages on the subject. I would guess that the B stands for Balanced. The authors don't explicitly say so though.

BOB MASSO ON 01/07

No references spring to mind, but in all the courses and literature I recall reading, B-Tree always (when spelled out) stood for Binary-Tree. Special sub-classes included the AVL-B-Tree, the B-squared-B-Tree (balanced B-Tree), etc., but always with the Binary in there somehow.

Printers

JERRY OPPENHEIMER ON 12/06

Are there any good options to the Imagewriter for the Mac+. I have an Imagewriter I and since I may be getting a second Mac I was wondering if there are any other printers to run graphics programs, Word, works etc. It seems there are few printer drivers on any of these programs except for Imagewriter and Laserwriter. Is there a software pkg that adds optional printer drivers—I have a Panasonic 1091 that runs with our //c, //e and Kaypro—is it interfaceable to the Mac?

JOE WHALEY ON 12/14

My folks have an enhanced Mac wired to a typewriter and to the Imagewriter, with an AB switch. I am not sure of the name of the typewriter but I would guess Smith Corona or maybe Olivetti. It uses an additional little box called a Messenger Module. Microsoft Word has a little file (seems to act like a printer driver) called "Typewriter" which shows up in the Printer Setup list box along with the Imagewriter, LaserWriter, etc. Also they have a similar document called Brother, which I assume means it will drive a Brother typewriter. Have not yet managed to get it running with their new HD 20 (der BOMBE! always) but will figure it out soon....

Rumor Manager

DEACON MACCUBBIN ON 12/10

I subscribed to Nibble Mac back in April or May. Two days ago, I got my first subscription issue. Today, I got a notice telling me my subscription is about to expire and offering a renewal!

CHARLES SICARD ON 12/11

My December Macazine arrived in the mail (Gaithersburg, MD) on Wed, 12/11/86. This is not a rumor, but fact. Now those who haven't received their issue can see how long they must wait. Be sure to read Jerry Daniels On The Road (pg 51) for some fun reading.

DAVID MORGANSTEIN ON 12/14

I have been told by the makers of dMac III (Format Software) that - 1) they have sold dMac to a BIG name software firm who will re-write the manual and make the product more Mac-like, reducing the current price (\$495) considerably and 2) the release of dBase from AshtonTate has been delayed till second quarter next year.

DAVID GURSKY ON 12/14

Considering AT demoed dBase Mac at the October meeting (?) and has had it out in Beta test for some time (see message on board 4), I find the 2nd quarter a bit late, unless they REALLY botched something. Or do you know something we all don't? <Grin>

DAVID MORGANSTEIN ON 12/21

David, I only know what I read in Infoworld—an article this week did in fact support the rumor I had heard from the Format people (past publishers of dMacIII), namely AshtonTate is moving the release date till end of Feb or Mar. Not good for appearances...

DAN YURMAN ON 12/28

As many who read this board know, MAC is reported to be developing a deal with Digital Equipment Corp. (DEC) for tying VAX8600s to Macintosh computers as intelligent workstations, using an Appletalk card in the so-called "Open MAC." Now then, why not the same for other 32-bit mini-computers? The answer is that PRIME Computer is ALSO supposedly working on the same kind of deal. This is important to me because among other things, my work involves managing three PRIME 2550s in a network with 60 terminals and 14 printers. I would dearly love some intelligent workstations with "transportable" software that would allow users to upload or download data transparently. I think that's what would be needed, is for third party software publishers to develop such products. Otherwise, use of the MAC and the PRIME would just be too difficult. The goal would be to take some of the "personal productivity" type jobs off the back of the departmental minis while preserving file management and connectivity among users.

BILL BALDRIDGE ON 12/30

I recently read an article in InfoWorld concerning connectivity software for the Mac/VAX/PRIME family(?) of computers. Seems GTE is interested because it uses (or will use) the new Mac Paris as a stand-alone workstation, and will need

to share data among its myriad computers. Check the Dec 15th or Dec 8th issues (if your local library carries InfoWorld).

DAN YURMAN ON 12/30

InfoWorld has carried several articles about the VAX connection for MACs, and I expect more now that this trade publication is carrying a regular section on Macintosh computer news. The PRIME computer line shares some of the "features" of the VAX line, even though it is a competitor of DEC. For instance, PRIMOS, the PRIME computer operating system, is the same across all of the firms processors. Thus a MAC which would tie into a low end machine, e.g. 2450, could also tie into a high end machine, e.g. 9955, without any change in software or user interface. What is still needed is for third party software developers to port products to the MAC and PRIME simultaneously, such as database mgt., spreadsheet, and word processing. In conversations with PRIME sales reps, based in Rockville, MD, I've been told that this is coming, but not until AFTER Apple Computer, Inc., has released the so-called OPEN MAC.

DAN YURMAN ON 01/01

By the way I heard an absolutely fascinating bit <grin> of news the other day, and that is that the MAC+ ROM reportedly ALREADY contain microcode to support color displays. Wha da do dah! Oh, yes the so-called PARIS would be an "open MAC" having either 1 or 2 slots, ideally one for Appletalk network cards, and the other for ? On the other hand, a recent note in INFOWORLD said that Apple might not introduce the machine until near the end of the second quarter of 1987. Perhaps Apple is waiting for third party software developers to be ready to ship new products out the door as the hardware comes on the market?

BILL BALDRIDGE ON 01/02

The Mac has had color capability from day one—it just was never brought to the screen, as Apple felt it unnecessary for a "business" computer and they wanted to keep the price as low as possible.

DAVE GIBSON ON 01/07

We have some IBM software which requires use of the EGA card to run. Will the 80286 card for the <Paris (?)> have graphics emulation capability, and if so, will it emulate the "standard" EGA graphics or will it emulate just the monochrome adapter? When will the open machine be announced anyway? It seems every time I read about it, the supposed announcement date has slipped!

BILL BALDRIDGE ON 01/07

I assume the emulator card will work like most other emulator cards—that is, it will use the Mac's display (the Paris will have a hi-res color display).

Software Misc.

BOB MASSO ON 01/07

Anyone out there know if World Builder for the Mac has hit the local stores yet?

contd.

BILL BALDRIDGE ON 01/07

YES! I've seen several PD programs written with it—the earliest about two months ago, so I assume it's been available at least that long. Several mail order firms are listing it around \$45-50.

Spreadsheets

DAVID GURSKY ON 11/29

Will Excel automatically expand the size of a chart to fit a larger piece of paper (i.e. fan-fold computer paper or legal continuous) in both the Imagewriter 15 and LaserWriter?

DAVID MORGANSTEIN ON 12/14

You can get Excel to enlarge the chart by changing the page setup option. On the LaserWriter the option for expansion is a misnomer, it only expands the fonts! Set the margins to 1/2" by setting the width and height of the display. Give me a call if you have any problems...

Tech Notes

CHARLES SICARD ON 12/30

Does anyone know how to take a MacFlow document (logic flow chart) and change it to open as a MacPaint document?

BILL BALDRIDGE ON 12/31

That depends... First, I know zip about MacFlow, but a LOT about MacPaint. So, with this in mind I proffer the following tips: 1) If the document is larger than the 8x10 allowed by MacPaint you will end up doing several prints and manually cutting & pasting them together. 2) If there is no facility built into McF for output to a bit-mapped format, there is always the ability to snapshot the screen (via <Shift>+<Daisy/Control>+3), which creates a McP document of the screen. Other suggestions will have to come from someone more familiar with McF.

Telecom. Hardware & Software

JONATHAN TITUS ON 12/02

I have a number of binary Apple //e files that I downloaded through ASCII Express to my Mac saved on my 20 meg hard drive. I brought them onto the Mac because I have 1200 baud on the Mac and only 300 on the //e. Now I want to transfer the files from the Mac to the //e, but I can't get any //e programs to accept a 'send file' from Microsoft Works. I have the Apple 1200 modem wired directly to the //e's micro modem, and I can get them connected, but they will not transfer the files.... Any help would be appreciated.....

BERNIE URBAN ON 12/04

Call me at the office, we can help .

TOM VIER ON 12/11

I don't know if you have called the WAP office and whether that route involves any costs, but you can hook your Mac and Apple serial ports together and send at the highest rate both terminal programs can support.

ERIC RALL ON 12/04

I don't normally use other BBS systems. (Some critics might say I don't do anything normally). I believe the Cap PC UG's

BBS is run under RBBS. I think I got on it a couple of times a few months back. I am not a big fan of RBBS. In all fairness, I am not familiar with the system. I am VERY comfortable with this system, but I ought to be for all the code I have written for it. Last weekend a friend brought over his MAC+ and RR and we played with it. Not too bad! Some of it is actually pretty neat stuff! I love the bong that you get with a CONNECT. That would wake the dead. (Or give the living a fatal heart attack.) I thought the Russians were attacking the first time it went off. Here are a few goodies you can use on this system. Some only a few people know about. (A couple a real SECRETS) In the editor, you may enter any editor command while entering the message. Just start a new line with a dot . followed by the command. For example to list what you have already typed just start a new line with .L or .l (upper and lower case are both acceptable). If you see a misspelled word, just start a new line with .G and then enter the word exactly as misspelled and then return, then enter the correct spelling. EVERY occurrence of the misspelled word will be changed. Now for the SECRET stuff. Configure RR to give you the option key as a CTRL key. To delete the ENTIRE line that you are on just type CTRL-X (or is that more properly said as OPTION-X?) Oh well. If you want to delete the entire word to the left of the cursor (up to the space preceding it) type CTRL-W. I haven't even told the // users this stuff. Maybe I can think of some of the other things you can do with the system and I will post it here.

PI OFFICE (Lee Raesly) ON 12/11

Another very useful editing feature is X (or x (or .x or .X when writing a message—at beginning of line only)). The X Edit command is a global search and replace by LINE # Only! It will ask you what line #, you enter it, then it will ask what to search for, and what to replace with, AND DO IT ON THAT LINE # ONLY! This is particularly useful in changing characters that are found as parts of other words (like in, instant etc.). Take Care, Now!

FROM RICK STICKLE ON 12/23

For those of you out there using a ProModem with your Mac, or just an external ProModem 1200, Prometheus is offering an UPGRADE to their 2400 baud modem. The price is \$199 for the modem and \$50 for the comm buffer plus \$7.50 for shipping. To take advantage of this you have to call Prometheus at their sales office (415) 490-2370, and ask for the "2400 Upgrade Department". They will take your order and give you a return number. The turn-around takes about three weeks and they will not give you a number unless they have a 2400 baud unit ready for you. (Eat your heart out Hayes!).

BAILEY WALKER ON 12/24

I use MacTerminal with a public domain DA called Autolog. There's a small utility called Autolog Editor with which you write the scripts. It will auto-redial if the line is busy or not answered within a certain time. It works very smoothly for me and hasn't caused any problems (even with JClock and Sidekick). I got it on the Clone but it may be on one of the Pi disks.

contd.

ALLAN BALLIETT ON 12/26

Thanks. I'll check that out. That would take care of my only real complaint about MacTerminal.

MARCO BARIO ON 01/01

I just bought a used Smartmodem 1200 which did not include the cable. (Yes, another victim of the Garage Sale!) Does anyone know the pin connections to go from my 1200 to my Mac(512k)? I refuse to pay the \$15 for a pre-made cable!

BILL BALDRIDGE ON 01/02

I think \$15 is pretty reasonable for a modem cable. But if you're really set on building one yourself, I seem to remember the Pi Journal had the pinouts for what you're asking—just don't remember which issue (anyone?).

RICK STICKLE ON 01/07

I just got my 2400 Baud Modem and so far the WAP board is the only 2400 baud connect I've been able to make. I can't seem to get into Telenet, is there something I've missed?? (Its driving me nuts!).

BILL BALDRIDGE ON 01/07

Why don't you give a little more detail on your connect problem with Telenet, and maybe someone can help. I personally don't use Telenet, but have a couple of friends who do and might be able to help.

Utilities

JOE WHALEY ON 12/12

Anyone have an idea where I can find a program to back up all of our 800K HFS floppies? We are using the Finder and it is a real pain. The Disk Librarian shareware looks good for printing out a complete directory, and if I can get it to work right I'll send in my fee.. but we also need something that is as painless to do the backups.... (hard disk still in the future at present....).

BILL BALDRIDGE ON 12/13

Version 6.0 of Copy II Mac is out, and now supports double-sided HFS drives. Suggest you contact Central Point Software or call MacConnection for availability.

LLOYD SWIFT ON 12/16

Actually the current (could have been updated again, I suppose) version of Copy II Mac is 6.2. I got it recently from Mac Connection.

LOUIS M. PECORA ON 12/16

I have seen floppy backup utilities on the Twilight Clone Board (946-5032). Get on and ask people there, it's a friendly crowd (unless they're arguing about drunk drivers).

Word Processors

JERRY OPPENHEIMER ON 12/06

Just a note to you writers out there. There is a new third-party keyboard available from Tangent Technologies—and I must say it's fantastic. It is based on the layout of the IBM AT. Some features—lovely tactile feel, but without the noise of the Mac keyboard and without the fatigue factor. It has caps

lock light (and num lock and scroll lock) which the manual suggests will be usable with upcoming software packages. It also has a huge return key and a numeric keypad that has two—get this—two sets of cursors. For example, on Word 1.05 the regular cursor keys move you from character to character. The other set moves word to word. Just like on the IBM there is the usual 10 functions key. They are pre-programmed for most functions on Word, Works, etc or you can use Tempo, the macro program, to make up your own functions. The control key replaces the command key and the alt key replaces the options key. It's larger than the Mac keyboard so I'll use this for home and the standard Mac+ keyboard for the road. By the way, this keyboard works on any Mac. A software package comes with it that patches your software to recognize the new board. I'm quite pleased with it. Retail is about \$129. Any questions?

MARK OSTROFF ON 12/08

I happen to have seen a beta version of WriteNow in action. Very impressive. The feature that ought to have serious WP people drooling is the automatic footnote tracking. For example, if you mark a spot on page 1 for a footnote and another spot on page 3, they become footnotes #1 and #2 respectively. Now, add a footnote on page 2, and the note on page 3 AUTOMATICALLY becomes footnote #3! Alas, as in all good S/W, there is a downside. WriteNow's document format isn't compatible with any other WP S/W on the Mac. To convert, you have to run a SEPARATE utility on your old files. I don't know if there is a way back to the old format, though. If I remember correctly, the conversion utility is NOT installable as a DA.

BILL BALDRIDGE ON 12/08

I suspect your SUBJ will draw some flack, but thanks for the insight on WriteNow—I am seriously considering its purchase. Would you know if it is possible to read TEXT files with it? That way you could at least save retyping by exporting from Word/Write to a TEXT ONLY file and import to WNow.

MARK OSTROFF ON 12/12

I'm not really sure about import/export of text files. The December issue of MacWorld has a little blurb about all the various WP packages either currently or soon to be on the market, including WriteNow. Might want to check it out.

JERRY OPPENHEIMER, ON 12/13

There is a thesaurus that comes with MacLightning, the spell checker, which I think is a DA. Has anyone had an experience with it on a Mac+ and an external drive. I gather it uses a lot of space as does Microsoft Works, which I'd like to use the thesaurus with.

PAUL CHERNOFF ON 12/14

I have MacLightning and enjoy it a lot. I have a Mac+ and a 400K external drive. I use MS WORD and MacLightning on one disk (with about 20K room left on the disk) and keep data files on the 400K drive. I do not have the thesaurus, that is a separate purchase. MacLightning would work better if you have a hard disk (due to its size and the fact that it can be used

contd.

with a number of different application programs). Also check out Thunder; some people have been praising it alot, and it does not set up a disk cache in order to work quickly (but it has a smaller directory).

DOUGLAS E CANTON JR ON 12/14

I have the thesaurus module to MacLightning. It comes in three separate thesarus files. The 80,000 wd dictionary and the thesaurus modules take up a whole 800K disk and as I seem to recall, the dictionary itself is around 300k. The thesaurus module also has a reduced size dictionary (50,000wds) on the disk. The smaller version of the dictionary and the thesaurus being split into three separate files allows those who are short on disk space to use various dictionary-thesaurus combinations within the limited disk space. As to how it works, you can select a word in the text, summon the thesaurus (mouse or keystroke) and a window comes out with the definition of the word , a classification (noun, verb, etc.) and a listing of words. You can select any word in the listing to enter into text or to become the new word for a thesaurus check. Works fine, have not encountered der bombe! with Maclightning in any function. My primary use of it is with MS Word. I only hope the interface with the new version of MS Word is as smooth. If you have any more questions, I will respond to the extent that my experience allows.

TOM WARRICK ON 12/16

Does anyone know of someone local who can convert Wang word processing files to WordPerfect, Microsoft Word or MacWrite format? (The machine, whether Mac or IBM, is secondary.) We have the need for fast turnaround and complete confidentiality, or else need to buy/license the software for use in-house.

LLOYD SWIFT ON 12/18

You might try Toby Riley (Winston Riley III) 7315 Wisc. Ave.Bethesda, 986-1234.

RICH WASSERSTROM ON 12/23

Both WriteNow and Mindwrite are in stock at the Pi office and available to WAP members through the Group Purchase Program. WriteNow sells for \$114 and Mindwrite sells for \$89.

BILL QUALLS ON 12/19

1986 has been a good year for Macintosh spelling checkers. Maclightning, Spellswell and several other programs were released earlier this year. Just recently, two new programs were introduced—Thunder! and WorksPlus Spell. We've gotten some comments here on the board about Maclightning. Has anyone bought any of the other programs and can tell us about them, as well? BTW, I've put together a list of spelling checkers and placed it in the library for reference. If I inadvertently left your program off the list, tell me about it.

DEACON MACCUBBIN ON 12/31

I just got Thunder! about a week ago and love it. (The only spell checker I had tried before was MacSpell+ which is incredibly slow and has a few bugs.) So far, I'd give a thumbs up to Thunder!—based on my own use of it as well as on the

comments of other users on CompuServe, many of whom switched from MacLightning or some other program. Thunder is fast, it runs as a DA and can be used interactively or in batch mode. The batch mode is limited because you have to select the text to be checked (and the checking takes place in the clipboard). The correct "guesses" offered by Thunder! are amazingly accurate. You can add words (up to 2000) to the main dictionary, set up supplemental dictionaries and teach the program to recognize your most common misspellings and correct them automatically. You can also use this "teach" function to store text (such as your signoff or an entire paragraph of copy) which can then be called up by just typing a couple or three letters (like the Glossary in MSWord). Best of all, Thunder! works under scores of programs—not just under word processors. You can use it with Excel or Red Ryder or whatever. The DA stays active until you close the application (though you can install Immortality—a shareware program by Carlos Weber—which will keep Thunder! "alive" between applications). Thunder is not copy protected and is available from Batteries Included (or almost any mail order company). I recommend it.

BILL QUALLS ON 12/31

Anyone who is thinking about purchasing WriteNow (Version 1.00) might be interested in a review published in the January 5, 1987 issue of InfoWorld. The reviewer, Cynthia W. Harriman, gave WriteNow an overall rating of 5.2 (on a 10 point scale). Essentially, she found WriteNow to be a good "low-end" word processor. Ratings broke down as follows: Performance - SATISFACTORY; Documentation - SATISFACTORY; Ease of Learning - SATISFACTORY; Ease of Use - SATISFACTORY; Error Handling - SATISFACTORY; Support - VERY GOOD; Value - SATISFACTORY. The review discussed several drawbacks of the program, such as lack of a window command which lets you switch among several open documents (see my following message). The review went on to discuss how some of the program's features perform in actual practice. The review pointed out several interesting features that the program shares with desktop publishing programs. For example, you can format text into one to four columns, and the program will display all of the columns on screen—WYSIWYG, in other words. You can vary the spacing between lines from one to 99 points, and you can vary the size of fonts from four to 127 points. You can place graphic images on the same line with text. You also have a good deal of flexibility over formatting of headers and footers and laser printer reductions. WriteNow has a built-in 50,000 spelling checker and is not copy protected.

BILL QUALLS ON 12/31

When I read the review of WriteNow in InfoWorld (see my previous message), I noted that the reviewer commented on the program's lack of a window command. A window command lets you switch easily between documents when you have more than one document open at a time. Several popular Macintosh programs, like Excel and MORE, have a window command built-in. Some other programs, notably MacDraw and MS Word 1.05, do not. As you know, when you are using a program that doesn't have a window command and you have more than one document open, you often have to resize
contd.

or move the windows around on the desktop so that you can expose each window's border in order to click on it and activate it. That is, if you don't have the Windows desk accessory. Windows is a shareware DA (\$5.00) that was developed by Marsh Gosnell of Montclair, NJ. I use it with Word 1.05 all the time, and it has made my life a heck of a lot easier. Here's how it works. When you select it from the Apple menu, it installs a "Windows" menu on the menu bar to the right of Word's "Document" menu. When you pull down the Windows menu, all of the documents that you currently have open on the desktop are listed for you. The names of inactive windows are dimmed. The name of the active window is displayed normally. To make an inactive window active and bring it to the front, you simply select its name. The Windows DA lets you list document names in alphabetical order or in the order in which you opened them. (As an aside, in Word 1.05 when you open subsequent windows, the program sizes each succeeding window slightly smaller than the previous one. To make each window the

same size as the first one, double click on the size box in the lower right hand corner immediately after opening the window.). I got my copy of Windows from CompuServe. Look for NWINDO.BIN in DL1 of MACUS. It's also available on the Twilight Clone. I know that Windows works with Word 1.05 and MacDraw. If anyone gets Windows to work with WriteNow tell us about it. Incidentally, does anybody have any other tips or techniques that you can share with us?

BILL BALDRIDGE ON 01/02

WriteNow DOES do windows. I've had three documents open at once, including a desk accessory and found no problems. In addition to multiple columns (1-4), when you select "landscape" from PAGE SETUP (off the File menu—this is where you set # of columns), your document is turned sideways ON THE SCREEN! So you can edit four columns across the 11" of the document. WriteNow does have a couple of small bugs, but I haven't found any major ones yet. I've sent a letter to T/Maker about these bugs/suggestions. ☺

CP/M AND PRODOS DISKETTERIA NOTES by John Bell

Hello. I am the new WAP librarian for CP/M and ProDOS software. This month we have a new disk for the CP/M library. Included on this disk are the following:

Z8E is an indispensable utility for the Z80 machine language programmer. It is a symbolic debugger for the Z80 microprocessor. If you are using CP/M on the Apple then chances are good that you have a Z80. Z8E is much more powerful than DDT, the standard CP/M debugger; however, Z8E uses Zilog Z80 mnemonics instead of the familiar Intel mnemonics. Z8E's full screen trace mode allows the programmer to observe the code, registers, and data as a program executes. It supports symbol tables generated by most assemblers and compilers. I have used it extensively with the Aztec C language compiler. This program is a must for the serious assembly language programmer.

REZ is a disassembler. It allows the user to recreate assembly language source code from a binary or .COM file.

It supports interactive entry of comments and symbols to help in recreating a source code version of the executable file. This can be a useful tool for anyone who is interested in discovering how a particular program works.

VDE is a very small, very fast full screen editor. It uses the same cursor movement conventions as WordStar. Because of its size and speed VDE is very handy to make those quick fixes during the program development cycle. The editor has a macro facility for repetitive command sequences. Try this one and you will like it.

As the new librarian I am going to try to contribute a disk a month to the WAP library. However, I do not want to be the only member making contributions. Please, if you have some quality software which is in the public domain or which you have written and would like to place in the library let me know about it. Remember that for each disk accepted into the library you are allowed a disk of your choice in return. I have had particular difficulty finding quality ProDOS software, so your help is greatly appreciated.

I would like to hear from you about your ideas on public domain software so feel free to write to: John T. Bell, PO Box 85 College Park, Md. 20740. COMPUSERVE 72775,353.

Next month... XLISP for Apple ProDOS! I hope... ☺

Another Look at "Mac"azines contd. from pg 82

comprehensive, give many illustrations, have a lot of useful tips and point out traps. Unfortunately they also review "beta copies". Columnists include Doug Clapp and John Dvorak.

MACazine (IConcepts/Hart Publishing) \$21/year. \$3.75 an issue. Started out as a newsletter and had difficulties in 1985 insuring a correctly spelled and grammatically correct issue every month. A thinner (84 page) and less slick publication, what it lacks in flash it makes up for in the diversity of writers and wide range of valuable tidbits. Software reviews are not as well developed as **MacUser** and I would not use **MACazine** as my prime information source. Columns include SBA MAC (small business applications), M.U.G. WRESTLING (user groups), ORPHAN SUPPORT (Lisa/Mac XL) and ON THE ROAD by Jerry Daniels (who produces the *Mac Underground* information network and is

president of Online Publishing). The magazine enthusiastically supports the Cauzin SOFTSTRIP system. **MACazine** is like the *Prairie Home Companion*, eccentric but interesting.

There is a finite number of programs, devices and themes to write about, and you could be buried with multiple reviews of the same item that will not tell you much. The periodicals discussed are the ones I currently read and are available in computer stores and bookstores. So, from one of the non-technical "...rest of us.", I hope this helps.

Mike Ward (WAP#9039) is a supervisor for the Fairfax County Fire and Rescue Department. He raised his Mac from a thin 128K to a +, and for two years it was used in the daily activities as the assistant to the Operations Chief (\$40 million budget, 700+ employees and hundreds of memos). Now back home, the Mac is used in teaching college and state classes. Mike is also coauthoring a textbook on fire apparatus. ☺

MAC DISKETERIA NOTES

by Dave Weikert

Due to the late production of some of the disks this month, there was not enough time to get the disks to Marty for him to write this column. Guess I'm stuck again—oh well!

In March, we are issuing five new disks and three revised disks. These are described below. The folder information, where appropriate, precedes the listing of program contents. Folder information is underlined, programs and files are printed in bold with shareware price information printed in bold italic print. Please remember to send the authors of the shareware the requested fees if you decide to add the programs to your software library.

This month's submissions are brought to you by Larry Half, Marty Milrod, William Jones, Bob Soule and me, together with the efforts of all the duplicators listed under the masthead. 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 \$4.50 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. We anticipate updating the catalog periodically.

Mac Disk 51.2: Telecomm II

This disk of telecommunications programs has been modified to reflect some slight changes to the contents of the Kermit folder. If you already have this disk, don't buy it again just for these changes. If you do not have this disk, there are folders containing **FreeTerm 1.8**, **TermWorks 1.29** and **FModem 0.97**.

Mac Disk 57.1: New Members Disk 1986

This revision includes replacement of the system files, removal of **Super Copy**, update of **Cat•Mac** and the addition of **Make Screen** and **System Version** files. The Program Notes were also extensively revised as follows:

In the System Folder:

This disk includes **System Version 2.0** and **Finder Version 4.1**. These files are not the latest releases but they should run on all Mac configurations including the 128K, 512K, 512K enhanced (with the 128K ROMs and 800K drive) and the Mac Plus. If you have a Mac 512K enhanced or Plus, you may want to replace these files with the current ones.

On the Desktop:

Megaroids: This is the old favorite Mac imitation of asteroids. Do not change its name, and make sure that you turn off the RAM cache, (if you have a Mac+ or a 512 Enhanced Mac,) to avoid crashes. It is probably a good idea to re-boot your computer after running any games as they may sometimes do funny things to memory.

In the Sample Utilities Folder:

Cat•Mac: This disk cataloging application catalogs programs across your disk collection (up to 600 programs). It

works with both types of Macintosh files, the Macintosh File System (MFS) and the Hierarchical File System (HFS) on either 400K or 800K disks. If you want some of the advanced features, you can upgrade to a more capable version. *Shareware \$10.00.*

Make Screen: If you would like your own customized start up screen on your Macintosh, this is the program for you. Just create your own design using **MacPaint** (or use any MacPaint file). Run **Make Screen** and use the mouse to select the part of the painting you want for the start up screen. Save the file with the name exactly as follows: **StartUpScreen**. Quit **Make Screen** and place **StartUpScreen** in the system folder. When you boot the next time, the start up screen will be the picture you saved.

MacID: This is a handy utility which tells you a number of things about the internals of your Macintosh and the version number of the system file that you are using. *Shareware - \$5.00.*

System Version: A similar utility that only shows the version number of the system file that you are using. This one only takes 2K of disk space and it is free.

In the GenericScheduler Folder:

Scheduler: Plan your life using your new Macintosh. This allows you to schedule and to print out your appointments. Read the **Generic Scheduler Notes** for the author's comments.

Mac Disk 59.1: CE Software Sampler

On the Desktop:

MockPackage+ 4.3.4: **MockChart**, a graph-producing DA which allows you to plot data in pie, line, & bar charts is integrated with **MockWrite**, **MockPrinter** and **MockTerminal** DAs. The **MockPackage Manual** documentation, done in **MacWrite**, is excellent. *Shareware - \$35.00.*

MockPackage Utilities 1.0.2: Install "hot menus" in your system to open a menu item without pressing the mouse. A real "sleeper" program especially if you do a lot of demos or instruction. Also allows you to remove the order forms from the **MockPackage** DAs once they are installed. Distributed as part of the **MockPackage** shareware.

Font/DA Mover 3.2: Installs the **MockPackage** DA.

Mac Disk 86: Utilities XIV

On the Desktop:

Memory Test 1.7: A series of tests for the Mac's memory, well explained in the Help file. In their initial stages, the tests display some interesting patterns on the screen, which shifts to a chart of the tests and their results as they (slowly) progress. Note well: All of the times given are for the 128K Mac—on a Mac+ even the short tests take some time to run.

Sad Mac Codes: A **MacWrite** document explaining the codes that show up under the Sad Mac icon when the system won't boot. (The codes given are those for the Mac+. See *MacWorld*, April 1986, p. 72, for the codes for the old ROM.) If you think you have seen these before, Lon Poole had a

contd.

similar item in *MacWorld*, February 1987.

In the Switcher Folder:

Switcher 5.1: Is there anyone out there who doesn't know what Switcher does? Oh, all right. Switcher is an application which allows you to allocate a 512K or larger Mac's memory to multiple applications, so that you can then switch quickly between them.

Inside Switcher Doc: An exhaustive explanation of how Switcher works, written more for the programmer than the end-user. There are three versions here; text, MacWrite, and Word. The MacWrite version is fully formatted (it runs 33 pages!) and includes the two figures which are also provided here as MacDraw documents for incorporation into the other versions if you wish.

In the FileSplitStuff Folder:

File Splitter.APP: This utility will split a file down into smaller files of a size to be determined by the user. You can specify the TYPE/CREATOR for your output files, the size of the files, and the character that you would like the files to be broken on past the block size. *Shareware: \$3.00.*

File Splitter.DA: The same thing in a desk accessory.

File Splitter.DOC: Modest documentation of the above.

In the MacMailing 1.4 Folder:

MacMailing 1.4S: A simple system for maintaining mailing lists and preparing mailing labels which will handle up to 25 entries per file. This version is distributed as 'freeware'. The latest 'full' version of Mac Mailing System (to handle 200 entries per file) and future releases is \$20.00.

MacMailing 1.4-S Doc: Three pages of MacWrite documentation of the application.

MacMailing Description 1.4S: An even briefer text description of MacMailing.

Mac Disk 87: Utilities XV

On the Desktop:

Font Tester: This program allows you to open up to ten different windows on your screen, each displaying a standard text or a text of your choice in a different font, font size, or style. (To use a file as your own sample, save it as text.)

In the System Utils Folder:

Layout: This application allows you to customize the layout of icons on the desktop, to adjust the font and font size of their labels, and to change the information you see when you view by name, size, or date.

Icon Exchanger 4.0: Icon Exchanger lets you change the icons and messages that are displayed in three different alert windows: the startup window, the bomb window, and (this is the new part since v. 3.1 on our disk 72) the disk swap menu. You can also use it to design your own icons a la FatBits. *Shareware - What you think it's worth.*

DSEdit: Another approach to changing the startup window. This lets you change the icon and the startup message, and also to double the size of the icon and to move it around within the alert window. *Shareware - \$5.00. (\$10.00 for source code).*

In the ImmortStuff Folder:

Immortality: Immortality automatically calls up a selected desk accessory each time a new application is

launched, just as though you'd selected it from the Apple menu. It was designed to launch the spelling checker Thunder! In order to change the accessory it will launch, use Apple's resource editor, ResEdit.

Handbook of Immortality: Documentation of Immortality.

In the RMaker2.0 Stuff Folder:

Macintosh Resource Compiler: Version 2.0 of Andy Hertzfeld's resource compiler, tuned up to work properly with HFS. This version fixes a number of bugs in RMaker version 1.0 (which was included with MDS 1.0). This release is an early development version, and hence may still have bugs.

RMaker2.0Doc: Brief documentation which describes the improvements in version 2.

In the KeyStringStuff Folder:

Key String: The author says this program is a replacement for keyboard translator routine which allows customization of the keyboard and assignment of character strings to keys. Unfortunately, it's still a development version, and the documentation is only an outline. Place the file 'Key_Str_Boot' in your System Folder and reboot. Add the desk accessories 'Key Edit' and 'Key Strings' (in 'Key_String_DA' package) to the system. **Key_St_FKEY's** supplies three FKeys: Cycle—Cycles thru document windows on desk top; Stack—Stacks document windows on desk top; Zoom—Zooms a window (like clicking zoom box). Move the FKEY's into your system folder by using ResEdit or the FKEY Manager.

Key Str Boot Builder allows you to create a default keyboard file that is loaded at boot time so you don't have to manually select and load a saved file. *Shareware - \$20.00.*

In the Disk/File Utils Folder:

Disk Performance: A simple, self-explanatory program that checks out your hard disk's performance by writing to a file, then reading and copying it.

Tiny Finder 2.2: Install this file in your system folder, then open it after you reboot to avoid the desktop for the remainder of your session. *Shareware - \$10.00-\$15.00.*

Password: This utility, offered as a standalone application, as an FKey, and as an INIT resource, keeps users from getting beyond the password screen until they enter the password. To change the password, use ResEdit for the application, FEdit+ for the FKey and INIT versions. The brief documentation is sufficient.

In the IconCollector Folder:

Icon Collector: First the America's Cup, and now this! An Australian import that lets you collect and inspect your full collection of icons. We've provided an assortment of icons in files to start you off. Check out the slideshow feature! *Shareware - \$15.00 (which currency, they didn't say.)*

In the PictStuff Folder:

PICT-ALL: This program converts a picture into an ASCII version of it. It takes quite a while to do it. Note: Non-Mac-Plus users, must be sure to copy a picture to the clipboard before starting PICT-ALL, or the system will crash. Use the later versions of the System and Finder. *Shareware - \$10.00 (or \$20.00 for Pict-All Plus).*

contd.

Mac Disk 88: DAs & F Keys VIII

In the DAs Folder:

DA Tester 1.51: Install up to two desk accessories temporarily to test them. I found that after loading a DA, that some text characters were replaced with the unprintable character (the rectangular box) and I had to quit DA Tester to restore normal characters. *Shareware - \$4.00.*

Tea Time: From the land of the rising sun, comes this cute little DA. Click on the disk icon to see the credit list.

In the File DAs folder:

FileStar (DA): This one shows file info (type, creator & flags) and allows you to rename, delete, copy and move a file and to create a new folder. *Shareware - \$15.00.*

Beacon DA: Launch, delete, copy and rename files. Examine and edit file type, creator and flags. Strip the high bit, control characters and line feeds. The shareware fee gets you instructions for making the DA full featured by activating the Launch and Strip functions which are disabled in this version. *Shareware - \$15.00.*

In the HFS Find 1.2 Stuff Folder:

HFS Find: Search your HFS disks for a specific file or files with or without specifying a creator, type modification date or a folder name. You can use "wild card" characters in the search as explained in the HFS Find 1.2 Doc.

In the Set Paths Stuff Folder:

Set Paths DA: Version 1.3 allows you to specify up to five different paths (volume/folder) to search each time a file open operation happens. Use it for those applications that would otherwise require all the files to be in the same folder.

Boot Paths is file that is placed in the system folder that uses the Paths file created by this DA to set up search paths at boot time rather than using the DA every time.

Set Paths Docs describes how to use them both. *Shareware - \$20.00.*

In the Util DAs folder:

Memory Monitor: Examine the way the system memory of your computer is being used. The percentages are shown in pie chart format.

Font Grabber+: Help!! What does this one do?.. *Shareware - \$5.00.*

New Scrapbook 2.0: Copy all or any part of the picture or text that is on one page of the scrapbook by using a rectangular "marquee" just like MacPaint. There is a scale box to select so you can see the whole page and a wrap box to click to cause text to wrap. *Shareware - a small contribution or a postcard to the author.*

DisplayRLE: View images created from RLE text files or create text files from RLE images. Hey mom, what's a RLE?

In the FontSizer folder:

Font Sizer: Use this DA to temporarily add additional Font sizes between 3 and 127 points to MacDraw Version 1.9 as described in the FontSizer Draw 1.9 Doc.

In the NumCaps2.0 folder:

NumCaps: Copy any character in any Macintosh font and size to the clipboard for later pasting into an application document if the application supports the clipboard. This is all described in NumCaps.doc. *Shareware - \$7.00.*

In the FKEY's folder:

LaunchKey.fkey: Allows you to open an application

from another application without returning to the finder first.

ATalk Key: This brings up a dialog box that enables or disables switching of printers. This was not tested due to lack of access to an Appletalk network.

Print Clip Key: This didn't seem to do anything. Anybody out there that can help us describe it?

Quit to FKey: This FKey allows you to select an application other than the Finder to quit to. To restore your selection, just specify that you want to quit to the Finder.

dvorak/qwerty: This allows you to toggle between the qwerty (normal) keyboard layout and the dvorak layout.

DisplayRes2.1.FKey: Displays all resources in open resource files. *Shareware - \$3.00.*

FormFeed Key I: Send a form feed to your printer with just a command-keystroke action.

DA Key 2.1: This is an update to the FKey on disk #37 that allows you to temporarily install a Desk Accessory under the Apple menu without installing it into the System file. *Shareware \$10.00.*

Version Reader 2.6.FKey: This reads the signature resource of most applications. Send the author a postcard saying that you liked it.

In the FKeyInstallerStuff folder:

FKEY Installer: This is the utility that makes this disk so easy to use. Dreams of the Phoenix, Inc. has released it for non-commercial distribution to encourage FKey creation and use. Works similar to Font/DA mover as described in the FKEY Installer Manual. See the FKEY Installer Notes on Disk # 37 for additional information.

In the ClipperKeyStuff folder:

Clipper Key 1.5: This is an FKey that facilitates telecommunications when using desk accessory word processors. It does a number of nifty things like replacing characters with ASCII values above 128 with the @ symbol so that they can be accepted by most bulletin boards.

Clipper Key 1.5 Doc describes its features.

In the Fontsie2.0 folder:

Fontsie Special 2.0: Run this FKey before running an application and you can access fonts from within an application without installing them in the system file. Not as user friendly as Fontsie but it is compatible with more programs. Note that this is still under development and observe the author's cautions about crashes.

Fontsie Launcher 1.2: An FKey to launch Fontsie.

Fontsie Special Documentation and Documentation.Text: The MacWrite and text documentation for Fontsie Special & Launcher.

In the Laser FKey4 folder:

LaserKeyInstaller: Print the screen of your Macintosh to the LaserWriter. Described in full in the **LaserKey.Wrt** documentation. *Shareware - \$15.00.*

In the Window Key folder:

Window FKey: Move the current active window to the back. Some windows such as alerts and modal dialog boxes cannot be "demoted" this way so be prepared for an occasional crash or bomb as described in **Window FKey.doc**. The **Window FKey.Pas** and **Window FKey.Asm** are the Pascal and Assembly program files for the FKey.

In the TimeLog FKey folder:

Time Logger 1.0: Use this to keep a log of your time
contd.

on the Mac along with a description and code for the activity. The Time Logger Doc describes how to use it. *Shareware - \$5.00.*

In the FKEYManager folder:

FKey Manager: This application installs FKeys into your system file. You can also use it to remove, rename and re-number FKeys and to configure Pop-Keys and the KeyPad.

Pop-Keys: This is an INIT resource that may be configured with FKey Manager. It produces a pop up menu allowing you to call up any FKey from within an application.

KeyPad: Another INIT resource that may be configured with FKey Manager. This one converts the numeric keypad or top row number keys to function keys with a single key stroke. You can turn this feature on and off.

FKey Manager Documents describes all you may ever want to know about FKeys and the FKey Manager and related programs.

Bug Report Form is provided just in case.

'CNFG' Template is for use by those adventurous folk familiar with ResEdit so FKey Manager is not required to install Pop-Keys and KeyPad.

In the Disk-FileFKEY folder:

Disk-File Utility 1.0.FKey: Rename, delete and set the file attributes from within any application that uses menus. Copy 400 K disks too.

Read first!.(MacWrite): The documentation for the preceding. *Shareware - \$3.00 or whatever you think it's worth.*

In the Cache Toggle folder:

CacheToggle.FKEY and **CacheToggle.doc:** Turn off your Mac Plus RAM cache from the keyboard instead of the Control Panel.

Mac Disk 89: Fun & Games XVIII

On the Desktop:

StuntCopter 1.2: The object of StuntCopter is to drop men from the helicopter that you pilot into the hay wagon moving along the ground below. Drop all five men successfully and the speed of the wagon and the effect of gravity change. It's kind of a strange theme, but the graphics and sound are well done. Be careful not to drop the men onto the wagon horse or the driver! (It's not a pretty sight—or sound either, for that matter.) And don't miss the backflip in the "About Stunt" under the Apple menu!

CrystalRaider: It's a good thing you don't need quarters to play this game, or it would be expensive to figure out what you're supposed to do. Move the circular object around the "room" with the mouse. Remove the crystals scattered around the "floor" by moving over them. Watch out for the portals to the right and the left, and avoid the other objects that emerge from portals and buzz around the room trying to get you. When you remove all the crystals, the portal at the bottom of the screen opens and you can progress to the next room. Don't scrape the sides of the portal as you pass through or you'll self-destruct just when you think you're home free. *Shareware - £10.*

Worm: Make the worm grow by directing it over the dot that appears in various places on the playing area. Redirect the worm by clicking the pointer in the desired direction. Buttons control the worm's speed. You'll find instructions in

the Help command under the File menu. *Shareware - "A Few Dollars".*

MacCommand: Another missile defense game. (Star Wars in your own living room?) Good sound effects and a little music add some extra touches to the usual theme of defending your cities against incoming reentry vehicles. Aim your interceptor missiles with the cross pointer and fire with the mouse button. You get points at the end of each round for saved cities and conserved missiles. *Shareware - \$10.00, or "whatever you think it's worth".*

In the WargleStuff Folder:

Basic Wargle: Maneuver through a changing maze as you avoid the deadly spiders that pursue you. Control your movement by placing the pointer over the desired direction arrow. Fire backward or forward with the Z key and the space bar. Pay the shareware fee and get Advanced Wargle, which allows customization of game controls and layout. *Shareware - \$18.00.*

Mac Disk 90: Utilities XVI

On the Desktop:

RefList: This program works with word processing and database programs to provide a bibliographic system. Designed to work primarily with scientific/medical journals, Ref-List is compatible with most data base programs that save listings as text. The instructions set out in the help menu are commendable not only for their completeness, but for their description of how they were created and included in the program.

In the Album Tracker 2.0 Folder:

AlbumTracker 2.0: Lets you catalog by 42 fields up to 1054 record albums, compact disks, cassettes, etc. As many as 8 icons can be associated with each entry by specifying the icon name in any field. Use the Sample Collection file to see how the program works. *Shareware - What you feel it's worth.*

In the Idealiner Stuff Folder:

Idealiner: A shareware outliner for the Macintosh. Like any good outliner, it lets you organize headers on many different levels, to add text to the headers, and then to print out your final document with a table of contents and page numbers. The two Idealiner documents, **Idealiner User's Guide** and **Idealiner Release Notes**, give you a good idea how the application works.

Read Me First: A text file with an overview of the contents of this folder. **A Tutorial Introduction:** Print it out and work through the Idealiner application with it. *Shareware - \$30.00.*

In the CalendarStuff Folder:

YOAP: This admirably simple program needs little explanation. When opened, it allows you to print a Year On A Page calendar. The program apparently doesn't depend entirely on the Macintosh calendar, because it will go beyond the 1904 - 2039 range.

SmallView 1.2: Smallview is a calendar program. that allows you to write, display and print notes and memos through the year 2039. Smallview can generate a month-on-a-page calendar for any chosen year between 1904 and 2039 along with personal notes and 14 major holidays. *Shareware - \$12.00.* ☺

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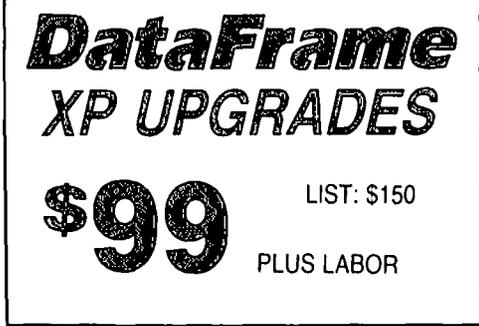
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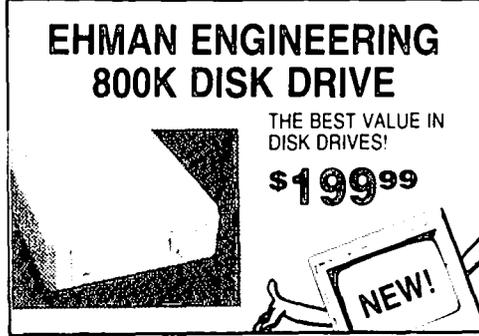


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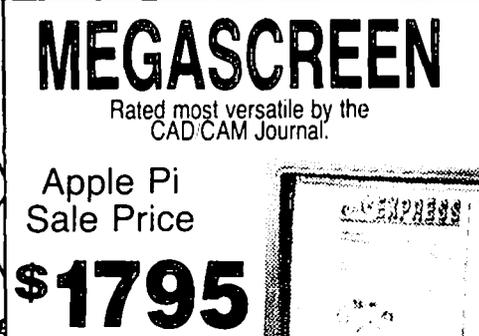


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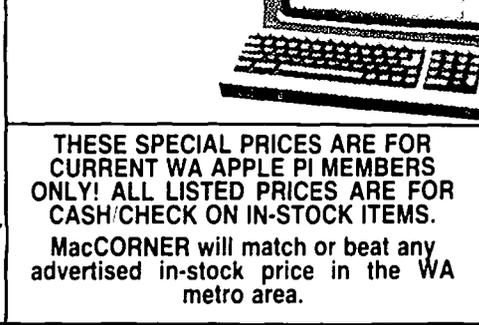
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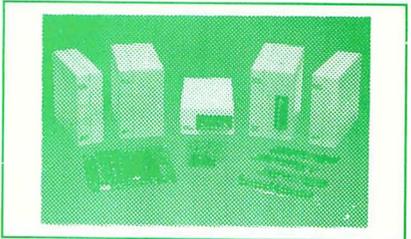
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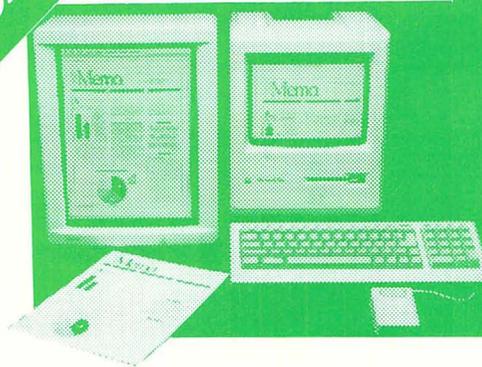
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