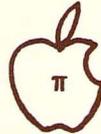


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Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 7

September 1985

Number 9

Highlights

My 640K //c with CP/M
 An Apple /// Bibliography
 Hackers Forth
 Softviews: Statworks & Click Art Effect
 MacNosy: A Review

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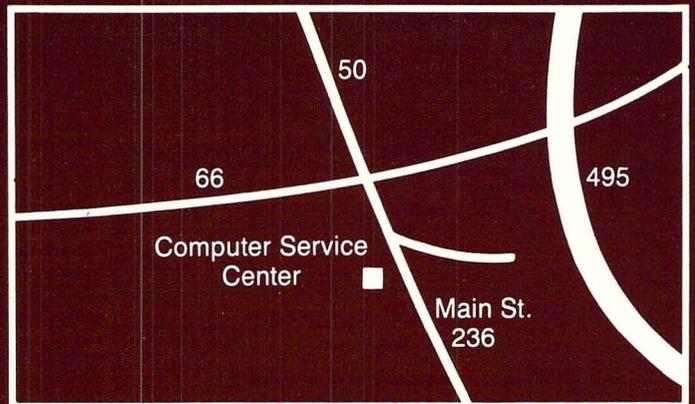
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Clinton Computer's Macintosh™ Business Expo -- a Fantastic Sale and a series of "Focus Weeks," featuring the Macintosh Office. Whatever your business, the Macintosh Office provides a powerful hardware-software solution, at considerable savings!

Focus Weeks Scheduled

Begun at the end of July and carrying on through the last week in September, the following topics are being featured:

- ∞ August 26-31 -- Publishing and Graphics
- ∞ September 2-7 -- Macintosh Office Faire
- ∞ September 9-14 -- Integrated Packages
- ∞ September 16-21 -- Publishing and Graphics
- ∞ September 23-28 -- Hard Disks

Upgrade Your Macintosh to 512K, Save \$175

During Clinton Computer's Macintosh Business Expo, our Service Department is offering special pricing on the Macintosh 512K Memory Expansion Kit to Washington Apple Pi members. For this limited time, the cost has been slashed by \$175, to \$525, including installation. (Be sure to bring your membership card.)

Upgrading your 128K Macintosh to 512K permits longer MacWrite documents (by a factor of eight); 50% larger Multiplan™

spreadsheets; and ten times more MacProject tasks.

Remember....Non-Apple memory upgrades all void your warranty, make your system ineligible for AppleCare and cause your motherboard to be "unswappable" for service or ROM upgrade. This means a failed motherboard will cost you \$933.66 instead of \$152.95 for an exchange! Cheap imitation upgrades can be VERY expensive!

Manufacturer's Reps To Visit

We have arranged for manufacturer's representatives to come to our stores to demonstrate their products throughout the Expo. Watch our display ads and classified ads in the Washington Post every Monday and Thursday for dates and times.

Seminars Planned for "Presenters"

Do you have a job that requires you to be a "presenter?"

Do you prepare reports, newsletters, or overhead transparencies requiring typeset quality text, charts and graphs, high-resolution graphics, or mixed text and graphics?

If you answered yes, then you can create professional presentations that make an impression -- with Apple's™ Macintosh Computer and LaserWriter™ Printer.

To demonstrate the remarkable capabilities of the Macintosh Office, we are offering free seminars at our Alexandria Business Center on September 17-18. Please call for a reservation.

"Bring A Friend To Clinton Computer"

You Could Win a Macintosh or a HyperDrive for Your Macintosh

As part of our Macintosh Business Expo, now through September 28th, we are having a contest. If you bring a friend to see the Macintosh, fill out this coupon to enter a drawing to receive either: a 128K Macintosh or, if you already own a Macintosh, a HyperDrive. If your friend buys a Macintosh, then he/she receives a free box of diskettes and 20% off list price on any Macintosh software purchase. The drawing will be held on Sept. 30th.

Name _____ Street Address _____ Phone # _____
 City _____ State _____ Zip _____
 Friend's Name _____ Street Address _____ Phone # _____
 City _____ State _____ Zip _____

No purchase necessary to win. No copies or facsimilies of this entry form can be accepted. One entry per household. No cash value.

Win with Apple's "Quick Quiz"

Apple Computer Inc. has just announced its "Apple Quick Quiz" promotion -- through the end of September.

There are three ways that customers can be winners!

Way #1 -- Purchasers of //e and //c systems receive a \$150 rebate from Apple. Macintosh system purchasers receive \$250.

Way #2 -- You have an opportunity to win cash prizes in Apple's \$1,000,000 Education Sweepstakes which boasts a grand prize of \$100,000. (No purchase is necessary to enter.)

Way #3 -- As a part of the Education Sweepstakes, 250 customers can win a pair of Apple computers -- one for personal use and one for a school of their choice. (No purchase necessary.)

Discount Offered to Pi Members

Clinton Computer is pleased to announce that Washington Apple Pi members will receive a **25% Discount** from list price on all Apple Brand hardware and software and on AppleCare. The discount on some promotional items may be even greater. Just show your Washington Apple Pi membership card.

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Clinton Computer guarantees that our price is the lowest bona-fide in-stock price for Apple™ products of any authorized Apple dealer in the Washington Metro area. If you would like further details, please call either store.

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Washington Apple Pi

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EDITORIAL

None this month. Too busy.

PRESIDENT'S CORNER

by Tom Warrick

Summer in Washington slows down much of the activity on the Hill and in many offices throughout the area, and even the Urbans take time off to go to Martha's Vineyard. This gives us our annual chance to put something in the Journal that says how much we think of them and the work they do. (During other months their modesty would prevent such praise from seeing the light of day.) So much of what Washington Apple Pi does for us all can be credited to Bernie and Gena's hard work on the Journal and at the office, which are probably the two things the club runs that touch the lives of the greatest number of members. Often is the time that Bernie and Gena have worked past Sunday night into the wee hours of Monday morning to get the Journal into the fine shape it is in. If you have the chance to peruse the office's collection of newsletters from other computer users groups, you will find many fine publications, but few if any as good as ours. While our authors deserve much of the credit, much also goes to the Urbans for hammering it (and some of us authors) into shape.

Additionally, the Urbans were the first WAP office staff members and still carry a full share of the responsibilities that go with answering our questions and inquiries when we call in or drop by. Organizing the Pi office is no small feat, given the large number of people who come through every week, and for this also we say, "Thanks!"

But while the Urbans are on what I hope is a well-deserved rest, some of us here at WAP have been busy. Tom Kroll of Manassas is organizing a "Slice of Washington Apple Pi" in the Manassas, Virginia area. Contact Tom at 368-1929 if you are interested in setting up meetings of local interest and in forming a core of Apple computer owners and users for mutual support. We are also in the process of trying to set up a bulletin board system in the Great Falls, Virginia area that would serve Manassas and many of the other areas of northern Virginia for which some of our bulletin board systems are not local calls.

Once a year the membership of WAP gets together to discuss not computers but computer clubs, specifically the future of Washington Apple Pi. This year's session will be on Saturday, September 21, at 10:00 in the Auditorium at USUHS. This is an event that has attracted many people in past years, and it's very important that you participate so that we can make this group a better one for all of its members. The agenda is an open one. Past meetings have led to our tutorials program, our office and more bulletin board systems. If you want more information, or would like to have a subject put on the agenda, call me at 656-4389 or on the bulletin board system to WAP538.

The celebrated wit Dorothy Parker once said that a woman can't be too rich or too thin. If she were alive today and in the microcomputer business, she might say that a computer can't have too much memory or too much disk space. Well, imagine a computer with one megabyte of RAM and a 20-

megabyte internal hard disk capable of running some of the world's most popular software. Sounds like Apple's next Macintosh, or even the fabled //x? Or perhaps something from Big Blue? But wait! This powerful computer is -- your Apple //e! Certainly the capability to install and use a megabyte of memory is here today, to judge from the success of RAMWorks' expanded memory board that allows up to a megabyte of RAM for such programs as AppleWorks and, soon, the powerful Supercalc 3a. And if you were at the July WAP meeting, you saw, in addition to demonstrations of a number of hard disks for the Apple, one of the first demonstrations of an internal 10- or 20-megabyte hard disk for the Apple. This hard disk replaces your existing Apple // power supply with a more powerful power supply and a 3 1/2-inch hard disk similar to that used on (shudder) IBM compatibles. But coupled with something like the Titan Accelerator card, the performance of such a machine truly outstrips some of its more expensive rivals. And best of all, you can still run all of your old Apple // favorites. The hard disk-Accelerator card combination wowed those who attended the July meeting, and left not a few of us hoping for a group purchase.

Speaking of disk drives, it's no secret that Apple Computer will soon make available double-sided 3 1/2-inch disk drives for the Apple // family. These drives will also be available for the Macintosh. Those of you who know something about the internals of the Macintosh may appreciate that this means that the two families of computers may therefore come very close to compatibility with each other. The disk drive controller chip on the Macintosh is called the "IWM," short for "Integrated Woz Machine." It is in fact based on the Apple Disk II controller card designed by Steve Wozniak. When the new line of disk drives comes out, how long will it be before some enterprising souls write an Apple // emulation program for the Macintosh? Of course, our Apple /// members remember the much-touted "Apple // emulation mode" on the Apple /// that almost but never quite worked as advertised. Lisa/Mac XL owners know about MacWorks, one of the more successful attempts at software emulation. On the other hand, who remembers the Quadram Apple emulation board for the PC and the 8086/2 PC emulator for the Apple // from Rana? You may laugh at a //e emulator for the Mac now, but think of the advantage to Apple owners (and to Apple Computer) of an upwardly compatible product line.

What's going on inside Apple these days? The past few months have been quite tumultuous for those with an emotional or financial interest in the company, which has been undergoing a major shakeup that has redirected the focus of the management of the company back to its strengths: the home, education and small businesses. This has to bode well for a company previously almost obsessed with unrequited love for the Fortune 1000.

First on the list of casualties of this reorganization is Steve Jobs. Jobs' departure marks a milestone in the history

contd.

of Apple not unlike the departure of Henry Ford from Ford Motor Corporation. (There are other interesting parallels between the early years of Ford and Apple, but those must be left for another time.) People are starting to reflect on Steve Jobs' contributions, both positive and negative, to Apple over the years. Jobs' role in the design of the Apple // and initial development of Apple Computer has been well-publicized in recent books about the microcomputer industry in Silicon Valley. But he will probably most be remembered for his role in the design of the Macintosh, a project that he virtually controlled. He brought the revolution in user interfaces, pioneered by Xerox and the Lisa, to the masses. But his aversion to slots and fans handicapped the Mac in the business market by making it difficult to expand memory and to add a fast hard disk. (Future designers: Remember Dorothy Parker!)

Another important contribution of Jobs, and one of which few people are aware, is that he has been a strong supporter of Pascal on microcomputers. He was the person responsible for making Apple Computer almost exclusively a Pascal shop; much of Apple's own software work was done in Pascal except for that which had to be done in assembly language. Pascal is a powerful language, as most who are familiar with it will agree, but it has some limitations that at times can frustrate the bejeezus out of you. It may be that part of the reason software was so slow coming out for the Mac was due to the limitations of its program development process. Until recently the only language that gave a programmer full access to the Mac's power other than assembly language was Pascal. A number of people declined to develop for the Mac because they preferred other languages, most notably C. Now, it appears, Apple Computer has recognized that even though Pascal on the Mac had a significant head start, C is already at least as popular with Mac software developers as Pascal, and appropriate changes in release dates of development software from Apple are being made.

What can we look for out of Apple during the next few months while things settle down? The virtual certainties are a hard disk drive for the Mac, new 5 1/4 and 3 1/2-inch drives for the // family, and several new models of Macintoshes. You will likely see several screen sizes offered for the Mac, including (I, for one, fervently hope) a full-page screen for serious office word processing use. Also, you will be able to buy Macs in the near future with more than 512K of memory. And the company whose success was founded in no small part on slots will likely go back to them, particularly for memory expansion, à la the Mac XL.

There is one other thing to keep in mind with regard to Apple's course over the next few months. What will Apple's response be to the Amiga and the "Jackintosh"? Although Apple was always able to price the //e higher than the Commodore 64 during the heyday of the latter, Commodore forced Apple to lower the price of the //e some in order to stay competitive. The same thing will probably happen to Mac prices. But think through what must happen if Apple were to lower the price of the 512K Mac, the machine against which the Amiga and the Atari must compete. In order to drop the price of the 512K Mac by, say, \$800 to a list price of about \$2,000, Apple would have to cut the list price of the 128K Mac to the neighborhood of \$1,500, which is currently the list price of a fully configured //e system. Prices for the //e

and //c will therefore also have to come down. But how much lower can //e and //c prices go before it will not be profitable for dealers to carry them? Will it pay for Apple to continue to carry the 128K Mac when more buyers outside of universities will prefer the 512K and two-megabyte versions? Ⓔ

Treas. Report contd. from pg 7

Washington Apple PI, Ltd.
CASH BUDGET
for Year Ending May 31, 1986

| | BUDGETED | PERCENT of REVENUE TYPE |
|--------------------------------|------------------|-------------------------|
| REVENUES: | | |
| Membership and publications | \$143,316 | 100.0 |
| Group Sales | 113,027 | 100.0 |
| Disketeria | 72,000 | 100.0 |
| Tutorials, Postage Fees | | |
| Interest, Miscellaneous | 19,057 | 100.0 |
| TOTAL REVENUES | \$347,400 | 100.0 |
| COST OF SALES: | | |
| Cost of Sales - Membership | \$94,627 | 66.0 |
| Cost of Sales - Group Sales | 101,784 | 90.1 |
| Cost of Sales - Disketeria | 18,686 | 25.9 |
| Cost of Sales - Other | 2,760 | NA |
| TOTAL COST OF SALES | \$217,856 | 62.7 |
| GROSS MARGIN | \$129,544 | 37.3 |
| EXPENSES: | | |
| Office Expenses | | |
| Office Salaries & Related | \$58,545 | 16.9 |
| Other Office Expenses | 33,775 | 9.7 |
| Subtotal Office Expense | \$92,320 | 26.6 |
| Accounting and Legal | \$8,800 | 2.5 |
| Meeting Expense | 5,045 | 1.5 |
| Sig Expense | 4,859 | 1.4 |
| Print Library | 2,900 | .1 |
| Insurance | 2,500 | .1 |
| Shows, Sales, & Promotion | 1,750 | .1 |
| Taxes & Licenses | 1,602 | - |
| Repairs | 850 | - |
| Miscellaneous | 300 | - |
| TOTAL EXPENSES | \$120,926 | 34.8 |
| CASH SURPLUS | \$8,618 | 2.5 |

NOTE: The September, October and November general membership meetings will not be at USUHS. The September 28 meeting will be in the Mazur auditorium of NIH. See "Event Queue" for directions. Watch the Journal for details on the location of the October and November meetings. Ⓔ

TREASURER'S REPORT

Dear Fellow Pi Member,

We are pleased to present the WAPi Budget for this fiscal year and the Financial Statements for the preceding one.

WAPi's fiscal year is June 1 to May 31. Revenues and expenses are recorded throughout the year on a cash basis, and up to the present time have been reported on a cash basis. That is, with the exception of depreciation and amortization, which are non-cash items, expenses were not recognized until they were paid. This system of reporting, which does not reflect unpaid but incurred expenses has, while the Pi was smaller, adequately met our needs. As we have grown, the unrecorded items have become more significant, and it has become increasingly important to recognize them. The accompanying financial statements have accordingly been adjusted to include these accrued items. Had the cash basis been followed for these statements, the results of operations would have been a deficit of \$1,249.51, and a Fund Balance of \$133,992.00, rather than a surplus of \$11,752.29 and a Fund Balance of \$125,271.19 as reported.

WAPi's cash position is excellent, as it has been for several years. The membership, in voting last June on the proposed budget, directed the Board of Directors not to rely on WAPi's strong cash position to finance a predicted deficit, but to raise dues and thereby maintain its cash.

Our strong cash position is used, and is useful for: (a) financing additional inventory...\$6,700 was so used this year, principally to establish a Mac disk inventory; (b) a reserve against a possible decline in the rate of growth of membership brought about, for example, by a downturn in Apple computer sales; (c) ameliorating the uneven nature of WAPi's annual cash flow... Our cash position ranged from a high of \$101,021 at the start of the year (June 1, 1984), to a low of \$77,527 in November, a change of \$23,594; and (d) purchasing equipment such as computers or a video projector, or undertaking projects such as the construction, purchase or rehabilitation of office space to replace our present facilities (our lease expires in January). Our fixed assets increased by \$4,098 last year.

Finally it should be noted that in the year just ended, membership has grown by about 25%, while cash has declined about 8%. Thus, the cash per member, while still strong is approximately 27% less than it was one year ago.

As one would expect, the largest source of Pi revenues is dues from members. However, comparison of membership revenues to "Cost of Sales Membership", "Cost of Publication - Sales", and "Office Expenses" indicates that membership dues pay only for the Journal and a portion of "Office Expenses". The remainder of the services WAPi offers to members are financed from other activities such as Disketeria and Group Sales.

The expense of running the office is considerable, representing more than one-fourth of all expenditures, but without the office, WAPi's present services to members could not be provided. While WAPi must and will continue to be run largely by volunteers, a fixed meeting and storage site, as

well as a paid staff are essential to ensuring that these services continue to be offered.

Last June the membership authorized the Board to raise the dues and take other necessary steps to eliminate the deficit which had been projected. During the year the Board took the following steps. First, as authorized, dues were raised from \$18, where they had been since 1981, to \$20 a year. The raise was effective January 1, 1985, and approximately half of our renewals in the year were at the new rate. Second, WAPi sought and found a new printer and reduced the substantial cost of printing the more than 5,000 copies of the Journal each month. The effect of both of these actions, and of other economies, was only partially felt during the past year. The budget for the fiscal year that began on June 1, 1985, however, takes them fully into account.

Please note that the Cash Operating Budget approved by the Membership June 22, 1985 reflects cash expenses only, and does not include either non-cash expenses (depreciation and amortization) or any capital expenditures the membership may approve for the coming year. In this regard, the Board of Directors will devote its August 14, 1985 meeting principally to formulate a capital expenditures budget for submission to the membership.

We will be publishing quarterly financial statements and budget reports starting with the quarter ending August 31.

Tom Warrick - President
Ed Myerson - Treasurer

contd.



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Theatres, Gifts, Metrobus
Schedules and Much More

Computer Access Number
(703) 893-0874

**Washington Apple Pi, Ltd.
BALANCE SHEET
As Of May 31, 1985**

ASSETS

| | | |
|-----------------------------|-------------|---------------------|
| CURRENT ASSETS | | |
| Cash on Hand and in Banks | | \$93,594.05 |
| Inventories | | |
| Disketeria Disks | \$17,015.76 | |
| Other | 13,303.06 | |
| | | <hr/> |
| | | 30,318.82 |
| | | <hr/> |
| TOTAL CURRENT ASSETS | | \$123,912.87 |
| FIXED ASSETS | | |
| Computer Equipment | \$12,022.34 | |
| Accumulated Depreciation | (4,344.78) | |
| Other | 4,313.42 | |
| Accumulated Depreciation | (1,729.51) | |
| | | <hr/> |
| TOTAL FIXED ASSETS | | 10,261.47 |
| OTHER ASSETS | | 1,377.03 |
| | | <hr/> |
| TOTAL ASSETS | | \$135,551.37 |
| | | ===== |

LIABILITIES AND FUND BALANCE

| | | |
|-------------------------------------------|--------------|---------------------|
| CURRENT LIABILITIES | | |
| Accounts and Payroll Payable | \$8,766.95 | |
| Taxes Payable or Accrued | 1,513.23 | |
| | | <hr/> |
| TOTAL CURRENT LIABILITIES | | \$10,280.18 |
| FUND BALANCE | | |
| Fund Balance | \$113,518.90 | |
| Additions | 11,752.29 | |
| | | <hr/> |
| FUND BALANCE | | 125,271.19 |
| | | <hr/> |
| TOTAL LIABILITIES AND FUND BALANCE | | \$135,551.37 |
| | | ===== |

**Washington Apple Pi, Ltd
STATEMENT OF REVENUE AND EXPENSE
For the Year Ended May 31, 1985**

REVENUES

| | | |
|--------------------------|--------------|---------------------|
| Membership Dues and Kits | \$108,759.01 | |
| Publications and Other | 40,678.41 | |
| Group Sales | 125,508.04 | |
| Disketeria | 58,154.24 | |
| | | <hr/> |
| TOTAL REVENUE | | \$333,099.70 |

COST OF SALES

| | | |
|----------------------------|-------------|-------------------|
| Membership | \$73,731.01 | |
| Publications and Other | 5,522.71 | |
| Group Sales | 107,041.30 | |
| Disketeria | 38,342.02 | |
| | | <hr/> |
| TOTAL COST OF SALES | | 224,637.04 |

GROSS MARGIN

\$108,462.66

EXPENSES

| | | |
|----------------------|-------------|-------|
| Office Expenses | | |
| Salaries and Related | \$53,970.56 | |
| Rent | 11,300.00 | |
| Postage | 5,355.37 | |
| Supplies | 3,334.21 | |
| Telephone | 2,752.29 | |
| Equipment Rental | 2,589.09 | |
| | | <hr/> |

\$79,301.52

MEETING EXPENSE

2,591.87

SIG EXPENSE

1,297.81

PRINT LIBRARY EXPENSE

1,465.24

OTHER EXPENSE

| | | |
|----------------------|------------|-------|
| Accounting and Legal | \$4,635.00 | |
| Depreciation | 3,208.55 | |
| Insurance | 1,135.00 | |
| Other | 3,075.38 | |
| | | <hr/> |

12,053.93

TOTAL EXPENSES

\$96,710.37

EXCESS OF REVENUE OVER EXPENSE

\$11,752.29

=====

contd. on pg 5

* September 1985 *

WAP

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|-----------------------------------------------------|---------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|
| 1 | 2 | 3 Beginning Tutorial #1 7:30-9:00PM Office | 4 | 5 SigMac 7:30PM-Lady of Lourdes; DisabledSIG 7PM CCCC | <-Thursday 5th contd. GAMESIG 7:30PM-Off. | 7 SigMac 9AM-Geotown University; LISA/MacXL |
| 8 | 9 Deadline for Journal Articles | 10 Beginning Tutorial #2 7:30-9:00PM Office | 11 Executive Board 7:30 PM Office | 12STOCKSIG 8PM Office; Apple /// 7:30PM-Conv Center Inn | 13 | 14 |
| 15 | 16 PI-SIG 8:00 PM Office | 17 Beginning Tutorial #3 7:30-9:00PM Office | 18 | 19 Pascal SIG 8:00 PM Office | 20 | 21 "Future of the Pi" meeting USUHS |
| 22 | 23 Mac Begin. Tutorial #1 7-10PM Office | 24 Beginning Tutorial #4 7:30-9:00PM Office | 25 | 26 EDSIG 7:30 PM Office | 27 | 28 WAP Meeting 9AM-Mazur Audit.-NIH DisabledSIG |
| 29 | 30 Mac Begin. Tutorial #2 7-10PM Office | | | | | |

* October 1985 *

WAP

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|----------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------|
| | | 1 Beginning Tutorial #1 7:30-9:00PM Office | 2 | 3 SigMac 7:30PM-Lady of Lourdes; GAMESIG 7:30-Off.-> | <-Thursday 3rd contd. DisabledSIG 7PM-CCCC | 5 SigMac 9AM-Locatn. TBA; LISA/MacXL |
| 6 | 7 Deadline for Journal Articles | 8 Beginning Tutorial #2 7:30-9:00PM Office | 9 Executive Board 7:30 PM Office | 10STOCKSIG 8PM Office; Apple /// 7:30PM-Conv Center Inn | 11 | 12 |
| 13 | 14 | 15 Beginning Tutorial #3 7:30-9:00PM Office | 16 | 17 Pascal SIG 8:00 PM Office | 18 | 19 |
| 20 | 21 PI-SIG 8:00PM-Off; Mac Begin. Tutorial #1 7-10PM Off. | 22 Beginning Tutorial #4 7:30-9:00PM Office | 23 | 24 EDSIG 7:30 PM Office | 25 | 26 WAP Meeting 9AM-Locatn. TBA |
| 27 | 28 Mac Begin. Tutorial #2 7-10 PM Office | 29 | 30 | 31 | | |

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday (usually) of each month. Library transactions, Journal pickup, memberships, etc. are from 8:45 - 10:00 AM. From 9:00 to 10:00 AM there is an informal "Help" session in the auditorium. The main meeting starts promptly at 10:00, at which time all sales and services close so that volunteers can attend the meeting.

A sign interpreter and reserved seating can be provided for the hearing impaired, but we need 3 or 4 business days notice. Call the office.

PLEASE NOTE: The September, October and November meetings will not be at USUHS. The September meeting will be on the campus of the National Institutes of Health, in the Mazur Auditorium, Bldg. 10. From Rockville Pike, turn west on Cedar Lane, left on West Dr. There will be a white sign "HHS/PHS/NIH". Parking is free, in Lot 20C or P3.

Watch the Journal for location of the October and November meetings.

Following are dates and topics for upcoming months:

September 28 - DisabledSIG

October 26 -

Dates for SigMac (held at Georgetown University) are:

September 7

October 5

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office. All members are welcome to attend. (Sometimes an alternate date is selected. Call the office for any late 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 \$27.00 for the first year and \$20.00 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.

Current office hours are:

Monday - Friday - 10 AM to 2:30 PM

Tues. & Thurs. - 7 to 9:30 PM

Saturday - 12 to 3:00 PM

CLASSIFIEDS

WANTED: Donate your computer to something wild! The Chesapeake Wildlife Sanctuary, a non-profit organization which rescues and cares for injured and orphaned wildlife is in need of a computer. An Apple //e compatible computer would be wonderful, but we will be grateful for any offer. Please contact Dianne Pearce at 249-1640 or Robert Williman at 262-1596 for more details on your tax-deductible gift of a computer to the Chesapeake Wildlife Sanctuary. If you find an injured or orphaned wild animal in need of care call the Sanctuary's 24-hour wildlife helpline at 249-1228 in Bowie, MD.

FOR SALE: The Grappler parallel printer interface for Apple][/][+, \$90/offer. Call Shaji at 231-6393, days.

FOR SALE: Apple 1200 baud Smartmodem. Will consider trade for Mac standalone disk drive. Call Bob Knetl, (W) 697-3235/6; (H) 276-9311.

FOR SALE: Apple][+ 64K, drive, Zenith monitor (green); Franklin Ace 1000, drive, Zenith monitor (green); Videx 80-column card, 16K memory card; Apple][+ motherboard. Best reasonable offer. Please call John, (day) 965-7520, (eve.) 564-9128.

FOR SALE: New IBM PC, complete, 12" screen, cables, 2 disks, etc. Never used. Still in original cartons, only opened by university technicians to burn in. I have a Mac but my university required me to buy this. You can have it at university price (60% discount). Call Jim, 951-4414.

FOR SALE to Apple /// Users: Two virtually brand new copies of MICRO/COURIER for the Apple ///. \$59 ea., plus shipping. Write or call Stephen Bach, Rt. 2 Box 89, Scottsville, VA 24590, (804) 286-3466.

FOR SALE: MicroCom mac modem. Has repeat dialing, unattended transmit and receive, upgradable to 2400. \$300. Call Kevin at (H) 280-1136 or (W) 654-8060. ☞

COMMERCIAL CLASSIFIEDS

STOCKMARKET SYSTEMS offers a new stock market timing service, **CYCLE ANALYSIS** and **FORECASTS**. A weekly service, valuable for timing stocks, options, mutual funds and index futures. Includes charts and comment with specific forecasts based on computerized models and artificial intelligence methods. 3 months, 12 issues \$28; 6 months, 24 issues \$50; 12 months, 48 issues \$96. (703) 893-9591. Robert Wood, 7616 Burford Drive, McLean VA 22102. ☞

Do you know you already own one of the best data base programs for home use that is in existence?

You do! It's the **Super File Cabinet** on your WAP New Member Disk.

Attend the September 14 Apple tutorial where Tom DeMay will teach you how to get the most out of it. ☞

WAP HOTLINE For Use by WAP Members Only

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

| | | | | | |
|---------------------------------------------|--------------------|------------------|--------------------------------------------------------|--------------------|--------------------|
| Hotline Proctor | Paul Koskos | (301) 279-0671 | Hard Disks | Tom Vier (4-11AM) | (202) 887-7588 |
| General | John Day | (301) 672-1721 | Corvus & Omninet | Jaxon Brown | (301) 350-3283 |
| | Dave Harvey | (703) 527-2704 | Sider | Barry Fox | (703) 820-5206 |
| | Robert Martin | (301) 498-6074 | Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine | | |
| Accounting Packages | | | A | Peter Combes | (301) 251-6369 |
| Accountant(Dec.Sup.) | Mark Pankin | (703) 524-0937 | A,I | Jeff Dillon | (301) 422-6458 |
| BPI Programs | Jaxon Brown | (301) 350-3283 | A | Richard Langston | (301) 869-7466 |
| Home Accountant | Leon Raesly | * (301) 460-0754 | A | Mark Pankin | (703) 524-0937 |
| Howardsoft (Tax) | Leon Raesly | * (301) 460-0754 | A,I,M | Richard Untied | (609) 596-8816 |
| | | | A,I,M | John Love | (703) 559-2294 |
| APPLE SSC | Bernie Benson | (301) 951-5294 | M | Raymond Hobbs | (301) 490-7484 |
| Apple TechNotes | Lance Bell | (703) 550-9064 | P | Donn Hoffman | * (412) 578-8905 |
| | Shirley Weaver | (301) 761-2479 | Forth | Bruce Field | (301) 340-7038 |
| AppleWorks | Carl Eisen | (703) 354-4837 | LISP | Fred Neaf | (703) 471-1479 |
| | Jay Jones (Balt.) | (301) 969-1990 | Math/ O.R. Applns. | Mark Pankin | (703) 524-0937 |
| | Barry Fox | (703) 820-5206 | Monitor, RGB Color | John Day | (301) 672-1721 |
| Communications Packages and Modems-Telecom. | | | Operating Systems | | |
| Anchor Mark 12 | George Kinal(7-10) | (202) 546-7270 | Apple DOS | Richard Langston | (301) 869-7466 |
| Apple Modems | Jeremy Parker | (301) 229-2578 | | John Love | (703) 569-2294 |
| ASCII Express | John Day | (301) 672-1721 | CP/M | Richard Untied | (609) 596-8816 |
| | Dave Harvey | (703) 527-2704 | | Robert Fretwell | (703) 971-2621 |
| | Harv Redd | (301) 944-2150 | ProDOS | Ray Hobbs | (301) 490-7484 |
| | Barry Fox | (703) 820-5206 | | Leon Raesly | * (301) 460-0754 |
| BIZCOMP Modem | Jeremy Parker | (301) 229-2578 | | Richard Langston | (301) 869-7466 |
| General | Tom Nebtler | (216) 867-7463 | Printers | John Love | (703) 569-2294 |
| Hayes Smartmodem | Bernie Benson | (301) 951-5294 | General | Walt Francis | (202) 966-5742 |
| Smartcom I | Harmon Pritchard | (301) 972-4667 | Apple Color Plotter | Leon Raesly | * (301) 460-0754 |
| VISITERM | Steve Wildstrom | (301) 564-0039 | Apple Daisy Wheel | John Day | (301) 672-1721 |
| XTALK CP/M Comm. | Bernie Benson | (301) 951-5294 | Apple Dot Matrix | John Day | (301) 672-1721 |
| Computers, Specific | | | Daisywriter 2000 | Joan B. Dunham | * (301) 585-0989 |
| Apple //c | John Day | (301) 672-1721 | IDS 460 | Bill Etue | (703) 620-2103 |
| | Jorge Osterling | (703) 671-5797 | Imagewriter | Henry Greene | (202) 363-1797 |
| | Scott Rullman | (301) 779-5714 | MX-80 | Jeff Stetekluh | (703) 521-4882 |
| LISA/Mac XL | John Day | (301) 672-1721 | NEC 8023 | John Day | (301) 672-1721 |
| Macintosh: | Don Kornreich | (301) 292-9225 | Okidata | Jeff Dillon | (301) 434-0405 |
| General | Steve Hunt | (301) 262-9080 | Scribe | Bill Mark | (301) 779-8938 |
| | Scott Rullman | (301) 779-5714 | Silentype | Fred Feer | (703) 978-7724 |
| | Donald Schmitt | (717) 334-3265 | Spreadsheets | Michael Proffitt | (301) 874-2270 |
| | Rob Clark | (804) 850-2016 | Lotus 1-2-3 | Dan Robrish | (301) 530-4202 |
| Chart | Terry Monks | (703) 471-4610 | Multiplan | Phil Leber | (703) 378-4391 |
| Comm. & Modems | Steve Hunt | (301) 262-9080 | VisiCalc | Bruce Field | (301) 340-7038 |
| Digitizers | JoAnn Stewart | (703) 527-4072 | Spreadsheet 2.0 | | |
| File Vision | Steve Hunt | (301) 262-9080 | (MagiCalc) | Leon Raesly | * (301) 460-0754 |
| Hard Disk | David Jamison(day) | (301) 589-8841 | SuperCalc Ver. 2.0 | Leon Raesly | * (301) 460-0754 |
| Helix | Harvey Levine | (301) 299-9380 | Statistical Packages | Jim Carpenter | (301) 371-5263 |
| Inside Mac | Jon Hardis | (301) 330-1422 | Stock Market | Mark Pankin | (703) 524-0937 |
| | Don Landing | (703) 690-1010 | Time-Sharing | Robert Wood | (703) 893-9591 |
| MacDraw | Tom Berilla | (301) 434-3256 | Word Processors | Dave Harvey | (703) 527-2704 |
| MacLion (DBMS) | Mark Miani | (202) 362-8123 | Apple Writer II | Walt Francis | (202) 966-5742 |
| MacProject | Jay Lucas | (703) 751-3332 | Format II | Dianne Lorenz | (301) 530-7881 |
| MacWrite | Mary Hockmeyer | (301) 897-5495 | Gutenberg | Leon Raesly | * (301) 460-0754 |
| MacTerminal | Jon Hardis | (301) 330-1422 | & Jr. | Henry Donahoe | (202) 298-9107 |
| | Mary Hockmeyer | (301) 897-5495 | Letter Perfect | Neil Muncy | Can.(416) 298-3964 |
| Multiplan | John Boblitz | (301) 356-9384 | Magic Window and II | Harris Silverstone | (301) 435-3582 |
| | Don Landing | (703) 690-1010 | Peach Text | Cara Cira | (301) 468-6118 |
| | Steve Hunt | (301) 262-9080 | PIE Writer/Apple PIE | Leon Raesly | * (301) 460-0754 |
| | Walt Francis | (202) 966-5742 | ScreenWriter II | Joyce C. Little | (301) 321-2989 |
| Multiplan/Chart | Bob Pulgino | (703) 379-0512 | Supertext II | Carl Eisen | (703) 354-4837 |
| MusicWorks | Skip Horvath | (703) 536-4091 | Word Handler | Jim Graham | (703) 643-1848 |
| Word | Marty Milrod | (301) 464-2154 | Word Juggler //e | Peter Combes | (301) 251-6369 |
| | | | Word Star | E. E. Carter | (202) 363-2342 |
| Data Bases | | | | Peter Rosden | (301) 229-2288 |
| dBase II | Paul Bublitz | (301) 261-4124 | | Jon Vaupel | (301) 977-3054 |
| | John Staples | (703) 759-3461 | | Carl Eisen | (703) 354-4837 |
| | Leon Raesly | * (301) 460-0754 | | Barry Fox | (703) 820-5206 |
| DB Master | Dave Einhorn | (301) 593-8420 | | Leon Raesly | * (301) 460-0754 |
| Data Perfect | Leon Raesly | * (301) 460-0754 | | Dana Reil | (301) 350-3283 |
| Data Factory | Bob Schmidt | (301) 736-4698 | | | |
| General Manager | Normand Bernache | (301) 935-5617 | | | |
| | Leon Raesly | * (301) 460-0754 | | | |
| List Handler | Jon Vaupel | (301) 977-3054 | | | |
| PFS | Bill Etue | (703) 620-2103 | | | |
| | Ben Ryan | (301) 469-6457 | | | |
| Profile | Ginny Spevak | (202) 362-3887 | | | |
| QuickFile II | Barry Fox | (703) 820-5206 | | | |
| | J.J. Finkelstein | (301) 652-9375 | | | |
| Graphics | Bill Schultheis | (703) 538-4575 | | | |
| VisiPlot | Lee Raesly | * (301) 460-0754 | | | |

* Calls up until midnight are ok.

Operant Systems

HARDWARE

PRINTERS—

| | |
|--------------------------------------------------------------|---------|
| Epson FX-85 (160 cps, upgrade of FX-80)..... | 359 |
| FX-185 (wide carriage version of the above)..... | 549 |
| LX-80 (replaces RX-80—call for specs)..... | 275 |
| LQ-1500 (200 cps, fantastic letter-quality model)..... | 949 |
| Okidata 192 (replaces Oki 92—call for specs)..... | 869 |
| 193 (132 column version of above)..... | 519 |
| Toshiba 1340 (144 cps draft, BEST letter-qual matrix)..... | 539 |
| 351 (288 cps, wide carriage version of above)..... | 1249 |
| Texas Instruments TI-855 (150 cps draft, 35 cps NLQ)..... | 675 |
| NEC P2/P3 Pinwriter (180 cps, high quality matrix)..... | 519/725 |
| Citizen MSP 20 (200 cps matrix, 18 month warranty)..... | 435 |
| Panasonic 1091 (120 cps, Epson compatible)..... | 255 |
| Genini 50-10 (120 cps, same features as Epson MX)..... | 249 |
| Powertype (18 cps daisywheel)..... | 335 |
| Quadram QuadLaser (8 pages/min, based on Canon mech)..... | 2495 |
| C.Itoh F-10 Starwriter (40 cps, office quality)..... | 849 |
| F-10 Printmaster (55 cps, same as above)..... | 1049 |
| Silver-Reed 550 (18 cps daisywheel, BEST at this speed)..... | 439 |
| NEC Elf (16 cps, par & ser interface, NEC/Diablo esul)..... | 439 |
| 8830 (55 cps daisywheel, built like a tank)..... | 1399 |
| Diablo 630 API (40 cps daisywheel)..... | 1549 |
| Quae LetterPro 20 (20 cps daisywheel)..... | 419 |

MODEMS—

| | |
|--------------------------------------------------------------|-----|
| Hayes Micromodem 3C6 (tone dialing/speaker/Smartcom II)..... | 145 |
| Smartmodem 2400 (2400/1200/300 baud, RS-232)..... | 595 |
| Smartmodem 1200 (1200 baud, RS-232, auto-dial)..... | 379 |
| Smartmodem 300 (300 baud, as above)..... | 145 |
| Novation Apple-Cat II (w/ Cosware; 1200 baud capable)..... | 199 |
| Smart-Cat 300 (RS-232, direct-connect)..... | 159 |
| Smart-Cat 300/1200 (as above)..... | 389 |
| Prometheus Promodem 1200 (300/1200 baud, RS-232)..... | 309 |
| Promodem 1200A (300/1200 card w/ software)..... | 299 |
| Microcom ERA 2 (300/1200 baud card with software)..... | 345 |
| ZoomModem 3C6 (300 baud Micromodem compat w/software)..... | 125 |
| US Robotics Password (300/1200 baud, auto-dial/answer)..... | 239 |
| Anchor Automation Express (300/1200 loaded w/ features)..... | 289 |
| Volkmodem 12 (300/1200 baud, RS-232)..... | 199 |

DISK DRIVES—

| | |
|-----------------------------------------------------|-----|
| MicroSci A2 drive (100% Apple-compatible)..... | 169 |
| A.5 (half-height, 100% Apple compatible).....(call) | |
| A.5c (half-height for Apple 3C6).....(call) | |

Corvus Winchester drives..... (call)

CP/M & 6502C SYSTEMS—

| | |
|--------------------------------------------------------------|-----|
| Applicard 16 Mhz Z-80, 64K to 192K RAM, 70-col video)..... | 249 |
| Microsoft Softcard 3C6 (Z-80, 80 col & 64K on one card)..... | 265 |
| Softcard II (includes CP/M 2.2 and MBASIC)..... | 239 |
| Titan Accelerator 3C6 (3.6 Mhz 6502C coprocessor)..... | 209 |
| Speed Decon (6502C high-speed coprocessor)..... | 229 |
| Applied Engineering Z-Rae (256K, CP/M, ramdisk for 3C6)..... | 365 |

MONITORS—

| | |
|--------------------------------------------------------------|---------|
| Audak 300G/300A (12" green/amber anti-glare, 18Mhz)..... | 125/139 |
| NEC JB-1201/1205 (green/amber anti-glare screen, 20Mhz)..... | 145 |
| JB-1260 (12" green, 15Mhz, best value for money)..... | 99 |
| USI PI-2 (12" green anti-glare screen, 20 Mhz)..... | 125 |
| PI-3 (12" amber anti-glare screen, 20 Mhz)..... | 125 |

INTERFACES & BUFFERS & CLOCKS—

| | |
|--------------------------------------------------------------|-----|
| Pkaso/U printer interface (superior graphics & more !!)..... | 99 |
| ShuffleBuffer (32K—128K w/cut & paste/ser and par)..... | 269 |
| Grapplert printer interface (parallel w/ graphics)..... | 85 |
| Buffered Grapplert (16K to 64K buffer plus graphics)..... | 149 |
| COS 7711 Super Serial (for printers & modems)..... | 99 |
| Practical Peripherals Graphicard (parallel w/ graphics)..... | 79 |
| ProClock (PRODOS compatible)..... | 109 |

VIDEO BOARDS—

| | |
|--------------------------------------------------------------|-----|
| Videx Ultratera (160 column/48 row display !!).....(call) | |
| Videtersa (80-column w/ softswitch & inverse)..... | 215 |
| MicroSci 80-col card (w/64K RAM, AppleWorks-compatible)..... | 95 |
| Applied Engineering Viewmaster (Videtersa on a budget)..... | 119 |
| Ramworks (64K to 1 meg w/80-col)..... | 139 |

MEMORY EXPANSION—

| | |
|---------------------------------------|-----|
| Microtek 16K RAM card..... | 79 |
| Titan Technologies 128K RAM card..... | 199 |

SOFTWARE

WORD PROCESSING—

| | |
|-------------------------------------------------------|-------|
| Wordstar 8.8..... | 199 |
| ScreenWriter II (40/70/80 col display w/speller)..... | 85 |
| Bank Street Writer or Speller..... | 45 |
| pfs: Write JCo..... | 79 |
| Pie Writer 2.2..... | 99 |
| HomeWord / HomeWord Speller..... | 49/35 |
| Sensible Speller IV (DOS or PRODOS versions)..... | 79 |
| The Word Plus (super spelling checker for CP/M)..... | 95 |

SPREADSHEETS—

| | |
|------------------------------------------------------|-----|
| Multiplan (state-of-the-art spreadsheet)..... | 70 |
| SuperCalc 3a (powerful spreadsheet for the 3C6)..... | 195 |

INFORMATION MANAGEMENT—

| | |
|-----------------------------------------------|-----|
| dBASE II (w/ ZIP screen generator)..... | 289 |
| pfs: File, Report, or Graph..... | 79 |
| The General Manager 2.0..... | 149 |
| Thinktank (electronic thought organizer)..... | 95 |
| DB Master 4+ (latest version)..... | 185 |

BUSINESS & ACCOUNTING—

| | |
|-----------------------------------------------|---------|
| Dollars & Sense (accounting w/graphics)..... | 69 & 79 |
| Poachtree Peachpat (GL/AR/AP)..... all three: | 229 |
| Back to Basics Accounting (GL/AR/AP) each | 59 |
| BPI Accounting (GL/AR/AP/PAY/INVENTORY)..... | 245 |

COMMUNICATIONS—

| | |
|-------------------------------------------------------|----|
| Ascii Express Professional (for DOS 3.3)..... | 80 |
| Z-term Professional (for CP/M)..... | 90 |
| CompuServe Starter Kit (password & 5 free hours)..... | 29 |

LANGUAGES—

| | |
|----------------------------------------|-----|
| Microsoft TASC Applesoft compiler..... | 119 |
| Fortran-80..... | 125 |
| Terrapin Logo..... | 65 |

DOS & ENDS—

| | |
|---------------------------------------------------------|----|
| Kensington System Saver Fan (w/surge protector)..... | 66 |
| Kraft Joystick / TG Joystick / Hayes Mach III. 85/35/39 | |
| KoalaPad Graphics Tablet (with graphics software)..... | 85 |
| Flight Simulator II..... | 36 |
| Print Shop..... | 86 |

| | |
|----------------------------------------------------------|------|
| Filevision (graphics database system)..... | 119 |
| Odesta Helix (database for the serious user)..... | 249 |
| Dollars & Sense (accounting w/graphics)..... | 95 |
| Microsoft Word (what MacWrite should have been)..... | 125 |
| Chart (presentation business graphics)..... | 85 |
| File..... | 125 |
| Basic (new version)..... | 99 |
| Multiplan..... | 125 |
| MacEnhancer (has the ports Apple forgot)..... | 175 |
| Lotus Jazz (word proc, database, graphics, more) (call) | |
| Assimilation Process Mac Memory Disk..... | 24 |
| Ioasoga Bernoulli Drive (5 MEG removable cartridge)..... | 1349 |
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Q & A

by Bruce F. Field



I had a question a few months ago from a user who was only able to print one line of expanded print on an MX-80. When a new line was started the printing reverted to standard printing. Mike Firth wrote to me suggesting that the problem was with the MX-80 ROMs. Thomas Vallee and Lee Raesly wrote to add to Mike's answer. Unless you have a very old MX-80 that does not have the Grafrax ROMs, there are two ways of turning on expanded print. PRINT CHR\$(14) turns on the expanded print and turns it off at the end of the line. PRINT CHR\$(27) "W"; CHR\$(1) turns on expanded print and leaves it on. Finally, PRINT CHR\$(27) "W"; CHR\$(0) turns expanded print off.

I received a rather lengthy letter of tips on AppleWorks and printers from Gene Carter that I have not seen published before. I'll pass some of them along and hope they help with some of those frustrating little problems.

"The earliest versions of Appleworks in ProDOS had an error that fouled things up when printing with an interface board such as the Grappler. Thus, if 80N prints at the top of your first page and you have the earliest version, your dealer should give you a new copy of AppleWorks, copied onto your disks. That is what I got.

"With the newer version I only got "ON" printed on the first page with the Panasonic 1091 printer. Since this also sometimes happened with Screenwriter II in DOS 3.3, I blamed the Panasonic. True, you can solve the problem by ejecting the first page or using Snopak, but still... Anyway, it took lots of effort to find the problem was a combination of the Panasonic and the Grappler. You can fix this by deleting the 80N code using the Custom printer option in AppleWorks and/or removing the Grappler as the specified interface card. That solves the word processor problem but the data base output will be junk with strange spaces and carriage returns in various places. It turns out you have to send a Control-I ON to the Grappler if you want it to completely stop sending carriage returns, that way the only way the printer can get a carriage return is from AppleWorks, which is exactly what you want. Why I didn't have this problem with my Epson FX-80 I do not know. Lesson: be careful with an interaction between software, printer interface cards, and printers.

"Within AppleWorks there is a particularly absurd action of the Find (or Find and Replace) function. Essentially, anything you had previously sought to find is left there unless you clear the buffer first, next time, using Control-Y, I believe. Thus, find marty. Next time, find sue. You will fail to find it because the system is searching for sue(CR)y. Put spaces after sue and then backspace to the end of your search string and type a carriage return. Thus, sue (CR) space space will work, whereas sue space space (CR) will not. This information is in the tutorial but not in the manual, nor is it in the summary tables at the end of the manual. No salesman understood this, which says something about customers/salesmen. Going to the end and deleting backwards may

work, but Control-Y is easier."

A couple of months ago I had a question on converting the standard keyboard on the Apple //e from the QWERTY (or Sholes) to Dvorak layout. My instructions were backwards and guaranteed to lock you into the QWERTY layout. The correct solution is to cut the little hourglass shaped solder pad on your motherboard that is marked X2 so that it is in two pieces. This pad is located on the right hand side of the motherboard just behind the keyboard connector. Take a sharp knife and cut through the solder at the narrowest part of the hourglass. Then solder a small piece of wire from the half of the hourglass nearest the rear of the computer and solder the other end into one of the little holes (the one nearest the rear of the computer) in the rectangle marked J19. You can use a single-pole, double-throw switch to connect the rear half of the hourglass to the other half or to J19 if you want to be able to switch back and forth. If you don't want to cut traces on your computer you can instead solder the wire from the rear hole of J19 to either the X2 hourglass pad or to the other hole of J19 AND remove the video ROM and bend pin 18 out so it doesn't fit back in the hole in the socket. It is not clear to me exactly why this second method works but it has been tested in two computers and does seem to work. The first method is preferable in my opinion. My apologies to those of you who tried my original solution.

Q. I am the owner of an Apple][+ that I've customized to be portable (64K already installed), and am very happy with. However, there are times when I regret having a][+ instead of a //e. To solve this dilemma, without having to buy a new computer, I am contemplating a hardware upgrade and the modifications necessary to bring my][+ up to an equivalent //e if at all possible. Though I am capable of performing such surgery myself, the real problem that exists is finding a suitable published reference that spells out the technical differences between these two models, and supports the information with schematics and other details needed to plan and execute such an upgrade with safety and accuracy. The two areas that I'm particularly interested in knowing about are the //e 'Auxiliary Slot', the][+ 'Slot 0', their conventions and differences, and the][+ lowercase/upercase 'shift key mod'.

A. Probably the best reference source for schematics and functional description of the //e is the Apple //e Reference Manual. This manual covers the hardware of the //e, the new soft-switches, and the auxiliary slot. There are a number of Apple manuals with similar names, on the cover; mine says "Reference Manual for the //e Only", and it contains complete schematics of the //e.

Now that I've given you the good news, here's the bad. The //e contains two custom integrated circuits that implement the new features and these will be hard to copy
contd.

using conventional circuitry. You may be able to emulate some of the //e features but it will be difficult to be 100% compatible. The keyboard on the //e is of course different, and the shift key actually works to produce upper and lower case letters. To do this on the][+ would require changing the keyboard encoder chip or inserting another circuit between the keyboard and the computer to do a "shift key mod" in hardware. In the long run it may actually be cheaper to buy a bare-bones //e as all of your existing peripheral cards will work in the new machine. Your 16K memory card in slot 0 cannot be used, but since the //e comes with the extra 16K already installed, you won't need it anyway.

A better solution might be a rumor I heard on a bulletin board the other day. (The product may actually be announced by the time you read this.) Checkmate is going to produce a new card for the][+ that is supposed to replace the 16K card in slot 0 and provide complete compatibility with all //e and //c software. The card is supplied with 64K of onboard RAM and is expandable to 768K. The card is being distributed by Colorado Software Connection (303) 756-8819, and will be available for shipping on September 1, 1985. The cost is estimated to be \$200-\$250.

Q. I have a Franklin Ace 1000 and would like to be able to run Appleworks on it. I've read Cornelius Bongers article on "ProDOS - Pros and Cons" in the May 1984 issue of Call -A.P.P.L.E. where he suggested a fix to the ProDOS disk so it would load on a Basis 108 (and the Franklin). I've done this and ProDOS does load. I also read your A.P.P.L.E. Doctor section in the March 1985 Call -A.P.P.L.E. which lists another possible fix. I'd like to be able to run Appleworks on my Franklin, but the manual says to press <control> Open Apple, RESET and the computer will then read the instructions on the startup disk. As you know, the Apple //e is the only machine that has the Open and Close Apple keys. Any information would be appreciated.

A. The //e has a special feature that when you press <control> Open Apple (or PBO) and RESET all at the same time, the computer re-boots. You can simulate this by turning your Franklin off and then on again. This just loads in DOS and runs the greeting or startup program.

The Open and Closed Apple keys are easy to emulate on any Apple compatible machine that has a game I/O port. The Open Apple key is connected to switch input 0 (PBO) or pin 2 on the 16-pin game I/O port. Similarly the Closed Apple key is connected to switch input 1 (PB1) or pin 3 on the game I/O port. If you have a set of paddles you already have Open and Closed Apple keys - just use the paddle buttons. This will work for all the cases except the one you've stated above where you want to use it with RESET.

Actually I don't understand why Apple used the game I/O port this way because this leads to the "my computer won't run on a messy desk syndrome". If you have some paddles or a joystick pushed to the back of your desk and buried under a stack of papers or books, one of the buttons may accidentally be pushed. This will cause the //e to either

re-boot or perform a diagnostic test when <control> RESET is pushed. (This feature does however make a certain columnist sound omniscient when he gets a call from someone with a non-working Apple //e and he tells them to clean up their desk.)

Q. I am reading the Graphics Tool Kit (Part 1) by Randi Rost in the April 84 issue of Call -A.P.P.L.E. After I entered the code for the four listings and ran the demo program the hi-res colors filled the screen so fast that I could not even count the seven colors before the screen finally turned white. I wanted to get back to the Lisa assembler and did not know how. I therefore pressed control-RESET on my Apple //e and this did the job. Is there another way to do this? Can one change the demo program so that at the end it will place you in the monitor? Is not the demo program equivalent to the following Applesoft program?

```
10 TEXT : CLEAR
20 HOME
30 HGR
40 FOR I = 0 TO 7
50 HCOLOR=I
60 HPLLOT 0,0
70 CALL 62454
80 VTAB 22 : PRINT "COLOR VALUE= ";I
90 NEXT I
100 END
```

If one runs this he will see all the colors for a sufficient time. If I want to delay for some time after each colorfill what changes should I make in the demo program of Randi Rost?

A. Yes, your Applesoft program is equivalent to Randi's machine language demo program except for the fact that it runs much more slowly. The whole point of Randi's program is to demonstrate how quickly the entire screen can change color. To do this he does not use the hi-res graphics software built-in to the Apple, but instead creates a table of memory locations corresponding to screen addresses to permit rapid access to the hi-res screen. The status of the dots (on or off) on the hi-res screen are stored in memory in a regular but not consecutive order. To determine which memory location controls which dot on the screen requires a calculation that takes some time. It is much quicker to do as Randi does, compute all the possible combinations and store them in a table for later use.

With your Applesoft program the screen does not appear to change color all at once, horizontal bars of the new color appear within the old color. Randi's program makes this change appear more instantaneous. If you must slow Randi's routine down, the following delay program can be inserted between lines 22 and 23.

```
LDY #50
LOOP1 LDA #196
      JSR $FCA8
      DEY
      BNE LOOP1
```

contd. on pg 23

USING THE APPLE TO HELP THE DISABLED (AND OTHERS)

by Boris Levine

What can we, who know and love our Apple computers, and perhaps program at some level, do to assist disabled, handicapped and retarded people via computers? In my experience... a lot! Also, what can we do to help students use computers at schools where such computers are already available? Again ... quite a lot.

What we can do for such people is to open doors to the world. Access to a computer permits communication with others, use of existing programs and more control of their personal environment.

At this point, WHY US? ... For one answer see the section marked "WHAT'S IN IT FOR ME???"

Let me give you some examples out of my own experiences. However, it must be realized that the persons I worked with had strong support from their teachers, parents and other computer-competent people. And, about teachers, there'll be more to say later.

A. Scope

To start, what kinds of people might be involved, and what kinds of help might be offered? We can consider people by age groups, by the kinds of problems they are coping with, by the intensity of those problems and by the kinds of solutions we can offer.

For these people we can:

- help by simply showing them how to 'drive' their computers and eliminate the "it's gonna blow up" fear.
- help them get past the 'fear of high-tech', which may sound strange but is real.
- help by writing programs tailored to their individual needs.
- help by introducing existing quick and inexpensive programs as starters.

B. CHILDREN

Let's look at a couple of examples involving children of elementary school age.

1. The computer is a tool and its use should be taught as a means for doing something useful. The simplest, and I think the most useful, tool is a word processor program made available to children who, for one reason or another, have difficulty in writing. I have come to believe that, for some people, their poor handwriting slows further learning. This is not to disparage good handwriting. But for them, fighting their way through the script i's, u's, and w's diverts their attention from the techniques of spelling and grammar, or the substance of history, literature, science and such. And certainly, the capability to deliver a highly legible piece of homework is most encouraging. A simple word processor

program would be a natural helper.

This worked in three very different cases, two using Bank Street Writer. In one case a very bright child, with disfigured hands, quickly learned to use BSW and when last heard from was running a class newspaper. In another, the teacher taught BSW to a group of children with learning problems. Three of these were permitted to do their homework and other reports directly on the computer. They interacted beautifully, enjoyed reviewing their work, criticizing and correcting one another's spelling and text, and finally turning out neat finished reports on the printer. The third instance was with four children from the school's Computer Club. In half an hour they became adept with the (old) Apple Writer and were negotiating with their teacher for permission to use it for their homework.

Note the magic group size - three. (Here I was to learn an aspect of pupil behavior with which teachers are no doubt very familiar: children don't necessarily want to be standouts. The bright youngster refused to use the computer for his regular class work - didn't want to be the 'only one in the class'. And, conversely, with the group of three the teacher had no problems; three was a large enough group to eliminate the feeling of being the only one. Thus, it isn't enough to be an enthusiastic volunteer; the active cooperation of the user is essential.)

2. A more complex form of involvement came about with more seriously disabled children. Here programs had to be developed and tailored to the individual child. The first was a bright child who was about to enter first grade but who suffered from cerebral palsy, with practically no effective control over her voice, hands, feet, or body. There were therefore two different kinds of problems: first, giving her access to the computer, and second, developing programs which would help in learning. She had already been introduced to computers by her teacher; now the goal was to try to 'mainstream' the child and it was my role to do what I could to improve the access and to develop supporting programs.

(In passing, all the programs were written in BASIC, which not only permitted them to be written quickly but more important, permitted them to be changed quickly. And there were changes galore, as the child made progress and also asserted her preferences on how she would interact with the program.)

What followed was a learning experience for all of us. As a starter, I wrote two programs to permit her to build words out of a displayed alphabet. One provided a cursor which moved from letter to letter at a predetermined rate, while the other required her to 'press any key' to move the cursor and the spacebar to select the desired letter. Then came programs to replace a manual flip board. And changes involving the handling of data which presented real challenges to my

contd.

programming skills. One challenge recurred repeatedly: making corrections in the displayed text. In displaying a word, it was easier for me to wipe out and rewrite the line. But the child, aided and supported by her teacher, insisted on corrections working backwards from the last letter entered. As in many other cases, I had to agree that my convenience was less important than hers, so the programs were changed ... repeatedly.

At first, my programs had to provide a solution both to the access problem and to the learning problem. Since the child had neither hand nor finger dexterity, selecting the letters was a matter of extraordinary difficulty. We tried two ways: one, by using the whole keyboard as a big target with "press any key" ; and the other, by a timed program. The exact value of the timing was developed in a subroutine based on the child's ability to access the keyboard. And, some of these programs worked; others did not. And some were brand new, while others 're-invented the wheel'.

There were other influences beyond mine. The most important was the group of school professionals, and particularly the child's teacher. She encouraged the child to use the programs and she encouraged me to improve them. More, she defined the problems and provided a progress report. There were, in addition, several staff specialists who helped the child and, incidentally, me. Eventually, the school received a Schwedja adaptive board and that greatly reduced the "access" aspect of the problem. Plans for the coming year are to increase the speed of communication.

Another child at this school was a kindergartener who had visual as well as other problems. For her, I provided a program which displayed much larger letters than those in her book or normally presented by the Apple. These permitted her to recognize individual letters. For her, the next step will be to help transfer letter-recognition to word recognition.

C. TEACHERS

Teachers are the most important link between the volunteer and the user. They are devoted to their 'children'. In the matter of computers, teachers who are convinced, or open to convincing, can do wonders for their students. But teachers, like many other adults, must confront their formal teaching schedules and other commitments. And some, like some other adults, have the 'high-tech barrier' and must somehow be encouraged to surmount it.

A most useful contribution is to give the teachers confidence in handling computers. Apparently, there is something encouraging in seeing a computer used in a simple, business-like fashion, or so I was told.

D. HOW TO START

The direct way is simply to offer your services to the principal of your local elementary school. The reception may be anything from enthusiastic to chilly, but it will be a start. Make an offer at any level, from teaching how to start the machine to how to program it. There may already be some interest on the part of some teachers, and even a computer club. But there may also be that 'fear of high-tech'; teachers are no more, and no less, immune than other adults. And try

again next term.

Let your willingness be known to organizations of parents of 'exceptional' children. This term covers the widest range, from genius to retarded, but the parents are very alert to anything that will aid their children.

My own entry to this effort was for an adult who was suffering from Charcot-Marie-Tooth syndrome, a creeping illness which left him increasingly helpless physically but with his mind clear. I worked with a program published in Creative Computing which was based on the Morse code and, with a special Morse key, might have given him input to the Apple. The progress and problems were described in several articles in the WAP Journal.

And, consider attending sessions of the Disabled-SIG.

E. WHAT'S IN IT FOR ME???

Yes, why go to the trouble of 'drumming up business' and devoting precious time to teaching others? To this there are several answers, because the question is a real one.

First, there are a lot of people who will be better off for your efforts. Second, there's an opportunity to practice some fancy computer programming.

And, FOR N=3 TO 999: Insert your own reasons: NEXT N.

F. PRINCIPLES

There are several guiding principles which I have found useful:

- Support the teacher, who is the key to reaching the user. The volunteer can best work through the teacher.
- Treat computers as a tool, and show the users how to put it to useful work.
- Use the computer technology that exists; it is not necessary to wait for the next development, or even desirable to use the leading edge of the art. Present technology is usually adequate and available today.
- Use existing programs, equipment and techniques. The list of software for the Apple is a good place to start.
- Avoid terms like computer-literacy. Such fuzzy terms hinder, rather than help, computer use.
- Use computers to increase the independence of disabled users.
- Make use of whatever capabilities the person may have, rather fret over the disabilities.
- Keep it simple!

G. WHERE ARE THE LISTINGS?

If you would like to see listings of the programs that I have mentioned, let me know. However, half the fun is in discovering your own ability to meet these specialized needs, so go try some yourself. &

TELECOM SIG NEWS

by Dave Harvey

The Telecom SIG met after the WAP meeting on 27 July and was conducted by George Kinal. The meeting started off with an announcement that an upcoming program at the main WAP meeting will be on the subject of Telecommunications. It has been tentatively set for the October meeting, and it was suggested that the program should be varied and compact. Previous program presentations on telecommunications have dragged on and attendees have lost interest. The program that is planned would be split into four areas:

1. Users' descriptions of exactly how they use telecommunications.
2. Conferencing applications.
3. Networks that are available, such as the Source and Compuserve.
4. Question and answer session.

There would also be demos of typical on-line sessions, possibly recorded previously and replayed during the program. In order to foster further discussion and plan for the program, it was agreed that Barry Fox's BBS, THE CONNECTION, will be used. The discussion will be on Board number 1, the general board.

There followed some announcements about modems. Contrary to previous reports, the Volksmodem DOES support the break function and does have the capability to send touch tones for the * and # buttons on the telephone. It was announced that WAP recently received the US Robotics 2400 baud modem which had been ordered. This modem was obtained by a special offer to SYSOP's of BBS's under which the modem was offered at a greatly reduced price. So far this modem looks good. Some of the features include the ability to dial using letters as well as numbers; dip switches which are easily accessible from the bottom of the unit; most of the complete parameters for the modem are printed on the bottom of the unit. One attendee observed that the new firmware for the enhanced //e might have trouble keeping up with the 2400 baud speeds. It remains to be seen if this is true. Also discussed were some of the new modems coming on the market that have protocol built into the modem in firmware. They are sometimes called self-correcting modems.

Until now there has been no provision for demos of on-line telecommunications sessions at the Telecom SIG meetings that are held in the USUHS cafeteria. In order to be able to have these sessions there, it was decided to get a device called THE BLACKJACK. This is a unit that temporarily replaces the microphone on a standard telephone handset. It has a modular jack into which can be plugged a modem for direct connection to the phone line. We will be getting this unit along with telephone cable and accessories so that the pay phone in the lobby can be used for these on-line sessions.

Mike Ungerman announced that the Electronic Networking Association will have a conference in November at Georgetown University. This association tries to work out ways to

better exchange data between different groups throughout the country. Washington Apple Pi might want to participate in this conference.

In answer to a question about how the communications program, Z-Term, compares with ASCII Express, Professional, the consensus was that this program (Z-Term) has not been kept up to date as much as AEPRO, and AEPRO was recommended instead. There are many programs available that can convert the DOS or PRODOS files to the CP/M format.

Joe England is developing Modem 740 versions for different configurations. So far there are no drivers for the Apple //c. One advantage of Modem 740 is that access to other programs can be made without disconnecting from the host computer.

A question was asked concerning Kermit's availability for the Apple. It is available for downloading on a number of local BBS's, such as Archimedes. It is also soon to be up on Barry Fox's board. Kermit was developed for communications between mainframes and micros so that 8-bit communications could be used.

Regarding the status of the multi-user BBS that WAP is developing, it was reported that a letter setting forth the agreement between the developer, Les Kay, and WAP was sent out last week. As soon as it is signed and returned, the Sunol hard disk, multiplexer and 3 adapter cards for the Apple will be shipped to him. Initially three Apples will be used for the multi-user board. One suggestion made by some members is to increase the number of boards presently available on the UBBS software. Thirty two boards were suggested. Having this capability should not be too difficult; however, it could have an impact on the present features of the UBBS system. There are many features that will probably be changed just due to the fact that a multi-user environment is being used.

George reminded everyone that it's that time of the year to be thinking about lightning protection for phone lines. When a modem is plugged into a phone line all the time, there is always the danger of the phone line being hit by lightning and thereby damaging not only your modem but, in some cases, even the serial card mounted inside your Apple. George previously had organized a group buy on a protection device for phone lines. Since that time many commercial units have appeared. One thing to watch out for is that units without a ground wire are not much help.

The Telecom SIG now has two communications disks, numbers 1 and 2, and these are presently available only from George Kinal. It was suggested that maybe they should be given to the WAP Disketeria and let them handle the distribution. George will investigate this option. ☞

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FREE TIPS ON USING APPLEWORKS FROM "THE APPLEWORKS USERS GROUP"

by Milton R. Goldsamt

A few months ago I answered a classified ad in The Computer Shopper and thereby stumbled onto "The AppleWorks Users Group", or TAWUG, an informal and unorganized (no dues at present) group of AppleWorks users across the country. They're willing to share what hints, ideas, templates and programs they have in the spirit of "helping everyone learn more about AppleWorks". TAWUG has been formed by its current president, Jim Willis, 1300 Hinton Street, West Monroe, LA 71291.

To obtain the information the group has, you merely send a disk and postage, or \$4.00, for each disk that you order. At present, they have four doubled-sided disks of information, numbered: (1&2) (3&4) (5&6) (7&8). Let Jim know which sides you want. Jim will also keep a database in AppleWorks of the currently over 140 USA-wide members' names and addresses (actually, those contributors to disk contents or those sending for disks). I have ordered and received two of the four double-sided disks. I intend to send for the other two diskettes shortly. (And, if you have information to share with others, as described below, put that on the disks you send; the TAWUG tips will be put there in its place, and sent back to you.)

After reviewing the diskettes' varied contents, I thought they would be quite useful to AppleWorks users in WAP. Therefore, although they are public domain software, I've asked for and received permission from Jim to make these AppleWorks files directly available to Apple Pi members. So, if you'll bring in your ProDOS User's Disk to the WAP office, together with fully blank diskettes, you'll be able to both format and copy the diskette side(s) you are interested in - at no charge to you (check with the office staff before going to the office to make sure the computer is available). A brief listing of those sides' contents and an AppleWorks screen dump of their file names, sequence, type (WP, DB or SS), size and date created will also be available at the office.

What's on these diskettes? They include the following topics, in no particular storage sequence:

- | | |
|----------------------------|---------------------------------|
| 1. Database help | 6. Other things |
| 2. Spreadsheet information | 7. Commercial programs |
| 3. Wordprocessor files | 8. Apple //e help |
| 4. Desktop ideas | 9. Apple //c help |
| 5. Printer points | 10. Troubles we need help with! |

For example, here are some of the actual AppleWorks files on these diskettes (for convenience, each disk volume named /TAWUG.1, 2, 3 or 4):

• On #1, the file ARTICLE has two pages of specifics on configuring AppleWorks for use with the Prowriter printer. the file Magazines 1984 is a database of how to set up magazine holdings by title, monthly issue received and renewal date.

• On #2, FIX.ASSET is a spreadsheet of a projected schedule of fixed assets and depreciation. ARTER.2 columns

describes how to print AppleWorks text in double column format.

• On #3, DRESS.UP.TEXT provides tips on dressing-up database and spreadsheet printouts for formal use. AMORT SCH 360.s is a 53K (!) spreadsheet of payments amortized over 360 periods (side 4 provides schedules for 240,120 and 60 time periods).

• On #4, Star Trek List contains a database of 82 Star Trek episodes' title, author, Star date (!) and rating. TAWUG MEMBERS contains a database of 83 USA-wide members' names, addresses, phone numbers (occasionally), what use they make of AppleWorks (WP, DB or SS) and two report formats (mailing labels and member listing).

Jim and TAWUG have had a very good response to this information interchange idea. A description of the group Jim sent along explains that they welcome ideas for TAWUG and for AppleWorks itself, as well as any files you have, even small ones. They also would like information on commercial programs that support AppleWorks, either a complete review or just a note that such information exists. Please do NOT send copyrighted material "that would get us into trouble", as he puts it. Applesoft programs that work with AppleWorks files are also welcome. Please title your files in such a way that it is clear what they are for, e.g. BOB.MUSIC - feel free to put your name in the file! ☺

APPLEWORKS AND ALL THAT by Paul Koskos

APPLEWORKS - We reported in the June WAP Journal that the problems of some owners of AppleWorks 1.2 with non-Apple printer interfaces could not be cured by Walt Mossberg's configuration utility program (WAP Journal, November 1984). Member Sue Berger now reports that for her CCS interface card, the cure was two new chips supplied by CCS at a cost of \$35, and installed by her local computer dealer at a total cost of \$45. Don't give up hope, you others.

FONTRIX - If you chafe at disk access delays in scrolling off the screen for large GRAFFILES, there is a remedy if you also have Applied Engineering's Ramworks. Simply use the A.E. Ram Disk program to create a Ram Disk in pseudo-slot 3. (Don't forget to configure Fontrix to access slot 3.) Then open your Graffile in the Ram Disk (slot 3, drive 1, volume 1), and hold on to your hat. Oh, yes, when you have finished creating your graphics, exit Fontrix, and FID the Graffile from slot 3 to a real disk in slot 6, if you want to save it. ☺

MORE ON APPLEWORKS AND VARIOUS PRINTERS

by Larry T. Tynes

This article describes things learned during the last year about using AppleWorks with several different printers. Perhaps my experiences will be helpful to others searching for ways to get full use of AppleWorks and their printing setup.

I use an Apple //e with Duodisk drive, NEC amber monitor, C. Itoh Color Dot Matrix printer (M-8510), and the Print-It interface card, whose commands are very similar to the Grappler cards. My Apple does not have the newest enhancements making it like the //c. I have configured AppleWorks to operate with this setup, using the program given by Walt Mossberg (*WAP Journal*, Nov. '84, "Appleworks Utility", p. 20).

A number of problems in getting the most out of this setup while using AppleWorks led me to various discoveries, some found only recently, others months ago. Somewhere along the way, I learned, but cannot confirm with authority, that the Dot Matrix Printer formerly sold by Apple Computer was once made by C. Itoh. I learned in similar fashion that the Imagewriter Printer, now sold and made by Apple Computer, was at first made by C. Itoh. Further, the NEC 8023 Printer, made by C. Itoh and the C. Itoh Prowriter 8510 are supposedly similar enough to my Color Dot Matrix M-8510 that, except for color they operate alike. Finally, all these printers, Apples, NECs and Itohs are enough alike that my configured AppleWorks program allows some operations I have not seen mentioned in any article or printer manual.

When I began using AppleWorks last year, it was not configured to my setup. I followed the manual and called my Itoh a custom printer. My frustrations with margin settings and such were chiefly met by the update from Apple allowing configuration of the AppleWorks program to my interface card and printer. I later had my AppleWorks disk updated to Version 1.2. Then AppleWorks was used with pleasure during the last school year, although I kept wishing for a few things: I could not print dittos because the Itoh struck the paper too lightly. Also elongated print was shown on my printer's print-out demo and I knew Imagewriters and Apple DMPs could do that.

A friend said his Okidata printer did dittos fine by removing the ribbon and setting bold print for the entire document. When I checked AppleWorks, it was unclear how to set bold print for an entire document. Instructions were just for the phrase or sentence being marked. Soon after that I read Paul Ross' article in the *WAP Journal*, (April '85, "Letter Quality Printing with AppleWorks and Epson FX-80", p. 30) and Butch Greathouse's article in *Call-APPLE*, (April '85, "Interfacing AppleWorks and Prowriter", p. 41). I learned enough to succeed in getting bold print for a whole document by defining printer codes under particular characters per inch for choice as a printer option. Dittos now do beautifully, even with the ribbon in. These efforts also enabled my discovery of several further peculiarities which are worth calling to the attention of other users of AppleWorks.

The articles taught me to play around with characters-per-

inch settings under the Printer Codes (from AppleWorks Main Menu, choose #5, Other Activities, Go to #7, Specify Info on Your Printer. Go to Change Printer Specifications, then to Printer Codes). However, when I set a printer code for anything my printer could do, say under 5 CPI, and called for it under Printer options, I got 5 CPI on the monitor screen and the printout. Since I use 12 CPI, 10 CPI and 17 CPI the most, that caused me to try setting alternate printer codes at 11 or 13 CPI, etc. so I could have bold pica or italicized elite or bold, italicized elite, or other such possibilities.

I still had problems with the literal interpretation of CPI by AppleWorks and the margins I set up. For instance, if I typed a document in 12 CPI, then decided to do it in bold elite, when I switched the printer options to CPI 13 or such, my margins went haywire. Basically, I solved this problem by redefining 12 CPI under printer codes if I wanted bold elite or such. That is still the only way for keeping margins and getting bold, italics, etc. that I know how to use with my setup, despite the help of Ross and Greathouse.

But there is more. While fooling around with this information and my setup, I tried calling my Itoh the name of other printers already defined in AppleWorks - Epsons, Apple DMPs, Imagewriters etc. I was surprised to see my printer operate just like an Apple DMP or an Imagewriter when I named it that. This enabled me to print elongated (or headline) type for the first time under AppleWorks, and since I have access in my work to an Apple DMP, an Imagewriter and their instructions books, I soon was trying various things those printers could do and finding that my Itoh did the same!

Soon I became frustrated again. It seemed dishonest that the only way I could get my Itoh to print certain things was to call it an Imagewriter! That is when I discovered that what the Apple DMP called elongated and the Imagewriter called headline were both caused by the Control-N command to turn on, Control-O to turn off. When I entered these commands under AppleWorks' printer codes to my custom printer, the Itoh, then I could get it to do anything the DMP or Imagewriter did under its own name.

The end of this journey to discover all that can be gotten out of my setup with AppleWorks has not been reached. I am still searching for ideas and aids. The Imagewriter instruction manual is much better than the Itoh manual received with my printer and has helped a lot. The Apple DMP manual was worth very little, but printing out the DMP demo program and analyzing the commands in it helped, after translating some ASCII characters to Control commands.

The undergrowth is dense when searching for truth in the jungle of computer merchandising. The companies seem to desire this obscurity to protect their corner of the market, but it has caused much hacking to seek out what they have hidden. The articles by Mossberg, Ross and Greathouse were quite helpful, but I would be glad to hear of continued improvements and developments from other AppleWorks pilgrims. ☞

WRITE AWAY: A Review

by Bob Oringel

Hey, wait a minute, please!, before you say, "Oh gawd, not another word processor program." This one is just a bit different, folks. It combines a very advanced word processor with a communications program, and it is operable on an Apple][+, //e or //c. There are no "windows", like some Mac/Lisa look alikes for the][family, but a simple <Ctrl> P takes you from Text Editor, to Formatter, to Terminal (its communicator section) and back again.

This is Version 5.4 of a word processing program written originally some years ago by programmer Doug Stinson, and marketed under the titles "Word Processor //" and "Word Processor ///". The current version, now called Write Away, is marketed by Peregrine Software, formerly Midwest Software Associates, of St. Louis, MO. The program is not copy-protected, as purchased, and is in fact written on both sides of the furnished disk. Peregrine states that they will replace the disk, should the magnetic media fail.

This program has some interesting features that merit trial by readers of the Journal. For example, it makes available 8 user-definable keys (employing the numerals on the keyboard in conjunction with the Open Apple/Closed Apple keys on the //e and //c, or <Ctrl> Q on the][+). Each function key can execute up to 32 characters, including nesting, or executing other function keys. Sets of functions can be saved and loaded, and one set can be automatically loaded when the program is booted. Another feature available is a mod which provides shift-lock on the][+.

The text editor has a fairly extensive and somewhat complex command set, which is operable in both an immediate mode and combinable deferred mode. The user is, however, left to decide how many, or how few, beyond basic commands need to be used. One can keep the others "in reserve" and employ them or not, as the complexity of writing requirements change. The user enters or creates text with the semicolon command (;), and leaves text and returns to the command mode with an ESC. In text mode, there is no status line on-screen, a feature that this reviewer feels more comfortable with, than without. In command mode the status line, second from the bottom of the screen, provides: each item bracketed, the column number, the character number from the text beginning, and the total number of characters in text. The bottom line contains the prompt (#), and a blinking cursor. The prompt indicates that the editor awaits a command and the cursor moves as it precedes the typed-in command.

There is additionally a text pointer, a > in inverse video, which is movable anywhere in text, and is used to indicate or mark, where a deletion or a text movement is to occur.

Write Away has a Mark, Cut and Paste feature which includes a 4K character buffer. Text can be moved or removed in simple fashion. This aspect can be used in conjunction with another, the MACRO feature, to user-design any desired char-

acteristic for this word processor. The program includes a fast loading routine, and a fast DOS.

Format is the text printing sub-program of Write Away, and as was observed earlier can be entered from the text editor by a <Ctrl> P. Format's menu provides the traditional processor settings, with default values, of margins, lines per page, pagination and justification. It also provides quantity (how many copies?), fill (vari-spacing), "dot" or imbedded commands, footnoting, super- and sub-scripting, tabbing, headers and footers, and underlining. Also on the Format menu is keyboard entry, which permits using the Apple keyboard like a typewriter, with the printer (as well as the screen) following your typed entry letter for letter; and it has Output Document, which allows //c and //e owners with Apple's extended 80-column card to use the additional memory as an electronic ramdisk, using RAMDRIVE software.

Format has printer handlers for a variety of printers by brand name, and/or it can become transparent, and use the printer's own commands. There is a form letter feature, called Mailing List, which permits the user to supply information that is inserted into "standard" documents for customized form letters. When leaving Format, another <Ctrl> P takes the user to Terminal.

Terminal, Write Away's communication sub-program, provides a menu which features command options such as half or full duplex, auto-answer/auto-dial, two modes of text reception and one mode of text transmission. The menu file option allows the user to write text to disk, and read text from disk, and its utility option permits formatting and printing of text.

There are five tutorials included with Write Away: two on-screen and three in the manual. This reviewer found the on-screen text editor tutorial easy to follow and very understandable, with an ample number of examples, which the user is urged to test. The almost inch-thick manual, in the 7"x 9" petite, padded cover, 3-ring binder which software houses find so fashionable is, despite its smaller print, well written, very readable, well marked and indexed, and has a broad table of contents.

Peregrine Software's Tim Mellitz was very helpful in response to inquiries on a number of occasions, and concerning a number of points about their product, as it interfaced with my hardware. It is my impression that they would be similarly helpful to any purchaser who calls their assistance telephone number. ☞

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SPEED UP YOUR HOME ACCOUNTANT

by John C. McDowell

It was just a little ad. Just a little ad in the back pages of Call-APPLE, (April 1985). But it appeared to be just what I needed. And at \$13.50 my risk was small. I took the chance. I ordered it. I used it. I love it. What is it? Well, it's the best thing that ever happened to THE HOME ACCOUNTANT. First, some background--then the product.

I am one of the thousands who have bought and used the program, THE HOME ACCOUNTANT (hereinafter to be mentioned as HA) from Continental Software. It has never had a great reputation, as it is written entirely in BASIC and it is slow, painfully slow. Also, it is very structured, requiring all operations to be processed through its menu tree.

I have put up with this for several reasons. The program was one of the best available at the time that I bought it (about four years ago). It was inexpensive (at about \$65). It is structured (no command language to learn). It is only mildly copy-protected (program backup is quite easy). And I have no desire to change my data over to one of the more modern programs. But I have wanted more, much more.

Admittedly, my search for improvement was not strenuous. But I did get a program upgrade from Continental (which turned out to be primarily an improvement in the documentation). And I did change the DOS to Diversi-DOS (it helped some but HA was still slow).

Then I saw the ad. It started "SPEED UP HOME ACCOUNTANT". You know that got my attention. It promised the moon and stars for "\$13.50 VISA/MC accepted." And it delivered. But not without a false start.

The package I received included a letter telling how to make the enhancements, eight pages of documentation, sized and drilled to go into the HA manual, a label for the new program disk to be created, and the enhancement disk. The instructions led me step-by-step through making a copy of my current HA disk, copying the enhancement programs to the new disk, and then automatically updating the new disk, complete with documentation of the changes. Most importantly, I didn't have to "play programmer." All of the work was done for me.

My first attempt did not run correctly. I changed my Diversi-DOS back to DOS 3.3 and tried again. Success. The first thing I tried was a printed report. This used to take three to four minutes to load. Voila. All that data was sorted and calculated in about 30 seconds. Then, loading a backup to a backup of my data (I have learned about backups), I entered some new data. There were no more entry delays now that there was continuous garbage collection. I could toggle between different checkbooks without going through the menu. I could toggle from checking to cash to credit cards without going through the menu. This was perfect. Or so I thought. But - when I backed out through the menus to save my data, the program suddenly crashed. (It usually is sudden, isn't it?) Both my data and my program disks were locked up. I went through the whole program disk generation once more to see if it was me or it. It crashed again. It was it.

With heavy heart, I wrote a letter to the programmer/

entrepreneur (who I now know as Steve Peterson) explaining the problem, and sent my disk back. He quickly responded that he had duplicated the problem and would send me a fixed program disk. That he promptly did and has subsequently made even further enhancements to the program. I am happy with his service and support and he now has a well-debugged enhancement to HA.

Briefly, some of the things it does are as follows: fast reads and writes, single-keystroke account change, single-keystroke change between checking, charges, and cash, posting of automatic transactions any time of the month, user prompts for split transactions (very handy), scan of the category names, fast index array searches, and fast report printing. There is more but I run out of room.

If you use THE HOME ACCOUNTANT, I heartily recommend writing to Mr. Peterson. If you don't use HA now, you might consider buying a used copy (there were a lot of them at the garage sale) and applying these enhancements. The enhancements only work with the DOS 3.3 version at this time. However, Mr. Peterson has stated that if enough interest is shown, he will develop a PRODOS version.

The full address is: Systems Solutions, 5516 Merritt Circle, Edina, MN 55436. As I stated, VISA/MC are accepted and he gives your money back if you are not satisfied. He is raising the price to \$19.00 plus \$2.50 shipping but has promised to honor the original price of \$13.50 total for any orders which mention this review. (No, no kickbacks.) Oh, yes. Also included is a sample of a program called Disk Manager, which among other things, prints nice-looking disk labels with file names on them. ☺

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MY 640K //c WITH CP/M

by Leon H. Raesly, LCSW



If anyone asks me why I didn't purchase an IBM PC instead of my Apple //c, I tell them that the IBM PC is too slow, doesn't have enough memory, won't run CP/M, and besides, I made it past the eighth grade!

Thus ends the ad for Applied Engineering's Z-Ram. And starts the beginning of this tale. Z-Ram is a board capable of holding up to 512K of RAM (Random Access Memory) and a Z-80 CPU (Central Processing Unit). It is installed in the Apple //c. What, you say, how can that be? The //c has no slots, and thus cannot be expanded!

That's only half accurate. True it does not have any slots, like the //c or IBM PC, but it can be expanded! Let me share with you my experience.

The Munchken is a cute little thing, sitting on my desk waiting to be used. (What, you don't name your computer, too?) Next to it I placed the box for the Z-Ram. In all its purple glory it looked good. Sliding off the cover, I glanced inside. Three disks. An AppleWorks pre-boot, a DOS 3.3, PRODOS, PASCAL RAM disk pre-boot, and a CP/M RAM disk pre-boot. And the Z-Ram! The disks look like any other disks, with AE's Purple and Gray label. The Z-Ram itself is a funny-looking board about 10 1/2 inches long, and about four inches wide. It comes with 256K of RAM, using the new 256K chips. Eight of them, and eight empty sockets. So you can add another bank of 256K chips, for a total on the board of 512K of RAM memory. Also on the board is a Zilog's Z-80 CPU, plus a few other chips, capacitors, and the rest of the entourage that usually accompanies a specialty board for a microcomputer.

Turning the Z-Ram over, you can see a set of pins protruding from the bottom of the board. Now it becomes clear. Glancing at the picture with the instructions, it is evident what you will be doing to install the Z-RAM. Just remove the 65C02 CPU and the MMU (Memory Management Unit) from the motherboard, put them into the slots on the top of the Z-RAM, and then plug the Z-RAM itself into the sockets that the CPU and MMU came from, and voila! MMM (Much More Memory!). Easy, Right! Wrrroonngg!!

The first picture is encouraging. "Everything you need for installation." And there sits a cute little //c, a Phillips screwdriver, and a flat blade screwdriver. The next picture gets a little more hairy with its caption, "Turn the //c upside down, and using the Phillips screwdriver . . ." Wow, they really want me to open this //c! To take it apart! They must be crazy, I can't do that!

But if I want a 640K //c with CP/M, I guess I can! So on with the job. There are 5 pairs of screws to be removed, and they are in three different sizes. So I remove them, carefully placing them in order on the back of my desk. Next, to actually open the //c.

Two pictures show removing the cover and point out the snaps that have to be loosened. The instructions say, "Should the snap break off, it is of little consequence as it is only used by Apple so that they can put the //c together a few seconds

faster." Wow, they expect something might break, and they say forget it. Break something on the Munchken? Never! I will work very carefully!

Eventually, the cover does come off, with a lot of wiggling, and a blow or two on the side as directions indicate. (Boy, Apple sure didn't want you to take this apart, did they?) The next step is to lift out the disk drive, unhook its cable and place it aside. That was easy. Then lift up the keyboard, remove its cable, and place it aside. That was also very easy.

The picture and instructions clearly indicate the CPU and MMU, and how to remove them, and then where to plug them on the Z-Ram board. Easy enough to do.

Since I purchased a second 256K, the next step is to install those chips. Most ram boards that I have used always install the extra chips with the same orientation as the ones already there. Easy enough, but wait! Usually each ram chip has a small capacitor in front of it, and these are usually on the same side for each bank of ram. However, on the Z-Ram the capacitors are reversed from the first bank. So which way do I install them?

Well, it is 7 in the morning, and AE is in Texas, one hour behind. So I can either install them in the most logical way (which is the same orientation, or direction as the first bank) AND MAYBE BLOW SOMETHING UP IF IT IS WRONG! Or, I can wait. I WWAAIITTT!

Two years later it is finally ten o'clock our time. I call (not without a lot of nervousness, because I feel dumb). You know, I am supposed to know, right? And they will know that I am really dumb! But I call anyway and reach Dave, who is very helpful, and most considerate. He even compliments me. "Most people," he says, "wouldn't even have noticed that. Good for you." Wow, a nice thing said like that, and from a real Techie, too. Maybe they are human, after all! So back I go the the Munchken. (Ed. Note: Well, which way was right?)

Now a different kind of step. There is a wire extending from the Z-Ram with a test lead at the other end (they call it a "Grabber"). The pictures are clear, and the "Grabber" is hooked to pin two of the TMG IC (Integrated Circuit). Then place a little piece of two-sided tape onto the board, press the "Grabber" into it, and on to the next step. Insert the Z-Ram into the slots for the CPU and MMU. There! Push down firmly, like that - a little harder, ah, that seems to be it! Now just reassemble in reverse order, about 10 more minutes, and I will be done. Wait, it says install the Keyboard and disk drive, then test it. O.K., I'll do that. Now, turn it on (I'll boot a DOS 3.3 System Master) and see the Apple logo come up!

What's this, a checkerboard screen? It doesn't work! Oh, no, I ruined it! OK, take out everything I did, and reinstall it the way it was. Now test it. It works! Maybe one of the extra RAM chips was bad - remove them, reinstall the Z-Ram, and test it. Checkerboard city! Nuts (and other less socially acceptable phrases!)

OK, call Dave at AE again. "Yes, Lee, what's the
contd.

problem? What does the screen look like? Oh, OK, did you press down firmly? That much, huh. That should have done it. OK, you have two choices. The problem is that the sockets on some //c's are poor, and because the motherboard is shock-mounted on the edges, you can't push down much harder. Every once in a while we get one like this from Apple. You can send it back to us, WITH THE //c, and we will put new sockets in for you, and test the unit with Z-Ram, or you could . . . Say, how much experience do you have with microcomputers, anyway. Oh, an old (UFF! - I'm not THAT old!)][+ person, huh? Well, if you want to, you could remove the motherboard, place it on a towel on the desk, and put all your weight on it, and force it in. You won't hurt it. Which do you want to do?"

Well, I'm six feet and 200+ pounds (every time I fall while skiing, I feel all of those + pounds). I think it was those + pounds that made the difference! Insert disk drive and keyboard, and test again.

Eureka!! It works. Now unplug again, remove the Z-Ram (you forgot that I removed the extra bank of RAM earlier, didn't you) and install the extra memory. Now reinstall the Z-Ram, and this time it goes in easily, just like it should have the first time, but didn't! Now test again.

It works still. Put it all back together, plug in the second drive, power, and monitor, test again. It still works!

Now for "Super AppleWorks desktop expander, V 4.0 - Instructions on disk - Insert and turn on COMPUTER!" So I do. And get two screensful of information telling me that I must genuflect to the East each time I use it, and never give a copy away! The latter doesn't make sense, since no one can use the program without the board, and when you buy the board, you get a copy of the program, free! Ah, well, such are the exigencies of software use. Now all you good people will have to do without a copy, which you could have mounted and framed and placed over your mantel - that still being the only use you could have made of it without a board!

"How much memory", it asks. I gleefully tell it 512K. "Do I want AppleWorks loaded in a RAM disk? It makes AppleWorks 10 times as fast. No more disk access." "Yes, Yes," I type feverishly. Insert the AppleWorks Startup disk on command, then the AppleWorks Program disk. And then it's finished. A one-time modification to my duplicate copy (don't use the original AppleWorks disks), and I don't have to use the pre-boot again. So insert the modified AppleWorks STARTUP disk, CONTROL, OPEN APPLE, RESET! AND HERE IS APPLEWORKS!

413K DESKTOP! WOW! OVER 3000 RECORDS IN THE DATA BASE! And is it FASSSST! And in closing, let me ask you a question. Which has more memory, an Expanded Apple //e with a 512K RamWorks, or an Apple //c with Z-Ram? Nope, they are not the same. Sorry, //e people. The //c has 128K internal, while //e has 64K on the motherboard and 64K on the extended 80 column card. Which you replace with RamWorks. Thus you have 512K plus 128K (640K)! So rejoice, you //c owners. You have yourself a REAL microcomputer, not a toy, as so many have said!

And AppleWorks also automatically picks up the date from the PRODOS clock I installed. What, you say, the //c has no slots, and can't be expanded! Weeellll, that's another story. This is it, for now. Thanks for listening. Lee. ☺

HOTLINK: Parallel Printing with a //c

by Leon H. Raesly

It is a shame that the Apple //c has only serial ports. Most dot matrix printers (and especially the less expensive ones) only have a Centronics parallel input port. And the //c has no slots, so it can't be expanded, right? Wroong!

Orange Micro, Inc. has come to the rescue with a modest cost device called "HotLink", a small little package, about 6 inches square and two inches deep. Colorful. And when you open it, here is a small device (3 x 4 x 1 inches) that plugs into the input connector on your parallel printer. From it runs a thin, typically //c cable, with the 5 pin DIN connector at the end. Plug it into the //c serial port.

Now comes the hard part. There is a switch on the top of the HotLink that requires you to select either TEXT or GRAPHICS (depending on which you are printing). You must manually move that switch to whichever you wish. And that's all there is to it!

I have used it for text on several Epsoms, Abati (letter quality), and a C.Itoh F10-55 Starwriter. They all work fine. I have also used it for graphics with the PrintShop on an Epson. Works great. And now to another good part - the cost. I purchased mine from Jeff Dillon at Operant Systems, for the discounted price of \$59.95. And no extra cable to buy, as you must with the Disc Washer parallel device!

So go get one now, and using your modem, call the Washington Apple Pi's Classified Bulletin Board, and get in on purchasing a low cost (but reliable) used dot matrix printer. A new world of printing can open for you.

Thanks for listening. Lee

☺

Q & A contd. from pg 13

Replace the original line 23 with BEQ LOOP. The above routine calls a built-in delay routine in the monitor at \$FCA8. This routine provides a delay time related to the value (A) of the accumulator, where the time is 0.000001023 (2.5A^2 + 13.5A + 13) seconds (decimal values). For values of A from 0 to 255 the time is 0.000029667 to 0.169836414 seconds. In my routine above I added an additional outer loop that calls the delay routine a number of times (the value in the Y-register) to increase the delay.

Pressing control-RESET is an okay way to re-enter the Lisa assembler as this resets the screen to text and does a few other housekeeping chores to restore the Apple to a predefined state.

☺

NEW CP/M DISKS

by Joe England

Important! All subsequent WAP CP/M SIG library disks will take on a new format - the files will be squeezed and grouped into library files. If you don't already have both a library utility such as LU, NULU, or LSWEET, and an unsqueeze program such as NSWP207 or USQ120, then you must obtain them before you can use any of the programs on future disks. For this reason, the first disk to be released this month contains both NULU12 and NSWP207, and it is called ESSENTIAL UTILITIES. An explanation of library files and squeezed files can be found in the README file on the same disk.

CP/M Disk 410 - Essential Utilities

NULU12.COM is an excellent library utility which incorporates all the functions of the older LU and LSWEET into one small program. If you're already familiar with LU, you can use the same command set. If you're more comfortable with LSWEET, just enter '-F' from the opening menu and you activate 'filesweep mode', where things operate in much the same manner as in LSWEET but with a greatly extended command set. Extensive documentation is provided in the file NULU11.DOC. For experienced users of ASM, LOAD, and DDT, NULUTERM.AQM allows the modification of a number of features within NULU12.COM. NULU12.COM and NULU11.DOC are not squeezed or librated simply because they must remain completely accessible to those who neither have a library utility nor know how to use one.

NSWP207 is probably the best all-around CP/M file utility. Weighing in at a mere 12K, it performs many of the functions of PIP, STAT, ERA, REN, SQ, USQ, and others. It shows the directory of the chosen disk and allows any combination of files to be 'tagged'. Then operations can be performed on the tagged files, such as mass copies from disk to disk, mass erasures, squeezing, unsqueezing, changes in file attributes, and wildcard renaming. Along with its documentation, it is contained in the library file 'NSWP207.LBR'. Use NULU12 to extract it from the library.

CP/M Disk 411 - Text Editor

If attempts to learn ED.COM have been driving you bonkers, VDO25 may be just the ticket. VDO25 is a very nice screen oriented text editor with a command set similar to that of WordStar (though not nearly so extensive). Many of the most useful features of WordStar are simulated, including identical cursor movement commands, find & replace, block commands, etc. Although the screen re-writing is a little slow and the maximum size of the text file which VDO25 can produce is limited to what it can keep in memory at one time (about 40k to 50k depending on the version of CP/M you're using), the program is the best public domain editor I've seen yet.

LISTT16 allows you to do some simple formatting of text

files as they are being sent to the printer. Heading, date, and left margin can be set. Easy to use, it does a satisfactory job of printing the text files created by VDO25.

BISHOW31 makes text files easier to read by allowing you to move backwards and forward in the file. It also allows you to read squeezed files and files within libraries.

CAL creates calendars and allows them to be displayed, printed, or saved to disk.

BANNER sends text to the printer in the form of large block letters.

CP/M Disk 412 - Spreadsheet

CHALK is a public domain spreadsheet program for those of you who can't justify the cost of one of the commercial programs. It allows basic spreadsheet functions to be performed adequately. Seven sample work sheets are included.

PROJANAL is a nice little program which performs discounted cashflow project analysis.

Enjoy...

⊗

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AN APPLE /// BIBLIOGRAPHY - Part 2

SOFTALK MAGAZINE

by David Ottalini

When Softalk Magazine ended its short life last year, there were a lot of Apple /// users who lost a close friend. Except for the ///-specific magazines that are currently being published (ON ///, which publishes only occasionally and /// CHEERS, a disk-based magazine that is currently trying to make a come-back), Softalk was the only monthly magazine that really showed it cared about the /// and its users.

During Softalk's roughly 4 year life (it lasted a while longer than did production of the /// and ///+), publisher Al Tommervik consistently offered /// users a variety of quality articles that continue to be a rich source of information.

It was in Softalk that then-Apple Product Manager Taylor Pohlman (who was also put in charge of trying to resurrect the /// upon its reintroduction in the fall of 1981) offered his lengthy series of articles about Business Basic (called "The Third Basic"). You will not find a better tutorial than these on the language.

It was Softalk that offered the /// world Dr. John Jeppson's fertile imagination and understanding of the machine. Jeppson, among other things, wrote about ways to improve both Business Basic and Pascal. He even provided a program to let you use PEEK and POKE in Business Basic. His rumored disgust with Apple when it discontinued the /// reportedly was what caused him to stop publishing.

Finally, I should mention one other author who offered a

lasting contribution to /// users. George Oetzel's primary offering in Softalk was a series of three articles on the Apple /// Emulation Mode. Although they are difficult at times to decipher for some of us, the articles are generally considered to be the single best source of information on the Em Mode and how to patch it. Oetzel later wrote a few articles for ON ///, but has not been heard from recently.

In any case, the Apple Pi office does have a fairly good collection of Softalk. It is not complete but I have gone through all of them and believe you can find most of the articles listed below.

Softalk is missed, but its legacy is in print for all of us to enjoy and use for years to come. As I mentioned last month, this Apple /// Bibliography will ultimately find its way into the a-borning Apple Pi /// disketeria, as will a list of Apple /// User Groups and other Apple groups that offer help and/or public domain software for the ///.

As for the listings, they are, for the most part, self-explanatory. One or two may not make sense, as in the Olivieri columns, which contained a mention of the /// in one way or another. A complete explanation is included in the database of articles from which the following material is taken.

As always, I would appreciate your comments and thoughts.

| SUBJECT | TITLE | AUTHOR | VOL/# MTH | YR | PG(S) |
|----------------|-------------------------------|---------|-----------|------|-------------------|
| BUSINESS | DOWN ON THE FARM | HUNTER | 2 12 AUG | 1982 | 72-76 |
| BUSINESS | HERBIE HANCOCK - FUTURE MUSIC | HUNTER | 3 9 MAY | 1983 | 126-42 |
| BUSINESS | THE APPLE AND BIG BUSINESS | MILICH | 2 1 SEP | 1981 | 59-62 |
| BUSINESS BASIC | THE THIRD BASIC #1 | POHLMAN | 2 1 SEP | 1981 | 43 |
| BUSINESS BASIC | THE THIRD BASIC 2 | POHLMAN | 2 2 OCT | 1981 | 111-16 |
| BUSINESS BASIC | THE THIRD BASIC 3 | POHLMAN | 2 3 NOV | 1981 | 115-20 |
| BUSINESS BASIC | THE THIRD BASIC 4 | POHLMAN | 2 4 DEC | 1981 | 30-36 |
| BUSINESS BASIC | THE THIRD BASIC 5 | POHLMAN | 2 5 JAN | 1982 | 153-56 |
| BUSINESS BASIC | THE THIRD BASIC 6 | POHLMAN | 2 6 FEB | 1982 | 176-82 |
| BUSINESS BASIC | THE THIRD BASIC 7 | POHLMAN | 2 7 MAR | 1982 | 58-64 |
| BUSINESS BASIC | THE THIRD BASIC 8 | POHLMAN | 2 8 APR | 1982 | 194-96 |
| BUSINESS BASIC | THE THIRD BASIC 9 | POHLMAN | 2 9 MAY | 1982 | 63-70 |
| BUSINESS BASIC | THE THIRD BASIC 10 | POHLMAN | 2 11 JULY | 1982 | 167-73 |
| BUSINESS BASIC | THE THIRD BASIC 11 | POHLMAN | 2 12 AUG | 1982 | 56-58 |
| BUSINESS BASIC | THE THIRD BASIC 12 | POHLMAN | 3 1 SEP | 1982 | 47-50 |
| BUSINESS BASIC | THE THIRD BASIC 13 | POHLMAN | 3 2 OCT | 1982 | 205-9 |
| BUSINESS BASIC | THE THIRD BASIC 14 | POHLMAN | 3 3 NOV | 1982 | 265-71 |
| BUSINESS BASIC | THE THIRD BASIC 15 | POHLMAN | 3 4 DEC | 1982 | 290-95 |
| BUSINESS BASIC | THE THIRD BASIC 16 | POHLMAN | 3 5 JAN | 1983 | 62+ |
| BUSINESS BASIC | THE THIRD BASIC 17 | POHLMAN | 3 6 FEB | 1983 | 65-71 |
| BUSINESS BASIC | THE THIRD BASIC 18 | POHLMAN | 3 7 MAR | 1983 | 245+ |
| BUSINESS BASIC | THE THIRD BASIC 19 | POHLMAN | 3 8 APR | 1983 | 205-7 |
| BUSINESS BASIC | THE THIRD BASIC 20 | POHLMAN | 3 9 MAY | 1983 | 193-203 contd. |

| | | | | |
|----------------|----------------------------------------------|-----------|-----------|--------------|
| BUSINESS BASIC | THE THIRD BASIC 21 | POHLMAN | 3 10 JUNE | 1983 252-56 |
| BUSINESS BASIC | THE THIRD BASIC 22 | POHLMAN | 3 11 JULY | 1983 204-7 |
| BUSINESS BASIC | THE THIRD BASIC 23 | POHLMAN | 3 12 AUG | 1983 261-65 |
| EM MODE 1 | HOT ROD /// | OETZEL | 3 11 JULY | 1983 216-22 |
| EM MODE 2 | HOT ROD /// | OETZEL | 3 12 AUG | 1983 88-93 |
| EM MODE 3 | HOT ROD /// | OETZEL | 4 1 SEP | 1983 252-60 |
| GAMES(?) | TENNIS, ANYONE? | SHELTON | 3 6 FEB | 1983 236-37 |
| GRAPHICS | COMPUTER GRAPHICS | SHORE | 3 7 MAR | 1983 144-52 |
| HUMOR | FRITZ THE CAT HAS AN APPLE /// | GOOD | 2 9 MAY | 1982 136 |
| OBIT | THE END OF FOREVER | TOMMERVIK | 4 11 JULY | 1984 24-26 |
| PASCAL | PATCHING APPLE /// PASCAL | JEPSON | 3 6 FEB | 1983 190-98 |
| PRODUCTIVITY | COUNTING WITH COLORS | JEPSON | 2 10 JUNE | 1982 170-77 |
| PRODUCTIVITY | IT'S /// O'CLOCK | JEPSON | 3 3 NOV | 1982 68-80 |
| PRODUCTIVITY | TAMING YOUR APPLE /// | JEPSON | 2 7 MAR | 1982 135-41 |
| PROGRAMMING | THE APPLE /// WORKSHOP: IT ISN'T EASY STREET | JEPSON | 2 11 JULY | 1982 121+ |
| PRODUCTIVITY | THE CHANGING CHARACTERS OF THE APPLE /// | JEPSON | 2 8 APR | 1982 134-42 |
| PROGRAMMER | PROGRAMMER FOR HIRE:HAVE APPLE WILL TRAVEL | | 3 5 JAN | 1983 156-60 |
| PROGRAMMING | PEEKING AND POKING THE APPLE /// | JEPSON | 2 12 AUG | 1982 38-48 |
| PROGRAMMING | PATCHING APPLE /// BASIC | JEPSON | 3 2 FEB | 1983 190-98 |
| PROGRAMMING | SYNCPATIC APPLE /// | JEPSON | 3 10 JUNE | 1983 180-92 |
| PROGRAMMING | THE JEPSON DISASSEMBLER FOR THE /// | JEPSON | 3 1 SEP | 1982 72-86 |
| PROGRAMMING | JOHN JEPSON'S TOUR OF THE /// HIGHWAY | JEPSON | 3 9 MAY | 1983 100-12 |
| REVIEW | MIND YOUR BUSINESS | OLIVIERI | 3 4 DEC | 1983 117-18 |
| REVIEW | MIND YOUR BUSINESS | OLIVIERI | 3 5 JAN | 1983 |
| REVIEW | OLIVIERI'S OUTLINE OF WORD PROCESSRS. | OLIVIERI | 3 11 JULY | 1983 250 |
| REVIEW | THE EDSEL HAS BECOME A MUSTANG | MILICH | 2 6 FEB | 1982 138-39 |
| SOFTWARE | A /// SOFTWARE FOR CHRISTMAS | FERRIS | 2 4 DEC | 1982 205 |
| SOFTWARE | A /// SOFTWARE FOR CHRISTMAS | TYLER | 3 4 DEC | 1983 298-99 |
| SOFTWARE CO. | HABA SYSTEMS:FAME FOR THE FUN OF IT | HUNTER | 4 11 JULY | 1984 32-38 & |

LETTER TO THE EDITOR:

"Separate Sections for Mac and Apple //?"

Dear Editor,

It is with a great deal of interest that I have observed the trend toward dividing magazines devoted to Apple computers into separate sections focused on the Macintosh and on "other" Apples. At least, that seems to be the case with the two that I peruse regularly - the WAP Journal and A+.

From various comments I have heard and Letters to the Editor that I have read, this appears to be a most popular trend. The benefits seem to be obvious. Mac articles are concentrated to the benefit of Mac users, and to the advantage of advertisers seeking to reach this audience exclusively.

I, however, deplore the trend! The ultimate result, I fear, will be to divide the total Apple community into two groups - those who own Macs and those who don't. This is a result that can be injurious to all of us. The movement smacks of a divide and conquer philosophy in which those who are divided become losers.

My personal reading habits are such that when I reach the beginning of the section that is obviously Mac-oriented, I skip it. Of course, in doing so I miss much that may be of interest to me in the future in both the articles and the ads. Somehow, though, my mind slips into neutral when I believe the next several pages are "specialized" and won't contain information that will be useful to me right now.

Washington Apple Pi

I long for a return to a format where Mac articles and ads are interspersed with the other Apple articles and ads. In this way, I will be exposed to the rare atmosphere of "MacLand" in a way in which I can absorb part of it.

George W. Sall

(Ed. Note: We have heard some of these same opinions expressed by others lately. Let's hear more from you, pros and cons, so that we can be guided in the Journal format.) &

JOB MART

HELP WANTED

Programmer to write a software interface between an Apple //e data storage program and a VAX 11/750 Fortran data analysis program. Dr. J. Crawley, National Institutes of Mental Health, Building 10 Room 4N214, Bethesda, MD 20205.

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Apple Macintosh computer instruction in the general Frederick, MD area. Instruction on the Macintosh and assorted software. Help with pre-buy decisions. Personalized service and reasonable rates. Call Lynn R. Trusal, (301) 845-2651 (evenings, with no calls after 10:00 PM.) &

September 1985

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The View From Durham

by Chris Klugewicz

Revelations, Rumors, and Random Ruminations . . .

September means back to school, and by the time you read this, I'll have been in Durham, North Carolina for more than a week. (As many of you who frequent the Mac BBS's in the area know, I've been here in Washington all summer.) So now this column's title will be accurate.

Mail room. Last month, I promised to talk about the mail, so let's get that out of the way first: There is none. As I said, I was here in Washington, not there in Durham where my mailbox is, so I don't know if anyone's written yet or not. I hope so.

Pet peeve dept. Spelling mistakes bother me no end. (Guess who reviewed Hayden Speller in the July issue of the Journal.) I don't mean typos in personal correspondence or flubs in typing on bulletin boards, but gross mistakes in prose intended for public view. How many of you saw the sign for "Univristy Boulevard" that was put up on the Beltway a few months ago? (No, I'm not kidding; it was up for three days before somebody removed and corrected it.) How about the signs for the Darcey Road overpass on I-95 south in P.G. County? (One sign says "Darcey Road," but the other--the new one--says "Darcy Road.") Well, to get to the point, I received some information in the mail the other day from SMS, Inc., a national distributor of the MacBottom hard disk drive for the Macintosh. To start things off wrong, they misspelled my name. (I'll give them the benefit of a doubt on that, though, since my handwriting is quite fitting for someone planning a career in medicine.) To make things worse, they misspelled about five words on the first page alone, and the grammar in the letter was simply amazing. Well, needless to say, I was not impressed by SMS, Inc. Just another example of how companies neglect what I consider the most important part of a product--especially in the computer industry--the documentation.

The promised ProModem. The modem that I was expecting has arrived. It's a Prometheus ProModem 1200, a Hayes-compatible, stand-alone, 1200 bps modem that is expandable. I bought it with the "Mac Pack," which includes Macintosh communications software and the proper cable. I am VERY impressed with the modem (which has run without a hitch so far), but the ProCom-M software that is included with the Macintosh package isn't on my "Best of '85" list. The software is actually very powerful, with macros, a telephone directory, a "record lines off top" feature, a built-in text editor, and more. However, not all of the features actually work. I can't get the macro features, for instance, to work at all, and the phone log works only intermittently. To Prometheus's credit, though, they maintain a bulletin board in

California from which you can download the latest version of ProCom-M for free. Now THAT is the best update policy I've run across. More on the ProModem as I start using the advanced features.

Mail order blues. Call it paranoia if you like, but I have always been rather wary of mail-order purchases. My latest experience has done nothing to assuage that fear. I ordered my modem from a place called Programs Plus, in Stratford, Connecticut; it was a rather harrowing experience for me. I had ordered some software from them previously, and I was very happy with their service and pricing. They had the lowest price on the Prometheus modem, so I called them to order it. So far, so good. Their ad says that they "ship same day for most orders," and the software I'd ordered before had arrived in less than a week, so I expected the same for the modem. Wrong. There was no sign of the modem after ten days, so I decided to call and check on the order. I spoke to a very pleasant woman who assured me that someone would pull the order and call me back; I didn't hear from them again that night. I tried to call the next day, but to my horror, there was no answer! All sorts of thoughts raced through my mind (out of business, store burned down, telephone lines down), but the main one was that I was out several hundred dollars. Needless to say, my fears were groundless; I got in touch with Programs Plus the next morning, and they said that they had been out of stock and would ship the modem that Monday. The moral of this story is this: when ordering something by phone, ask when it will be shipped; you will save yourself a lot of needless worry. (There was a very good article on buying computer-related items through the mail in a recent issue of BYTE, but I don't remember the issue. Maybe someone will write and tell me . . .)

Apple thoughts. The latest shakeup at Apple, when Steve Jobs got forced out of the day-to-day workings of the company, was probably a shock to everyone; I know that it surprised the heck out of me! After some thought, I concluded that it was probably a very wise move in terms of the company's future. Jobs had made a lot of marketing missteps (under-promotion of the Apple III, overpricing the Lisa, making the Mac too wimpy for serious business use, and bungling the upgrade policy on the 512K machine), and Apple's image had gone from "friend" to "traitor." John Scully, the former head of Pepsi, is a smart businessman - which Jobs was not. Let's hope that Scully can manage to make Apple attractive to business (by making the Mac more powerful and more versatile) while regaining the confidence and loyalty that it once enjoyed among us owners. (He could contd.

start off on the right foot by offering a reasonable policy on the upcoming ROM/disk drive upgrade for the Macintosh.)

Fabulous new product dept. At the July main meeting, we were treated to a preview of a new product being co-developed by Clinton Computers and an engineering firm in California: an internal hard disk for the Apple //e. If you missed the meeting, you missed a VERY impressive demonstration; this disk is FAST. The people from Clinton say that it will be available in early September, and I can guarantee that it will sell faster than they can manufacture them. I would say that it's the best product I've seen for the Apple // series since the Microsoft SoftCard.

Random rumors. For all you Mac owners, it seems that the long-awaited and much-talked-about ROM upgrade will give the Mac true multitasking-- where two applications run at the same time, unlike with the Switcher. Also, double-sided drives will be available at the time of the upgrade (Real Soon Now). I heard \$200 if you change the ROM and the internal drive at the same time, but I'll believe that when I see it. (The reason that it's cheaper than the RAM upgrade is that the ROMs are socketed; they just change the chips, not the whole motherboard. Why Apple socketed the ROMs and not the RAM, I can't imagine. Poor planning, I suppose. As usual.)

Apple, it seems, is planning on switching the // series to 3.5" disk drives like those used in the Macintosh. The drives will hold 400K (single-sided) or 800K (double-sided) and will run under ProDOS. However, they will not be compatible with the Mac--which I think is another mistake, since a standard is desperately needed in the 3.5" world; Apple has the chance to create one and probably won't.

The people who have seen the Atari ST in operation are not impressed. GEM, the operating system used on the Atari and written by Digital Research (the CP/M people), is slow, clunky, and nowhere near as powerful as the Mac OS. From what I've seen, the Atari's only selling points are price and color. The Commodore Mac-alike, the Amiga, will not be priced as low as originally rumored. It's a much more impressive machine than the Atari and will probably be a more serious competitor for the Mac than Jack Tramiel's ST.

Software of the month. My vote goes to GATO on the Macintosh. (See Michael Drolet's review in last month's Journal.) I've been playing it non-stop since I bought it, though - unlike our esteemed GAMESIG chairman - in general I don't go in for computer games. This one, however, is superb. Mac owners playing it for the first time will experience a thrill akin to that Apple][owners felt when they first booted SubLOGIC's Flight Simulator 1 (way back in DOS 3.2). Recommended with no reservations whatsoever!

Hardware (combo) of the month. Clinton Computer's internal hard disk for the //e and the Titan Accelerator card. See above for my reasons.

I stand (sit, whatever) corrected. In last month's column, I said that I was annoyed at MCI Mail for refusing to bill you other than to your credit card. Well, I have since learned that all of the major timesharing systems (Tymnet, CompuServe, The Source, etc.) work the same way. I also went out and got a VISA card.

Next month... and closing remarks. As I said at the beginning, I'll be in Durham next month, so look for a

report on Macintoshing down South. Also, probably comments on CompuServe, and - of course, rumors. My address is below, and you're welcome to write me for any reason at all. I will even guarantee a reply, either by mail or in this column. (If you have an account with CompuServe, send your CIS number; I should also be able to reply through EasyPlex by September.)

**Chris Klugewicz
P. O. Box 22171
Duke Station
Durham, NC 27706**

Dealer's Corner

Dear Washington Apple Pi Members and Friends:

On the night of August 17-18 we at MacCORNER were the victims of a burglary in which a large amount of equipment (Macintosh, LaserWriter) was stolen. The Models and Serial Nos. of these machines appear below. If you find anything that might lead to the recovery of the equipment and the apprehension of the thieves, please let me or Enrico know about it, or call the Montgomery County Police. If you want to remain anonymous we will respect that request.

We are offering a reward of \$500 for information leading to the recovery of the major stolen items. Any help, however, will be much appreciated.

Thank you for your help.

Raul De Arriz, MacCorner
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Descriptions:

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(This machine has a screen display problem)
- 1 Mac 128 Upgraded to 512 S/N 411AA3M1000
- 1 Mac 512 S/N F5124DRM2512
- 1 Apple LaserWriter S/N A5240D8MO156
- 1 Apple Imagewriter S/N 303741
- 1 Apple Disk Drive S/N Y43538VM0130
- 1 Haba Disk Drive S/N
- 2 AppleTalk Connector Kits
- 7 Miscellaneous Accessories
- 1 Copy of JAZZ

HACKERS' FORTH

by Chester H. Page

I recently developed a routine to compress an application vocabulary by deleting unused words and collapsing the vocabulary in memory. In doing this I realized the advantages to be found in a FORTH where colon words end in ;S and all opcode sequences are named primitives. This would allow easy inspection of memory to see which data are subject to adjustment when moved in memory.

In FIG-FORTH, there are unnamed generic execution procedure opcode routines hung on the ends of definitions of defining names; these definitions start as colon words, but instead of ending in a ;S, end in a (;CODE) followed by opcode. In the Washington Apple Pi version of FIG-FORTH, these defining words are ":", "CONSTANT", "VARIABLE", "USER", and "DOES>".

FORTH-79 is very unkind to honest hackers. I quote McCabe, "FIG-FORTH's run-time procedures such as ;S are available for separate use, if needed. FORTH-79 does not specify names for its run-time procedures, which are assumed to be inaccessible to the user."

The WAP version of FIG-FORTH also contains "broken" primitives; primitives whose code fields do not point to the following addresses but to opcode routines somewhere else in memory. One example is "I" (used in loops) which is identical with "R" (copy address from return stack). The code field of "I" points to the parameter field of "R" to avoid repeating the 15 bytes of machine code. There are four other "broken" primitives: CR, EMIT, KEY, and ?TERMINAL. In these four cases, there is no apparent reason for the break. Since there is no recognizable pattern in a "broken" primitive, attempts to decompile these words return nonsense.

Considering these factors, I decided to modify the WAP version of FIG-FORTH to eliminate transparencies, hybrid words, and "broken" primitives, and to rearrange the order of words in the vocabulary to make condensation simpler and more complete.

BASIC SYSTEM CHANGES

The colon definition of (;CODE) is

```
: (;CODE) R> @ LATEST PFA CFA ! ;
```

At runtime, the generic colon procedure adds 2 to the address where (;CODE) is used, and stores this on the return stack. This would normally be the address of the next word, but in this case it is the address where the opcode starts. This address is removed from the return stack and stored in the code field address of the word being defined. That is how the following opcode routine becomes a generic execution procedure. The ; at the end calls for a jump to the next word, but since the following address has been removed from the return stack, the jump is to the previous address on the return stack, namely, to the word following the one which called (;CODE).

To break this fixed procedure, I have replaced (;CODE)

with (JUMP) which uses the return-stack-address as a pointer instead of a destination.

```
: (JUMP) R> @ LATEST PFA CFA ! ;
```

To see how to use (JUMP) we must first study the structure of WAP FIG-FORTH.

The WAP version of FIG-FORTH is not constructed as a nucleus of primitive words, expanded to a core vocabulary by colon definitions. Rather, the whole dictionary is generated simultaneously from an assembly source code; component colon words are labelled and used as macros. As a result of this approach, some conventional steps are bypassed. For example, the textbook formation of defining words, e.g., CONSTANT, VARIABLE, USER, uses ;CODE which is an immediate word that compiles the run-time (;CODE) and invokes the ASSEMBLER vocabulary for writing generic execution procedures. WAP FIG-FORTH does not use ;CODE nor the ASSEMBLER vocabulary; (;CODE) is called as a macro and followed by opcode entries.

The WAP routine defining CONSTANT is

```
DW DOCOL ; label for generic colon
           procedure
DW CREAT ; label for CREATE macro
DW SMUDG ; label for SMUDGE macro
DW COMMA ; label for COMMA macro
DW PSCOD ; label for (;CODE) macro
DOCON LDY #2
      LDA (W),Y
      PHA
      INY
      LDA (W),Y
      JMP PUSH
```

Note that the macro DOCON is an unnamed primitive word. I modify this routine to

```
DW DOCOL
DW CREAT
DW SMUDG
DW COMMA
DW PJUMP ; label for (JUMP) macro
DW DOCON
DW SEMIS ; dummy ;S terminator
```

and add the primitive word

```
(dummy name)
(linkage)
DW *+2
DOCON LDY #2
      LDA (W),Y
      PHA
      INY
```

contd.

LDA (W),Y
JMP PUSH

A similar procedure for the other defining-word definitions eliminates all the "hidden" unnamed primitives.

STRUCTURE OF FORTH WORDS

Each FORTH word comprises a NAME field of at least 2 bytes, a 2-byte LINK field, a 2-byte CODE field, and a parameter field of at least 2 bytes.

The NAME field contains a dimensioned string - the word name in ASCII code preceded by a count byte. Only the count byte and the final character byte have their high bits set.

The LINK field holds a link pointer: the address of the name field of the preceding word in the same vocabulary.

The CODE field holds a pointer to the machine code Generic Execution Procedure (GEP) appropriate to all words of the genus to which the current word belongs.

The PARAMETER field holds a sequence of parameters which may be CODE field addresses of component words, numerical data, or ASCII character codes as for printing messages. There is also a special case of a parameter which is a pseudo code field. This is always preceded by a call to the GEP of DOES>, and will be discussed later.

A word is executed by having its code field address (CFA) entered into the (two byte) address W (W for Word pointer). Byte W-1 holds the value \$6C, so a jump to W-1 results in an indirect jump to the GEP pointed to by W. The CFA of the next word to be executed is stored in address IP (IP for Interpretive Pointer). The operation NEXT is carried out by moving to W the address pointed to by IP, incrementing IP by 2 to point to the next parameter, and jumping to W-1.

There are 5 basic genera of "operating words":

(1) "Primitive words" defined in machine code. The code field of a primitive word holds a pointer to the start of the machine code, normally the following address.

(2) "Colon words" defined in terms of a sequence of component words, using ":" as the defining word, and having DOCOL as their GEP. (In conventional FIG-FORTH, this GEP has no name, only an address, causing a transparent spot in FIG-FORTH. DOCOL is a word in HACKERS' FORTH.)

(3) Constants, defined by the sequence "n CONSTANT <name>". Their GEP is DOCON (again a transparent spot in FIG-FORTH).

(4) Variables, defined by the sequence "n VARIABLE <name>". Their GEP is DOVAR (again a transparent hole in FIG-FORTH).

(5) "User variables", predefined in the USER area of the system. Their GEP is DOUSE (another transparent hole in FIG-FORTH).

These four GEP's operate as follows:

DOCON puts the following parameter on the stack, then calls for NEXT.

DOVAR puts the following address on the stack, then calls for NEXT. This allows for changing the content of that address.

DOUSE adds the following parameter (a number) to the base address of the USER area, and puts the resulting address on the stack, then calls for NEXT.

DOCOL moves the next-word code-field address (pointed

to by IP) to the return stack and reloads IP with the address of the first parameter of the word being executed. Thus successive nested levels of code-field-addresses pile up on the return stack for recall and execution.

Each operating word is created by a defining word which assigns a GEP and compiles the parameters of the word being defined. The basic defining words such as ":", "CONSTANT", and "VARIABLE" are provided by the source code for FORTH.

Additional defining words can be created using the <BUILDS...DOES> generating routine. Each newly created defining word can define its own set of operating words, all with the GEP specified in the generation of the defining word.

Suppose, for example, we wish to create a genus of array variables, i.e., variables containing several values such as the X, Y, Z components of a vector. A defining word ARRAY can be created using <BUILDS...DOES>. This new word generates a new genus of words, array variables. For example

```
3 ARRAY DISTANCE
3 ARRAY VELOCITY
5 ARRAY POKERHAND
```

The GEP (generic execution procedure) for this new class of words will be provided in word form as part of the creation of ARRAY. The GEP is incorporated into the defining word, ARRAY, in a special way. The code-field of each array variable will hold a pointer to DODOE, the GEP of DOES>, and the first parameter of the array will point to the word sequence that constitutes the GEP for ARRAY-defined words.

ARRAY is defined by

```
: ARRAY ( n---) <BUILDS 2 * ALLOT DOES> SWAP
2 * + ;
```

Two bytes are allotted for each of the n variables specified by the number on the stack when ARRAY is used to define an n-variable array, as in

```
3 ARRAY 3VAR
```

The GEP assigned by DOES> makes entering

```
m 3VAR (0<=m<=2)
```

yield the address of the |m|th variable in 3VAR, providing for actions like

```
N 1 3VAR !
2 3VAR @
```

Disassembly of ARRAY gives

```
(name field)
(link field)
DOCOL
```

```
.
.
DOES>
(A) SWAP
```

contd.

2
*
+
;S

where (A) is the address holding "SWAP". For 3VAR, we find

(name field)
(link field)
DODOE
A
6 blanks

DODOE moves the next-word code field address to the [return] stack, just as DOCOL does, puts the second following address on the parameter stack, then uses the first following address as a pointer for NEXT, i.e., puts the contents of the first following address into IP. Thus when 3VAR is executed, DODOE calls for the routine at address A as a GOSUB, with the ;S acting as RETURN.

Contrast WAP FIG-FORTH in which the operation of DOES> is transparent; the CFA of 3VAR would contain the unnamed address of the DODOE routine, and decompiling returns only the CFA of 3VAR. In HACKERS' FORTH, decompiling adds the message "Created by ARRAY".

Note that the five DO-words introduced in HACKERS' FORTH are primitives but are invoked by indirect jumps to their PFA's rather than to their CFA's. Thus for these five words, the avoidance of split-page indirect jumps for the 6502 processor applies to their PFA's instead of their CFA's..

PROGRAM CONDENSATION

The dictionary of a FORTH application, even the basic starting vocabulary, contains many words that are not used when the application is run. The object of CONDENSATION is to identify all words needed to run a given application, all words to be used as input commands, to delete all other words from the dictionary and compress the surviving words down in memory. Additional space is saved, and program security enhanced, by shortening the names of non-input words to a single character each. Words that comprise the core of the starting vocabulary do not have their names shortened, but disguised by conversion to a string of special blanks.

The source code for HACKERS' FORTH provides a CORE vocabulary, followed in memory by "expendable" words, mostly words that will not be used at runtime.

Certain words are used by all applications. For example, the text interpreter loops are necessary for accepting input. If we list all the components of ABORT and all the components of these components, etc., out to all generations, we have a list of words needed for the inner and outer interpreter loops. This listing, however, includes some compile-time words not needed at runtime.

Any desired word can be analyzed into components, components of components, etc., by entering EXAMINE <name> after CONDENSATION is loaded.

Some FORTH words are designed to be used at runtime, for example, arithmetic commands. Others are used only at

compile time; they direct the compilation of runtime words. A good illustration is found in the definition of a loop operation; the end of the loop must contain an instruction for the program to branch back to the beginning of the loop. The distance to jump back depends on the particular loop instruction, so is not known before compilation. Thus at compile time, there must be an immediate-action word in the loop definition that will compute the branch offset (jump distance) and compile a runtime word controlling the jump. Compile-time words used in defining loops are BEGIN, AGAIN, UNTIL (END), WHILE, REPEAT, DO, LOOP, and +LOOP. Similarly, conditional branches require compile-time words IF, ELSE, ENDIF (THEN).

Words that are not used at runtime do not need to be in the protected core of the vocabulary, but can be in the erasable upper part.

The glossary for the condensation process will be loaded as an upper vocabulary above the application glossary, and only CORE words are used in defining the condensation glossary. Hence the application glossary and the expendable words of the HACKERS' FORTH vocabulary can apparently be manipulated at will, since none of the addresses involved in CONDENSATION will be affected. The one restriction on freedom of dictionary manipulation lies in the FORTH word 00 (null). Since every keyboard input line ends with a null, this word must be recognized. Non-recognition of 00 is particularly noticeable (and troublesome) during debugging, when stages of condensation are taken piecemeal. This problem could be solved by repeating the definition of null in the temporary "upper vocabulary". A better solution is to maintain vocabulary linkage at all stages because this will allow various operations during debugging. Linkage is normally destroyed when vocabulary data are moved during a condensation; changing link field data, [before] a move, to the values that will be needed [after] the move, protects the linkages. (Linkages are not used [during] a move.) This allows, for example, use of WORDS to list all words and their name-field addresses at various stages of the condensation.

Since the glossary of CONDENSATION will lie above the vocabulary to be condensed, a movable link must be established. The first step is to define a dummy TOPWORD to float on the top of the vocabulary being condensed, a variable TOPNAME will stay in fixed position above TOPWORD and contain the NFA of TOPWORD. Having both the PFA and LFA of TOPNAME hold the address of TOPWORD is redundant, but when this address is wanted during debugging, after ' (tick) has been discarded, the redundancy comes in handy. Also in the condensation glossary definitions, using TOPNAME @ is simpler than TOPNAME LFA @.

All words above the CORE that are to be retained in the dictionary are identified by smudging them. (FIND) is modified to ignore the smudge bit, so that the identification mark will not interfere with dictionary searching. Among these retained words, those that are to be available as input are further marked as IMMEDIATE. (This bit is used because it is the only one available. Marking a runtime word as IMMEDIATE does no harm.) All words not marked for retention will be deleted from the dictionary and the gaps so created will be closed by moving the remaining data. Retained contd.

words not marked to be recognized as input will have their names shortened to a single character and the resulting spaces filled by data moving. Finally, the "inviolable" words of the vocabulary core will be disguised by having all their name characters replaced by dummies (except for null). After the selected words are marked, the space that will be saved by eliminating words and shortening names is computed and displayed. The gaps are marked and the link fields modified to skip over the gaps. These new links will be corrected for the address changes that will occur when the data are moved to eliminate the gaps, and then the data moved.

Moving the data requires correcting any references to moved words. The essential part of CONDENSATION is to examine all data in memory and determine which data need adjusting to compensate for the move. This must be done after moving to eliminate the gaps and again after shortening word names. Finally, if there are any code-field page splits resulting from all these moves, all data from that point up are moved up by one byte, and the data adjustment routine invoked again. The data are checked for any new splits caused by the one-byte shift, and the process repeated if necessary.

When all moving and adjusting is finished, TOPWORD and all words above it are discarded by making appropriate changes in the initializing data and calling a COLD start.

The condensed application can be saved as a self-booting binary file using BSAVE as described later.

AVAILABILITY

HACKERS' FORTH is available as a self-booting disk, with screens for CONDENSATION and DECOMPILER. The back side carries the assembly source code for HACKERS' FORTH, in the format used by the PRODOS TOOLKIT ASSEMBLER.

USING CONDENSATION

Make a copy of the HACKERS' FORTH disk, and put the master in a safe place. Boot the copy, load the screens of the desired application, and load the CONDENSATION screens by entering 1 LOAD. (Alternatively, load the desired application directly, then insert the HACKERS' FORTH disk and enter 1 LOAD.) For each word to be used as keyboard input, enter KEEP <name>. When all the desired words have been KEEPed, enter SHRINK. The space saved by condensing will be reported, along with the A and L parameters needed for BSAVE HACKERS FORTH, A\$800, L\$nnnn. Various stages of the condensation process are displayed on the screen, and finally there is a cold start bringing up the header message that is displayed when HACKERS' FORTH is booted. Entering BSAVE HACKERS FORTH, A\$800, L\$nnnn will replace the HACKERS' FORTH file on the disk with the condensed program. If a split-page CFA is encountered and corrected (this will be displayed), the L\$ parameter must be increased by 1.

RENAME can now be used to give the program an appropriate name (the disk booting ignores the file name, using only its location). The disk will now hold your condensed application (self-booting).

48K versions can be fast-booted by entering RESET FIG@. (This will give a fast boot whenever the system has

been booted with any HACKERS' FORTH program usable on a 48K system. RESET re-establishes DOS, allowing CATALOG, RENAME, etc., with the exception of INIT which has been replaced by FIG@.) Versions strictly for 64K gain space by moving DOS up.

For a simple experiment, boot HACKERS' FORTH, enter KEEP WORDS, KEEP ID., KEEP HEX, then SHRINK. After the condensation is finished, enter WORDS. The only non-blank names displayed will be WORDS, HEX, and ID., but the name-field addresses of all words needed for running these two will be given. Enter HEX, then for any of the NFA's, entering <NFA> ID. will return the blank name at that NFA. The NFA of WORDS, HEX, or ID. itself will return the corresponding word name.

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USING THE WAP READING LIBRARY

by Walton Francis

As of June, 1985 the WAP reading library has over 270 titles and 400 book copies - some \$6,000 worth of reading material, not counting the far larger magazine collection. No matter what your tastes, knowledge level, or problem, we have a book which will help. And, of course, scanning a number of books on a subject will help you decide which ones to buy later for your personal collection.

A few recent acquisitions which should be of particular interest to many WAP members are Michael Crichton's *Electronic Life*, for beginners; Lon Poole's *User's Guide with separate][and //c versions* which are as good and cheaper than the Apple manuals; *Apple's Inside Macintosh*; *Apple][Computer Graphics* by Williams and Kernigan; Vahe Guzelimian's *Becoming a MacArtist* for advanced tips on using a number of Macintosh programs for complex applications; Gary Borders' *The Adventure Companion* if you can't survive without hints or pre-drawn maps for the popular games; Steven Frankel's *The Compleat Apple CP/M*, which is indeed a complete as well as sensible guide to both hardware and software for the world's largest selling CP/M machine; the *OMNI Online Database Directory 1985*, indispensable to researchers; Gader and Nodar's *Apple Software for Pennies* if you want to see what free software is available from other clubs as well as WAP; and the *Whole Earth Software Catalog*.

Our books are shelved by author, and two indexes are available at the office, one by author and one by subject. Each index includes author, title, subject, year of publication, number of copies, and the rating (if available) by either Nicita or Poponoe. The *Reader's Guide to Microcomputer Books* by

Michael Nicita and Ronald Petrusha, and *Book Bytes*, "the *User's Guide to 1200 Microcomputer Books*", by Cris Popenoe each contain many hundreds of mini-reviews. These reviews are generally excellent and to help readers select from among the many competing titles on similar subjects we have indicated their conclusions in our indices. Nicita rates each title on a scale of 0 to 100, and Popenoe selectively recommends books he finds particularly valuable. These critics, however, do not cover all books published even in earlier years, and sometimes miss a gem among those they review, so do not take the absence of an endorsement as a strike against a book.

Originally our book indexes were kept on the Apple // version of Microsoft's *Multiplan*, a spreadsheet which has considerable data base capabilities but which is limited to about 264 entries (rows). They are now kept on Microsoft's *File*, on a Macintosh. (File is an exceptional combination of power, speed, and ease of use--see the comparative review in the June, 1985 issue of *A+*).

We have intentionally geared our library acquisitions towards building a lending library. After all, one wants to be sitting at his computer while practicing a language or copying a program! To this end, we are increasingly buying multiple copies of key books, so that copies can be lent without baring our shelves of a reference copy for those who want to read at the office. We will also lend some single copies, on a highly selective basis.

As of June, there are over 80 titles with multiple copies, as shown in the table which follows. Borrow, and enjoy.

| Subject | Author | Title | Year | No. Cop. | Nic. Rat. | Pop Rec. | |
|--------------|-----------|---------------------------------------------|-----------------------|----------|-----------|----------|-----|
| Apple // | Apple | Apple // Reference Manual (//e) | 1982 | 3 | | | |
| | Goez | The Apple Almanac | 1983 | 2 | 90 | | |
| | Heiserman | Apple IIe Programmer's Reference Guide | 1985 | 2 | 85 | | |
| | Phillips | Apple //c User Guide | 1984 | 2 | 85 | | |
| | Poole | Apple II User's Guide 3rd edition | 1985 | 2 | | | |
| | | | Apple II User's Guide | 1983 | 4 | 95 | Yes |
| | | Rubin | The Endless Apple | 1984 | 3 | | |
| Applications | Sanders | The Elementary Apple | 1983 | 3 | 80 | Yes | |
| | Heilborn | Science and Engineering Programs | 1981 | 2 | 80 | | |
| Assembly | WAP | Inside Washington Apple Pi | 1981 | 2 | | | |
| | Levanthal | 6502 Assembly Language Routines | 1982 | 4 | 95 | Yes | |
| | Mottola | Assembly Language Programming for the Apple | 1982 | 2 | 50 | | |
| BASIC | Zaks | Programming the 6502 | 1983 | 2 | 95 | Yes | |
| | Blackadar | Macintosh BASIC Handbook | 1984 | 2 | | | |
| | Coan | Basic Apple BASIC | 1982 | 2 | 95 | Yes | |
| | Finkel | Apple BASIC: Data File Programming | 1982 | 2 | 95 | | |
| Business | Lien | The BASIC Handbook | 1981 | 2 | 100 | | |
| | Hoffman | The Complete Software Marketplace 1984-85 | 1984 | 2 | | | |
| C | Longman | The Investor's Guide to Software | 1983 | 2 | | | |
| | Chirlian | Introduction to C | 1984 | 3 | | | |

contd.

| | | | | | | |
|---------------------|--------------|--------------------------------------------------|------|---|----|-----|
| | Purdum | C Programming Guide | 1983 | 2 | 70 | Yes |
| Chips | Zaks | 6502 Applications | 1979 | 2 | 80 | Yes |
| Comm. | Edelhart | OMNI Online Database Directory 1985 | 1984 | 2 | 85 | |
| | | OMNI Online Database Directory | 1983 | 3 | 85 | |
| CP/M | Glossbrenner | The Complete Handbook of PC Communications | 1983 | 2 | 90 | Yes |
| | Dennon | CP/M Revealed | 1982 | 4 | 80 | |
| | Miller, A. | Mastering CP/M | 1983 | 4 | 95 | |
| Data Base Directory | Baker | How to Run Your Business with dBase II | 1984 | 2 | | |
| | Brand | Whole Earth Software Catalog | 1984 | 2 | | |
| | Gader | Apple Software for Pennies | 1985 | 2 | | |
| | Good | A Critic's Guide to Software for Apple Computers | 1983 | 2 | 90 | |
| | Nicita | The Reader's Guide to Microcomputer Books 2d ed | 1984 | 2 | | |
| | Popenoe | Book Bytes: The User's Guide to 1200...Books | 1984 | 2 | 70 | |
| | Skarbek | Skarbek Software Directory 3rd Edition | 1982 | 2 | | |
| DOS | Apple | The DOS Manual | 1981 | 2 | | |
| | Campbell | Inside Apple's ProDOS | 1984 | 2 | | |
| Education | Bonnett | Ace It! Use Your Computer to Improve...Grades | 1984 | 2 | | |
| | Lathrop | Courseware in the Classroom | 1983 | 2 | 65 | |
| | McGettrick | Graded Problems in Computer Science | 1983 | 2 | | |
| | Papert | Mindstorms | 1980 | 2 | 90 | Yes |
| | Swift | Swift's 1983-84 Educational Software Direct. | 1983 | 2 | 80 | |
| FORTH | Brodie | Starting FORTH | 1981 | 2 | 60 | Yes |
| General | Crichton | Electronic Life: How to Think About Computers | 1983 | 3 | 25 | Yes |
| | Evans | The Micro Millennium | 1979 | 3 | | Yes |
| | Freiberger | Fire in the Valley | 1984 | 3 | | |
| | Heckel | The Elements of Friendly Software Design | 1984 | 2 | 75 | |
| | Pournelle | The Users Guide to Small Computers | 1984 | 2 | | |
| Graphics | Dewitt | Art and Graphics on the Apple II | 1984 | 2 | | |
| | Hughes | The Power of: VisiPlot | 1982 | 2 | | |
| | Williams, K. | Apple // Computer Graphics | 1983 | 2 | 95 | Yes |
| Handicap Hardware | Bowe | Personal Computers & Special Needs | 1984 | 2 | | |
| | Hailgren | Interface Projects for the Apple II | 1982 | 3 | | |
| | Hofacker | The Custom Apple & Other Mysteries | 1982 | 2 | | |
| | Lancaster | Enhancing Your Apple // | 1982 | 2 | 95 | |
| | Riley | The Computer Controller Cookbook | 1983 | 2 | | |
| | Titus | Apple Interfacing | 1981 | 2 | 65 | |
| | Uffenbeck | Hardware Interfacing with the Apple II Plus | 1983 | 2 | | |
| Logo | Abelson | Apple Logo | 1982 | 5 | 60 | |
| | | Logo for the Apple II- | 1982 | 3 | | |
| | Bitter | Apple Logo Primer | 1983 | 2 | | |
| Mac/Lisa | Burnett | Logo: An Introduction | 1982 | 2 | 30 | |
| | Apple | Inside Macintosh | 1984 | 4 | | |
| | Chernicoff | Macintosh Revealed | 1985 | 2 | | |
| | Clapp | Macintosh! Complete | 1984 | 3 | 60 | |
| | Field | Using MacWrite and MacPaint | 1984 | 3 | | |
| | Guzeliman | Becoming a MacArtist | 1985 | 2 | | |
| | Lu | The Apple Macintosh Book | 1984 | 4 | 80 | |
| | Miller, M. | Presenting the Macintosh | 1984 | 2 | 85 | |
| | Poole | MacWork MacPlay | 1984 | 3 | | |
| Pascal | Kernighan | Software Tools in Pascal | 1981 | 2 | | |
| | Platt | Perfect Pascal Programs | 1985 | 2 | | |
| | Shafer | Pascal Primer for the Macintosh | 1985 | 2 | | |
| Spreadsheet | Beil | The VisiCalc Book Apple Edition | 1982 | 2 | 75 | |
| | Bolcan | Mastering Multiplan | 1984 | 2 | | |
| | Castlewitz | VisiCalc Home and Office Companion | 1982 | 5 | 70 | |
| | Clark | Executive VisiCalc for the Apple Computer | 1983 | 2 | 70 | |
| | Cobb | VisiCalc Models for Business | 1983 | 3 | 85 | |
| | Henderson | Spreadsheet Software from VisiCalc to 1-2-3 | 1983 | 2 | 95 | Yes |
| | Hughes | The Power of: VisiCalc Real Estate | 1981 | 2 | | |
| | Trost | Doing Business with VisiCalc | 1982 | 2 | 85 | Yes |
| | Williams, R. | The Power of: VisiCalc Vol II (Accounting) | 1982 | 2 | | |
| Word Proc. | Glatzer | Introduction to Word Processing | 1981 | 2 | 70 | Yes |
| | Poling | Apple II Word Processing | 1982 | 2 | 95 | Yes |

GAMESIG

by Ronald Wartow



SEPTEMBER MEETING

The next GAMESIG meeting will be Thursday, September 5, 1985, beginning at 7:30 at the office.

SOFTWARE DONATIONS

Gaming software continues to come in from companies for review at the rate of 4-5 a month. For any club members wanting to review gaming software, you must participate in GAMESIG, primarily by attending the meetings. Repeating last month's notice to club members: Because of the constant use of the club computers, anyone wishing to examine any of these packages must make advance arrangements.

ULTIMA III by Origin Systems (Macintosh). Review in October Journal. See the August SigMac meeting notes for a brief look.

THINK FAST by Brainpower (Apple // series and Macintosh). Review in October Journal.

CHIPWITS by Brainpower (Apple // series). Review in October Journal.

GAMESIG REVIEWS

Beginning last month and continuing hopefully forever, the Journal will contain reviews of gaming software on a regular basis. We now have a stockpile of game reviews.

Reviews will appear first for those products sent to us for review by the gaming companies. Our editorial policy is only to observe space limitations.

WAP BBS's, OTHER LOCAL BBS's, AND THE OFFICE HAVE GAME REVIEWS AVAILABLE FOR DOWNLOADING OR BROWSING.

Initially as a "thank you" to several local BBS's for providing excellent downloads and discussion forums, and then at the request of local SYSOP's, I prepared a 35K file (15 pages) of game reviews and previews of coming attractions, covering gaming on all Apple computers, which will be updated occasionally. Some BBS's have them for browsing and some for downloading. Hopefully, they now appear on the WAP boards.

Rumors, possible release dates, and recalls are included, as well as reviews of 60 individual games (including all Infocom), several gaming categories, public domain gaming, and gaming magazines. These are not full reviews but short shots that hopefully will increase your knowledge before buying. As the file states: "All opinions, editorial commentary, and the 'tongue-in-cheek' are mine alone and do not represent the views of Washington Apple Pi."

A copy is available at the office for those who don't have modems.

REACH FOR THE STARS, Second Edition

Review by Chris Hancock

REACH FOR THE STARS, for the Apple // series with 64K and one drive, was first released by Strategic Studies Group (SSG) in 1983. It was designed by Roger Keating and Ian Trout, with Roger doing the program design and Ian doing game development assisted by Eric Baker. Judging by the game review extracts on the program package, the game was extremely well received. This review deals with the second edition which has just recently been released. I cannot comment on the first edition. The documentation states that the features added have included "enhanced" computer opponents and extensive game configuration options. In June, I had the pleasure of talking to both Roger and Eric and they added that the whole game program has received an extensive update. [See last month's Journal for an account of their visit to WAP.]

This is a game of colonization and conflict in a fictional galaxy for up to four players. Within the galaxy are 54 star systems. These are located on a 34 by 23 hexagonal grid. This is detailed on a data card to aid in planning one's activities. For each new game the star systems are randomly allocated with up to 3 planets each. The players are each

allocated a home planet at least 5 hexes from the others. Players must explore the galaxy and attempt to colonize promising planets. At the same time they must always be alert to the activities of their opponents. The victor is the player with the highest number of victory points at the end of the game.

Colonies produce income in resource points. These must be allocated in support of the native population, to defend the planets, develop planetary environment and carry out research to develop new technology. They are also used to build up the industrial base and to purchase starships.

Each planet has a unique makeup, some favoring development while others are hostile. This factor together with the level of industrial and social state governs productivity and affects population growth. Since there are limits to the sustainable population for each planet, colonization of other planets is essential. Overcrowded planets start to rebel and overall planetary conditions deteriorate quickly. Moreover, it is necessary to expand in order to broaden the economic base. The secret is to make new colonies self-sustaining as soon as possible. While contd.

social conditions are poor, there is negative population growth which merely creates a drain on existing colonies. The industrial base must be built up in conjunction with the social level in order to guarantee prosperity. Interstellar trade is handled in an abstract manner where unspent resource points go to a global pool and so become available to other planets. This is often a key tactic to use.

While victory points are awarded for planetary development, they are also earned in combat and for planetary conquest and destruction. In fact, to do well in this game you cannot be defensive. The computer opponents simply do not play that way. It is essential to prevent them from becoming too strong. If they develop too far, it is simply over.

An excellent feature of this game as for all SSG products is their menu system for entering orders. The routines quickly become second nature and so allow players to concentrate on the play of the game. A tutorial is included to ease new players into the game and the documentation is pretty good.

One can select several levels of computer opponents, from the quite benign beginners to nasty "enhanced" opponents. There is enough flexibility here to allow any level of gamer to have an enjoyable evening. One can even have a mix of opponents.

Once one has finished with the standard game there are many optional variations available which will add to the challenge. These range from merely adjusting the standard 40-turn game length to the inclusion of irritating little nasties called Xenophobes which are quite a nuisance to one's plans. There is also an option to allow novas and natural disasters. I would say there is more than enough to keep anyone happy.

There is a save game option for those who have to interrupt a game. However, a 40-turn game is easily playable in an evening.

In conclusion, I have found this game a great deal of fun to play. It is challenging, with sufficient depth to make the game a winner for many years. I will be going back to play this game long after some other programs will be gathering dust.

GATO FOR THE APPLE II Review by Barry & Ben Bedrick

GATO is a simulation based on a World War II attack submarine on patrol in the Pacific. The Macintosh version was reviewed by Michael Drolet in the August Journal. The game is now also available for the IIc, or the IIe with 128K. Having played GATO for a few weeks on our IIc, we agree with Michael's assessment: this is a well-executed and challenging simulation.

This version of GATO has a few differences from the one for the Macintosh. A color monitor or TV helps, at least at lower levels. Your sub, its course, and your subtender are shown in blue, and enemy ships and shoals in red. (At higher levels, the subtender and enemy are not shown.)

The mouse is not supported in the Apple II version. You

control the sub with keyboard alone, or a combination of joystick for steering and diving, and keyboard for everything else, including speed, periscope, and command displays. Torpedoes are fired either from joystick or keyboard. "DELETE" calls up a mock spreadsheet for those who play at the office.

A chart of your position is not always on-screen, like the Mac version. You must toggle back and forth, but that is not a major drawback. Graphics are not elaborate but are clear; enemy ship types are clearly distinguishable.

Finally, this version does not include a mission creator, nor a Morse code tutorial as does the Macintosh version. However, there are many pre-programmed missions, and with ten levels of difficulty, choice of day or night, and a variety of geographical locations, lack of variety should not be a problem. Without knowing Morse code, you must discover enemy locations and your mission at higher levels by trial and error (unless you record your mission message, and play it back over the phone to Ron Wartow, GAMESIG Chairman, who has the Macintosh version and will translate for you.) [The parenthetical was not deleted so as to preserve the flavor of the review and should be ignored, of course, unless the caller wants incredible misfortune to attend the rest of his/her life. RW]



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THE BEST OF THE WAP ABBS

by =Alexander-

WP3511 to ALL 07/03 TTY/TDD?

Does anyone know if it is possible to access a TTY/TDD (Teletype) for communication with the deaf? If so, how? I have a][+ with a Prometheus 1200A modem. Thanks. Dave G.

WP2208 to: WP3511 07/04 TTY (R)

Simple. Use ASCII Express and select BAUD Rate "DEAF". I use my Apple //e daily as a TTY, but I normally use Novation's "DEAF.TERM" on my AppleCat. - Richard

WAP342 to:WP3511 07/04 TTY/TTD

Contact Ellen Bouwkamp on the MAC ABBS board. She has done it with a MAC, and I'm sure the][+ can do it as well. Ask her what setup she used. Tom

WP6779 to ALL 07/06 APPLE CAT II DeafWare

I would like to know if any of you hear of APPLE CAT II by NOVATION related to a deaf diskette which works with a modem to communicate with TDD users. I would like to gather information from users.

WP2208 to:WP6779 07/06 DeafWare

Joe - I occasionally use DEAFWARE from Novation with my AppleCat. I more often use a Binary program of theirs called "DEAF.TERM" that I have modified. You can also use ASCII Express and select DEAF for your BAUD rate and you can communicate with a TTY. DeafWare will not access the memory on an Apple-Cat. Call me at 770-5260 if you have questions. Give me a minute to boot.

WP4763 to:WP6779 07/16 Apple Cat Deafware

I use the Apple Cat and DEAFWARE to talk to my sister-in-law using TDD. It works very well. When you buy the Apple-Cat (at least when I got mine) you have to send it to the factory to get a jumper soldered on in order to use TDD. The Apple-Cat will serve your needs well. It also has a built in serial port (active when modem is on, or all the time with optional ROM) and many other features. If you want more info please leave msg here. Keith WP4763

WP1755 to ALL 06/30 Drives on Sides

Can the Apple or Commodore 1541 drives be used if turned on their sides?

WP3797 to:WP1755 07/01 Drives on Sides

Yes....And upside down if so desired. The disk is clamped at the hub and the media is pressed against the head by a pressure pad. -tom

WP2653 to:WP1755 07/01 Hmm...

I can't see why not. At least the Apple drives are at heart a Tandon or Teac or Shugart or something. These are used in Trash-80's on their sides all the time. I don't think it should affect them. You know, the Commodore cassette tapes are

faster than their disk drives (with a special program you can use)! -Danny WP2653

WP1095 to:WP1755 07/01 Drives on Sides

Most manufacturers have stopped using drives on their sides because there is a greater tendency for the disk to slip off center before the clamping takes place, which crunches the hub hole, protector ring or not. But, the drive certainly doesn't care.

WP2645 to:WP1755 07/02 Drives on Sides

Sure they can. They will work just as well and probably use a lot less space. If you have seen the TRS-80 (yuk) drives, they are on their sides. One thing I would do if I were you is put the rubber bumpers on the side of the drive. /// KITT DIBOLD ///

WP1755 to ALL 07/15 Turning Drives Sideways

I turned my Apple drive sideways to save space. Now everything on the monitor is sideways. Any suggestions? Perhaps I can turn the monitor sideways. Yeah. That works. Thanks.

WP6904 to ALL 07/03 Eamons

Would appreciate learning what "EAMONS" are. I note that there are a number of disks available from WAP Disketeria that are referred to as EAMONS.

WP6397 to:WP6904 07/09 Eamons

Unless someone else said it first, EAMONS are public domain adventures. Don

WP6141 to ALL 07/14 //c vs. //e

I am getting a system for my office; all I need is AppleWorks software. Should I get the //e or //c. I will not need CP/M or hard disk. Is there any reason why I need a //e? I also will not be using a mouse. Is the //c as sturdy and durable as the //e? Any thoughts, advice, or experience will be useful and appreciated. The use is mainly for lists of 30-50 people and letters.

WP4795 to:WP6141 07/14 //c vs. //e (R)

Based on what you said my opinion is get the //c. But that assumes you will never (Never say never...) need the things or want the things you say you do not need. I think that the //c will (or may) paint you into a corner you can't get out of if you wanted to. CP/M is not a problem any longer on the //c since AE has CP/M for the //c. Of course I am a biased //e owner.

WP2243 to:WP6141 07/15 //c or not //c

That is the question. Well, if you NEVER want to expand the system, or add any further capability to it, AND you NEED a machine that is transportable, then the //c is for you. However, we have found here that our purpose and justification for getting the Apples in the first place soon becomes

only a small part of what they do for us. When this is the case, the //e, with its flexibility and expandability, is for sure the way to go. The 'open' design of the Apple //e allows for further and future enhancements to the system to keep it working for you in a changing environment and will result in a system with a longer useful life than would be the case with the //c, if our history here is any guide. Brett

WAP208 to:WP6141 07/15 //c vs. //e

For an office environment, I would always choose an open system (the //e) over a closed system (the //c). You may not need CP/M now, or a hard disk, but you never know what your needs are going to expand to in the future. The extra slots on the //e are awfully nice to have, even if you have to pay comparatively more for the //e. The only reason to buy a //c for an office is if portability is such an overwhelming requirement that you must get the //c. If portability is the overwhelming requirement, I would seriously consider a "luggable" IBM compatible instead either the //e or the //c. Theron Fuller.

WP2243 to:WAP148 07/18 //c Expand (R)

True, true, never say never....but I doubt if the //c will ever reach the point where it can be as flexible as the //e, at least not at comparable costs. And for business use, the cards that SPEED UP the //e are a real godsend, and I have yet to see anything like that for //c. Or, for wide forms and spreadsheets the Ultraterm card, etc, etc, etc....guess I'm biased. Brett

WAP977 to:WP6141 07/18 //e vs. //c Office

While a //c may meet your present needs, the //e is more expandable. You can't be absolutely certain of future needs. Also the //c is more portable and also more easily carried off. You can get a CP/M RAM disk board for the //c so that alone does not require a //e I suspect that the //e may be more compatible with future 16 bit upgrades, which would allow you to use more powerful software available downline. External disk drives for the //e allow you to send disk only to shop for repairs if Drive 1 acts up. If portability is important, it's more convenient to carry a //c back and forth between office and home. The //e keyboard may be a little more rugged, but comfort is important too. Go to a dealer and use both keyboards and see which is best for you. Finally, if cost is primary concern, a //c system should be a little cheaper. In making comparisons you should compare costs of two drive systems. TV

WP5317 to:WP6141 07/20 //c vs. //e

Get a //e. Like the Mac, the //c is a closed system; you can't do much to it without major surgery. If you're going to run AppleWorks, you'll eventually want more RAM and maybe a hard drive. The //e is much less limited in all respects. Chris Klugewicz

WAP977 to:WAP713 07/23 16 Bit Compatibility

I note latest ads for RAMWORKS and other 80 col/memory cards for //e contain mention of a connector for compatibility with future 16 bit processors. Apple upgrade may prove to be rumored //x, brand new 16 bit machine, but 3rd party developers may come up with compatible 16 bit cpu cards for //e or even][+. No guarantees, but 16 bit upgrade easier for //e vs //c. It is now possible to add 8 bit CPM boards (very popular; much software), 6809 boards, accelerator boards (fast 6502), 8088, and even 68000 boards (less software but great

for the Gonzo Hacker). This shows flexibility of][+ and //e. If price and portability are most important, then maybe //c is best. That is if you never expand!! For office use //c is less secure.

WAP713 to:WAP977 07/24 Debating rumors...

Well, if you feel like discussing suspicions, I'm game... though please don't paint me into the anti-Apple corner! Hey, I like these little buggers! What you say about the current expandability, I agree. Though as for co-processing boards, there really are only 2 that have sold at all well - the Z80 (terrific!) and the Accelerator cards (that really only do the same things as a 6502, only faster. The other boards you mention certainly EXIST, but I have only heard of a couple researchers/hackers ever using the things-- and then, only when they're first put on the market. For example, what ever happened to the RANA "make your Apple][IBM-compatible" system?? Or the DTACK 68000 kit? Do you know anyone who has/uses these? As far as the 65816 goes, I haven't ever heard of Applied Engineering's RAMWORKS supporting it now or in the future... I think you've mistaken it for MULTIRAM (a different extended 80-column card). Finally, I'm very pessimistic that Apple will offer an upgrade for //e owners to any new system they come out with. They haven't done anything like that since the old days of Integer BASIC and the non-autostart F8 ROMs! But then again, I do hope you're right!! Sam Swersky

WAP438 to:WP6141 07/27 //c vs. //e

Having read all the automatic votes in favor of the //e expandability, I wonder if any of the respondents have ever used a //c. I find mine much easier to type on than my][+ was, and it will cost less to get what you want, as far as I know. If anyone is thinking about the future expandability of a computer in an office environment, I'm afraid that no member of the // line is the answer.

WP2446 to ALL 07/24 TV Interference

It seems that when I have the computer on, our TV doesn't get in channels that good at all. Is there a way to shield the computer? Our antenna cable is shielded; is there anything I can do to help this problem? Thanks a lot. Andy.

WP6859 to:WP2446 07/24 Shielding

There's two ways - first one is to cover the case and video cable with aluminum foil, except the air vents (No I'm not kidding). The second is to cover the inside of the case in a similar manner. Your problem is probably in the connection of the cable from your CPU to your monitor. If the shield is bad your CPU could be broadcasting TV-band signals. I think that the case is coated metal (I'm not sure though). Look at that cable!!!

WAP457 to:WAP713 07/19 Monitor Jiggle (R)

Possible cause of monitor jiggle may be a second monitor connected to your system. Do you have more than one monitor? If so, turn off the other and see if this cures your problem. Different ground potentials cause this problem. Otherwise, look toward the offending monitor.

WP6859 to:WAP713 07/21 Monitor DT's

Your problem is usually caused by an accumulation of dust on the tube and circuit cards. The card can be overheating because

Contd.

the dust acts as a little blanket, holding in the heat. Get a dust gun at a photo store. Unplug and open up your set and blast the dust away. If you're adventurous you can reconnect all the plugs you see. Don't touch the red wire w/suction cup!

WAP977 to ALL 07/09 Bad Bad News

Has anyone read articles in InfoWorld, the Aug. Computer Shopper, etc. which refer to legal actions and pending legislation in several states which are aimed at making it illegal to market backup programs for archival copies of your software? First is article in InfoWorld. Vault Corp., mfr of PROLOCK Protection System, is suing QUID Software, maker of a Nibble copying program, on grounds QUADE illegally broke a version of Vault's PROLOK protection scheme. Understand VAULT is 20% owned by Ashton-Tate. My reaction would be to be to avoid purchase of software using the Vault protection scheme, and be very dubious about Ashton-Tate software as well. Understand software piracy problem, but users should have some rights and protection as well! What about the guy who a hundred or two for a piece of software and finds, after investment of much time and labor, that the company has gone bankrupt and there is no support. The data you have created with the software is worth several times the value of the software. You can't break the copy protection scheme, and it is now illegal for a company to develop and/or sell you a copy program. I'm sure all you JACK², etc. users out there can understand the problem. Finally, the Computer Shopper article outlines the legislation pending in several states which would make legal particularly offensive, usurious, and onerous licensing agreements which would make it illegal to resell your original MEDIA software. The vendor owns it in perpetuity; you just lease it! Period! It would be illegal to go into the software and modify it for your own needs as well! If your needs change ... and you have to get new hardware and software, you lose 100 percent of your software investment. In addition, if I understand it correctly, 3rd party developers might be impeded in developing enhancements for your software, lowering the value of your investment still further. To me, this represents a crass and greedy attitude on the part of some the people in the industry which will in the long run be harmful to all concerned users and software publishers alike. I feel we have an obligation to pay for what we use but, users have rights too! TV

WAP208 to:WAP977 07/12 Suits

Yes, Vault is suing the maker of CopyII PC in Louisiana for allegedly disassembling the Prolok code in order to determine the protection scheme. Louisiana has a law which allows such nonsense in licensing agreements. So far, it is the only state in the U.S. to have such a loser law. However, big money software houses are lobbying like crazy in other states.

WP1821 to ALL 07/18 Star Card & PCPI

Has anyone ever heard of or know about a CP/M card called the STAR CARD made by Personal Computer Products Inc.? Is it MicroSoft compatible? If not what CP/M system does it use? ** KEN **

WP2136 to:WP1821 07/18 Star Card

The Star card is really an Applicard version 2.0, and is a good Z80 card. I've been using the Softcard for a couple years, and the Applicard has several advantages and one disadvantage. It is faster, it has 64K of ram on the board, and it is very inexpensive if you buy it as part of the WordStar/Starcard package (\$164.95 for both). The Applicard alone costs over

\$200 (you figure it out). The only minus is that the Softcard is so much more common and well supported. Don't get the Starcard without its own version of CP/M 2.2. Most generic CP/M programs work fine on the Starcard, but those which are written specifically for Softcard CP/M may not. All in all I would recommend it. Joe England

WAP148 to ALL 07/09 More on sticky keys

My //c is starting to get old, I think. (A whole year!) The keys are starting to stick and mistype. When I type fast I often get "thje" instead of "the" (and no, it's not me). It's not so bad now that I am bothered too often but is there anything I can do to clean/fix them. DON'T want to give up the //c for couple of days for a dealer to fix it. Any ideas? Any help appreciated. -Bob

WP3001 to:WAP148 07/09 Sticky Keys (R)

I also have a //c, and my keys stick every once in a while. I clean them with liquid air (you get at a photo store), and a Q-Tip. ☺

SEARCH FOR THE LOST APPLES!

by Leon H. Raesly

A Pi contest! We have lost five Apples! Do you have them? The Pi is starting a SERIOUS search for eight LOST APPLES! The Board of Directors wants to find the earliest Apples in our group. The rules are simple, and the prize is neat!

Here they are. Rules: The lowest serial number is the oldest Apple. So check your serial numbers. The Board wants to find the oldest (LOST) Apple of the following types: Apple][, Apple][+, Apple ///, Apple /// +, Apple //e, Apple //c, Mac, (how come no one ever prefixes the Mac with Apple?), and the oldest Lisa. Copy down your number, and we will check it out against the other entries. We will publish in the next issue of the WAP Journal (September) the entries so far, and then in the October issue the winners. So send in your entries now. Send them to Leon Raesly, c/o Washington Apple Pi, 8227 Woodmont Avenue, Bethesda, Maryland 20814. For convenience of the office staff (and Lee) please mark the outside front of your envelope with the phrase "LOST APPLE SEARCH" Rush them in now.

Oh, I forgot the ! Well, the Board decided to award a Washington Apple PI OFFICIAL T-shirt to each member of the winner's immediate family (maximum of four) as the prize. So check your serial numbers now, and send in your entry now.! ☺

THE WAP "PRINT SHOP" LIBRARY

by Gary E. Hayman

(NOTE: The WAP Print Shop Library is about half completed. The following article, which was published several months ago, is being repeated to again encourage submittals for this worthwhile project.)

How many of you have been using Broderbund Software's "The Print Shop" and "The Print Shop Library" but have developed your own graphics for use on your greeting cards, banners, letterheads, signs, etc.? There are probably some good original WAP member-developed graphics out there in Computerville that you would be willing to share with other members via the WAP Disk Library.

I have volunteered to put together a disk for the WAP Disk Library containing a collection of YOUR GRAPHICS which you developed on the Print Shop's Graphic Editor. Let us see if we have enough to produce a disk or two.

Submit your graphic(s) on a Dos 3.3 disk to:

GARY HAYMAN
7315 Wisconsin Ave. Suite 605W
Bethesda, Maryland 20814.

I will collect the various drawings and place them on a master disk for the WAP Disk Library. Your original disk will be immediately returned to you IF YOU INCLUDE A SELF-ADDRESSED MAILING LABEL AND CORRECT ADDITIONAL POSTAGE. As a surprise, some additional graphics from some of the previous submittals will be included on your returned disk for your use until the master disk is complete.

All submittals must be original work so that there is no copyright infringement. Drawings must be in good taste. Credit will be given for your drawings in a text file on the master disk. Release for publication will be assumed upon submittal.

Some of us already own the new "Print Shop Library" containing many additional pieces of art work but we are hungry for more drawings that we can use. Here is a chance to share our creations at a very low cost.

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MAC Q & A

by Jonathan E. Hardis



Mac Section

Readers, the original idea behind this column was to answer in print those questions raised at SigMac meetings which would be of general interest to all, as well as to answer others which, for lack of time, didn't get asked. In practice, it is very hard to understand a five or ten second conversation on a subject or a program with which you are not familiar, much less make it into a credible Q&A item.

So I now ask for your help - in order to diversify the subject matter of this column, I would appreciate submissions in the form of Q&A's, or Q's alone, which would highlight the significance of the issue. You can reach me by phone, (301) 330-1422, electronically on the SigMac BBS, WP5416, or by mail via the WAP office.

The first few questions this month arrived by mail:

Q: With the new MacWrite 4.5, when the document is more than a page or two long, when I change the font or style in a large block, I keep getting an annoying warning that the change can not be undone. This happens even if there is lots of space left on the disk. Is this an unavoidable feature, or is there a cure?

A: This is the nature of the program when run on a 128K machine. Sorry. MacWrite 4.5 appears to remember your last change (so that it can undo it) in RAM only. This is another good reason to save your work frequently. If you make a bad edit, you could then Quit and start over at the point you last Saved.

By the way, at the SigMac Q&A session, one member suggested using spaces and tabs as much as possible in MacWrite 4.5 on a 128K machine, instead of carriage returns, to maximize the number of "paragraphs" available to you.

Q: Is this an unavoidable feature of virtual memory?

A: The Macintosh doesn't use "virtual memory" in the customary meaning of the term. Virtual memory is a combination of a hardware process that reassigns the addresses of the RAM chips on-the-fly, and a software process that moves sections of "RAM" memory back and forth to and from a disk. Together, they provide the illusion to the CPU that it has access to more RAM than is actually installed.

The Mac has no such hardware, although it is a good bet that future Apple products will. What the Mac does do is akin to "Overlaying", which is a software-only trick to run large programs in smaller memories.

And no, what MacWrite does is purely a design decision on the part of MacWrite's programmers, which is constrained by the limits of your 128K machine.

Q: What computer language is good for someone who has never learned one? I would hope to use the same one to advance to more complex programming. Is the MacForth tier system good for that? Or is Pascal the overall more flexible language?

A: Most universities make a point to teach using a structured, algorithmically-oriented language. Further, there are languages with "training wheels", which spend the extra time to diagnose mistakes beginners are apt to make. Although I've never used it, MacPascal would seem to be ideal to learn from. Its virtue for teaching is that it is not flexible, which is why there is the market for so many C compilers on the Mac. (Apple's Pascal for developers, which will no longer require an XLisa, should be out in about six months. Borland will release a Pascal for the Mac after their Amiga project is done.) But before the nice folks from Creative Solutions (MacForth) cut off my typing fingers, I have to say that (1) I'm not familiar with their product, and (2) You are really putting the cart before the horse.

It's a bad idea to assume that you can learn to program by yourself, with only a language reference manual. I would first determine what other support you can get locally, and let that determine the language. Are any courses being taught by a local community college? After browsing through a library or a book store, do any books strike you as particularly readable? Do you have a ready source of working, sample programs of progressive difficulty? Do you know anyone willing to correct the mistakes you can't find by yourself?

One final thought: If you like RPN mathematics, such as what Hewlett-Packard calculators use, you may like Forth. If not, avoid it.

Q: Everyone is talking about Switcher, but no one is saying exactly what it is. Is it an operating system? A finder? And is it for 128K machines like mine?

A: Switcher is an application program that runs on 512K (or larger) Macintoshes (or XLisas). It loads other, additional programs into RAM and allows you to switch back and forth between them. That is, it lets you run one for a while and then another. The assumption is that most programs don't need the full 512K, and, to make a simplified example, two programs can each use 256K or four programs can each use 128K at the same time. In reality, only the one program that you have chosen is actually running, while the others just sit there and wait. (A notable exception is for communication programs which, as of now, can listen to the modem while another program is running.) Your 128K machine is too small to subdivide in this manner.

Switcher does its magic by intercepting the "conversation"
contd.

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between an application and the operating system. So, you might think of Switcher as an extension to the operating system, but only when it is running. "Finder" is a word made up by Apple to name another application program, the one that runs in the absence of any other and manages the visual desktop. (It is a popular misconception that the Finder is part of the operating system. In fact, it is gone as soon as it transfers control to another application program.) However, since it is an Application program too, one of the programs loaded with Switcher may be the Finder.

By the way, Switcher is now up to version 4.3, which is not the final version that will be distributed by Apple eventually to the general public.

Q: What the heck is floating point?

A: "Floating point" numbers are an alternative to "fixed point" numbers, which are what you use in everyday life. With fixed points numbers, the digits you write get their meaning with respect to a decimal point, either stated or implied. For example, the "2" in 21.5 means twenty, and the "3" in 350 means three-hundred.

This is fine when considering numbers on the human scale. But if I were to ask you, "How many atoms are there in your Macintosh?", the answer would be 26 digits long, and you could only be confident that the leftmost (most significant) 3 or 4 digits were really correct. So, an alternative is to state the part of the number which you know well, and then also to give a scale, by which it is multiplied. The scale is usually stated in a compact way by expressing it as a power of 10, a number made up of a "1" digit followed by only "0" digits.

To force an example, the number 1,250,001 can be approximated as the floating point number 1.25×10^6 , where 10^6 is a "1" followed by six zeros (1,000,000). In this format, the decimal point has "floated" to call attention to the million's digit, not the one's digit.

Further details are beyond the scope of this column, but may be found in high school math and science texts. Also, in the real world of computer architectures, many designs encourage the use of the floating point format for multiplications and divisions, no matter what the accuracy or the magnitude of the numbers.

By the way, the Mac does floating point mathematics with the "SANE" software package, included in the System file. Future products may do floating point math in hardware, which could speed up number crunching a lot.

Q: Does the new version of the new "Key Caps" desk accessory which appears on local bulletin boards fix all of the bugs?

A: No. It only fixes the ones I described how to patch in last month's Q&A column.

Q: When I open a Microsoft Word document just to print it, I'm asked whether I want to save the changes. What changes?

A: Repagination is considered a change. Printing causes a repagination.

Q: In Word, how do I avoid the annoying diamond symbol that follows the cursor as I type?

A: Insert a few blank lines before the end of the document first.

Q: What is new about the new version of Word?

A: It reads Word files from the IBM version that were saved in SYLK format (assuming you get them onto a Mac disk with a communication program), it prints about four times faster on the LaserWriter, and it keeps files in their folders with the correct dates. But there is trouble with the "Search and Replace" feature. For reasons I don't understand, don't use it.

Q: What is Excel?

A: Excel (not to be confused with the Mac XL) is Microsoft's answer to integrated programs, such as Lotus' Jazz™. It is a major revision to Chart and Multiplan, which you'll note was never upgraded to take full advantage of a 512K machine. It also has limited database capabilities.

According to informed sources who are part of the official beta testing crew (those outside of Microsoft who hunt for bugs), Excel is very well done. It's a solid product, despite Microsoft's past record of buggy product introductions on the Mac.

Excel is reputed to have one of the best, if not *the* best spreadsheet available on any computer. According to the SigMac consensus of third-hand knowledge, Excel can do everything that 1-2-3™ can do on a PC, and better. Excel will ship with the Switcher, so you can add your favorite word processor, communication program, and/or database to the integrated mix.

For a comparison of Excel, Jazz, Crunch, and the other integrated packages on the Mac, see the current MacWorld magazine.

Q: Doesn't the small Paradise hard disk look cute next to the Mac on a desk top?

A: Yes, but what they don't show you in the ads is the large power supply, about as big as the Mac itself, on the floor below. (Sometimes I have to really work at getting this stuff in a Q&A format!)

Q: What is the risk of a head crash using hard disks?

A: The risk is significant, even for "shock mounted" drives such as the Hyperdrive. Do nothing to cause them to move or vibrate while in use, and be prepared for such an eventuality by backing up your work often. Such a crash out-of-warranty may cost hundreds of dollars to repair.

The conversation at the SigMac meeting turned at this point to the Bernoulli Box, which claims in its ads "No head crashes, ever." This point went undisputed, but the trade off is that the drive is a bit slower. (It's really a large flexible disk). Also, the software was described as "flakey" by one member.

contd.



MacNovice Column

by Ralph J. Begleiter

Fantastic Fonts #2

When we left our hero last month, he was twisting tantalizingly in the wind, appetite whetted by the promise of fantastic font flexibility with his Macintosh, but awaiting some clues on how to actually install all that flexibility. Here they are!

Before moving ahead in the somewhat complex process of installing all those fonts you like, let me briefly review where we stand:

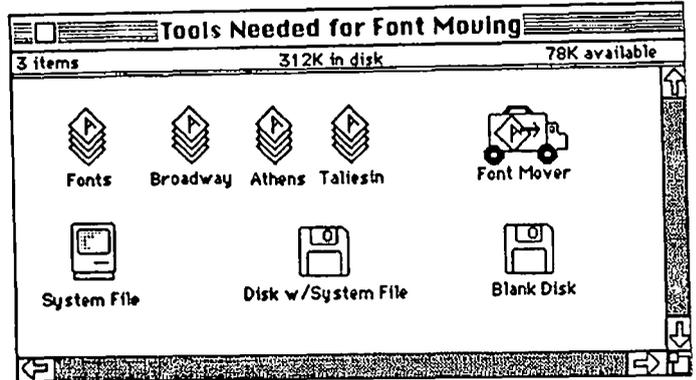
- You recognize the unique ability of the Macintosh to switch easily among literally dozens of different typetypes, called "fonts."
- You understand that fonts are "fat." They take up lots of space on your disks, so you can't have all the fonts available at your fingertips at all times.
- You've explored the various fonts, so you know what they look like, and given some thought to which fonts you want to have available on which of your application disks (MacPaint, MacWrite, etc.). You can "browse" through the fonts using the Font Mover and see the samples it shows you when each font is "selected."
- You recognize that the price for all this font flexibility is a bit of complexity and work to set it all up. Once that's done, however, you know you probably won't have to do it again for a long time.

There are two ways you can install the fonts you want. One is with the Apple "Font Mover" which came with your original "System Disk." The other is with a new version of the Font Mover, called "Font/DA Mover," supplied recently by Apple on its updated System Disk. They work differently, so read and understand the instructions for the one you'll be using.

Also on the System Disk is a file called "Fonts" which contains all the various fonts Apple supplies. As I mentioned last month, there are, by now, dozens more fonts available from commercial sources and from computer user groups, including the ones in WAP's disk library.

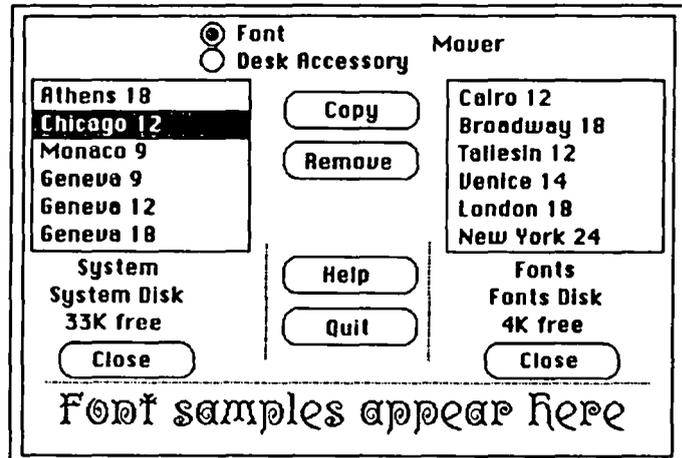
Start with a blank disk. "Initialize" it when Mac asks you if you want to do so. Call it "Fonts Disk". Copy onto that disk one "Finder" and one "System File" (not a whole System Folder, just the System File from within a System Folder). Next, copy onto that disk the "Font Mover" or "Font/DA Mover" (whichever you're using). Also copy onto that disk the file called "Fonts," and any other Fonts files from commercial or WAP disks you might want to use.

These are the "tools" you'll need:



Once you've copied all your supplies, you're ready to install fonts. This whole process will go faster and be a bit less complicated if you're using a "Fat" Macintosh with two disk drives, but it works just fine (albeit more tediously) with a 128K Mac and only one drive.

OPEN the Font Mover. You'll see a new window with a list of the fonts already "installed" in the System File you're working with. The other window will show the "Fonts" files you copied onto your disk. Remember, what you see, and how you manipulate the font mover, will differ depending on which Font Mover you're using. I won't go into the differences here, because you should read the instructions for the Mover you're using.



REMOVE all the fonts you don't want from the "Installed" System File using the Font Mover. (Remember to COPY them into the Fonts file if they're not already there, so you won't lose those fonts forever.)

Next, choose ("select") the fonts you do want in your system file and COPY them into the "Installed" System File window. Remember to include only the font sizes you really need, because they take up lots of space. And if you plan to print in "high" quality, remember to include also the sizes

contd.

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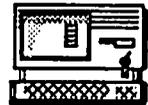
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| Prometheus ProCom -M | Z |
| Accessories Modem 300 | I |
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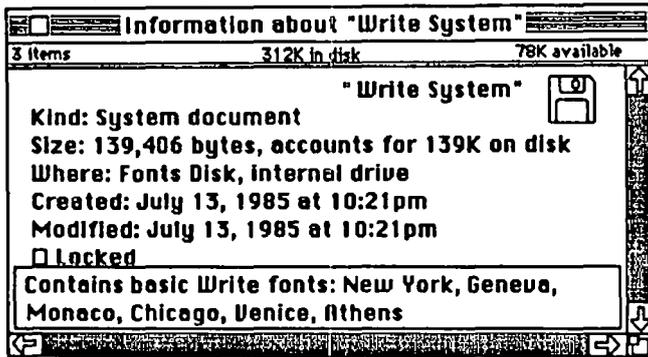
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twice as big as the ones you want to print.

As I noted last month, I use a file of just seven standard fonts in only a few font sizes for routine work. You might start with a similar file (see WAP Journal, August 1985), and modify it later if it doesn't meet your needs. Maybe you'll want to include just New York, Geneva and Venice in this batch, plus the "system fonts" which Mac requires you to save.

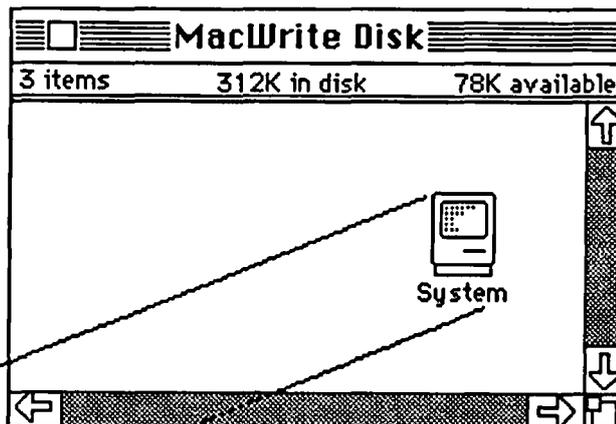
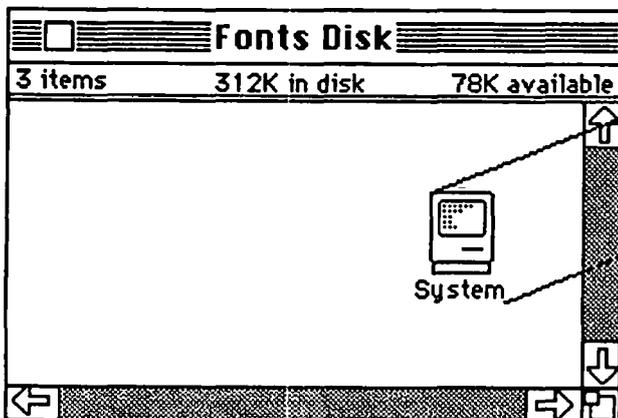
Now QUIT the Font Mover. Mac will tell you it is "Updating the System and Fonts Files" following your instructions, and that this "updating" could take some time. Don't worry. That's only because fonts use so much memory that it takes Mac awhile to do all the copying and erasing of the fonts data.

When Mac returns you to the "Finder," you won't notice any changes. But the new fonts are all installed inside the System File (where you can't see them). Now LABEL the System File distinctively, so you'll know which sets of fonts are included. (You might call it "Write System.") OPEN the "Get Info" window for that System File and type in the names and sizes of the Fonts you've included. That'll help you later on, after you've forgotten what's in it.



It would be a good idea now to COPY that "Write System" file onto another blank disk (call it "Font Systems"), so you can save it for future use. Later, you might want to copy the Write System onto other disks with different applications, and preserving an extra copy of the file now will save you the hassle of having to go through the motions with the Font Mover again.

Now, back to your Fonts Disk. Change the name of the "Write System" file back to just plain "System." Now COPY that file onto your MacWrite workdisk (the application disk you usually use to write documents).



Mac will ask you if you want to "Replace items with the same names?" Say yes. After some disk swapping (in a one-drive system), Mac will make the replacement, installing your personalized System File (with your chosen fonts already in it) on your MacWrite disk.

You've done it! You've got your own selection of fonts on the MacWrite disk, and you've mastered the art of manipulating fonts.

Now let's create a different font selection for your MacPaint disk (because, as we discussed last month, you'll probably want some fancier fonts in larger sizes to work with in MacPaint).

Return to your Fonts Disk. OPEN Font Mover again, and select different fonts and sizes for use with MacPaint. (For example, you might want to use larger sizes of New York or Geneva. And you'll want the headline font Athens. And you'll probably want London.) Copy them to the "Installed" section of the System File.

QUIT Font Mover again. Rename the System File again. This time, call it "Paint System." In the "Get Info" window, again make note of the fonts included, for later reference. And move a copy of the "Paint System" file onto that "Font Systems" disk with the "Write System."

Rename the "Paint System" File again, calling it "System." Now COPY it onto your MacPaint Workdisk (the one you use when you're creating MacPaint pictures). Mac will ask you if you want to "Replace items with the same names? Say yes. Now you've moved your customized MacPaint System File (with your own chosen fonts) into position for working with MacPaint.

You can repeat this process as much as you like, of course, creating as many different System Files as you want, each with a different selection of fonts inside it. The key is to name them (and make notes in "Get Info") so you know which is which, and keep them on the "Font Systems" disk you can later use to copy from. Then, whenever you want to change font selections, you can just choose the System File

which has the ones you want, without having to go through the bother of working with the Font Mover again.

Always remember to rename the System Files to just plain "System" when you copy them to your work disks, so Mac can recognize them and toss out the old "system file" contd.

Softviews

by David Morganstein



Continuing with reviews of statistical packages, this month you can read a not altogether unbiased review of Statworks, since I had a hand in designing the package. However, I think you will find a balanced review describing not only the program strengths, but its limitations and weak points, as well.

Statworks. (WAP members Jim Rafferty, Rich Norling and others including yours truly) Unlike other statistical packages released for the Mac, this program looks and feels like a Macintosh application. It supports all of the Macintosh interface including an easy-to-use data window (see below). You can exchange data with other Mac programs, such as MacWrite or Multiplan, through the clipboard. Each output window containing computational results or graphics can be saved to the clipboard and pasted elsewhere as MacPaint documents or can be sent to the printer. All desk accessories are available to you. Statworks will work with the switcher and it can be transferred to a hard disk.

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| 3 | 88.2 | 258054 | 3682 | 1616 | 109773 |
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| 14 | 114.2 | 502601 | 3931 | 2314 | 123368 |
| 15 | 115.7 | 518173 | 4806 | 2572 | 127852 |
| 16 | 116.9 | 534894 | 4007 | 2827 | 130081 |

Statworks Data Window

As you can see from the menus below, Statworks performs most basic statistical analyses including descriptive summaries, multiple regression, 2-way ANOVA and non-parametrics.

| | | | |
|----------------------|-------------------|-------------------|----------------|
| Stats | Regression | ANOVA | Plot |
| Descriptive | | 1-way Analysis | Scatter |
| Cross-Tabulation | | 2-way Analysis | Line |
| t-Test | | Kruskal-Wallis | Histogram |
| Normality Test | | Friedman | 3-D Scatter |
| Kolmogorov-Smirnov | | | 3-D Histogram |
| | | Regression | Box & Whiskers |
| Mann-Whitney U | | Simple | |
| Wilcoxon Signed Rank | | Polynomial | |
| Spearman Correlation | | Multiple | |
| Kendall Correlation | | | |

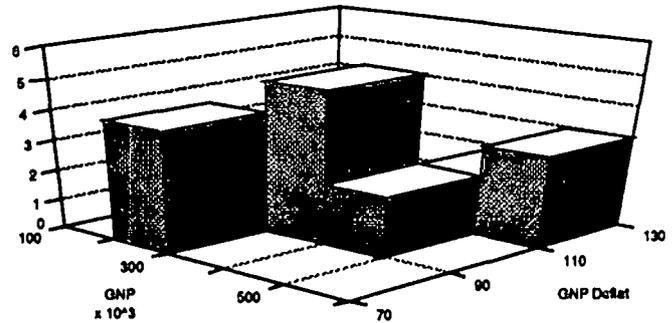
Statworks Analysis Menus

Statworks holds all data in memory which, although limiting the number of data points to about 1500 on a 128K

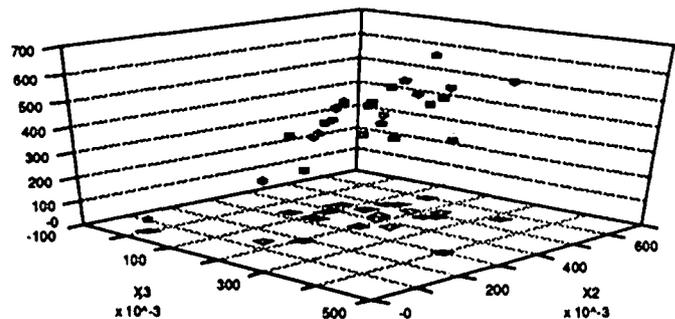
Mac, provides for quick analyses. Statworks will hold about fifteen thousand data points on a Fat Mac.

While its data management features lacks some ease in recoding and record selection, these functions are available (more on this later). On the other hand, it has several capabilities not found in other packages. The data window has a "home button" which can be used to bring the cursor immediately back to the upper left hand corner. By clicking in the title bar, any window can be made to grow to fill the screen of a Mac or Mac XL. It can handle character data and use them to define the analysis of variance levels (e.g. a variable can consist of the text entries "male" and "female"). The original data can be transformed through the use of logarithms, powers and algebraic combinations of any two numeric variables.

From the figures below, you can see that Statworks has several unique graphics displays including two-variable histograms, three-variable scatter plots and box & whiskers plots.



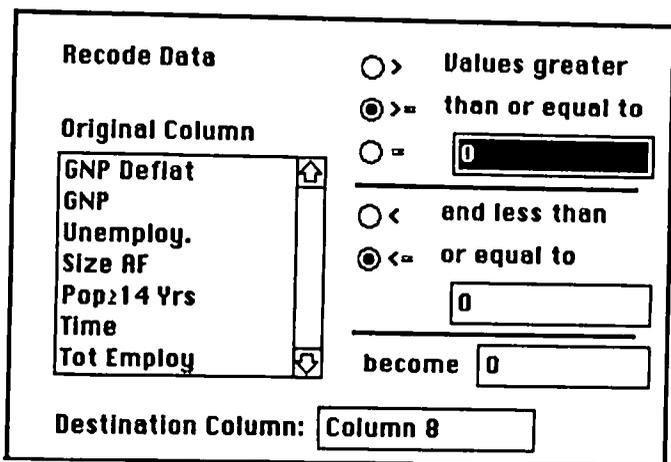
Three Variable Scatter Plot



A few words about data management. Statworks allows you to recode an analytical (sometimes called qualitative) variable into a small number of categories. For example, you may want to analyze individuals by age groups. To do this, you must repeat the recode selection once for each level you want to create. If you use the following categories: under 18, 18-25, 25-35, 35-45, 45-55, and over 55, you will use the recode function six times, once for each level. As you can see from the dialog box below, you supply the upper and lower levels of the age category and the value you want to appear for those cases falling in the selected age range. You may want to analyze a sub-set of data, defined by a range of one of your

contd.

variables. To do this you must first sort the data on the selection variable so that the desired cases are adjacent to one another. Then you must copy the appropriate cases to the clipboard and paste them in a new data window. Both of these functions, recoding and sub-setting, can be performed but not as easily as they could be.



Recode Dialog Box

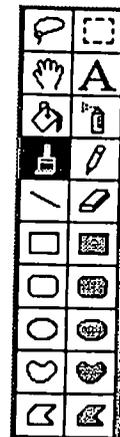
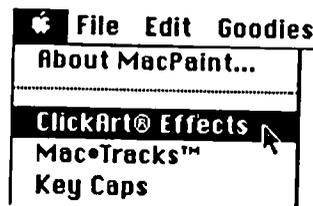
The manual is oriented around the program's menus. It begins with a quick menu guide and then goes into depth on every menu option. Each section discusses the various options within the menu and includes Mac screens that you will see. The manual does not contain a tutorial or sample data set with annotated output, but does include an index and a listing of the formulas used in the computations.

Unfortunately, Statworks comes on a protected disk. While it can be copied to a hard disk, it does require a periodic insertion of the Master disk once every two weeks thereafter. This is a bit of a nuisance to the hard disk user, though not as bad as systems requiring a master to be inserted each time the program is accessed. Written by Datametrics. Marketed by Heyden & Sons, 247 S. 41st. St., Phila., PA. 19104. Price \$125.00

Click Art Effect. Do much painting with Mac Paint? You'll find Effects to be a valuable enhancement to Paint's features. It provides four new functions which you can use while in MacPaint. It allows you to rotate a selected area any number of degrees (not just in 90 degree increments). You can slant a selected area to give a "leaning tower" effect. Perspective can be added to give your pictures depth. Lastly, a rubber-banding effect can be applied to distort portions of your art work. Not only are these features powerful, CAE is as easy to use as any other MacPaint option since it becomes part of your MacPaint menu.

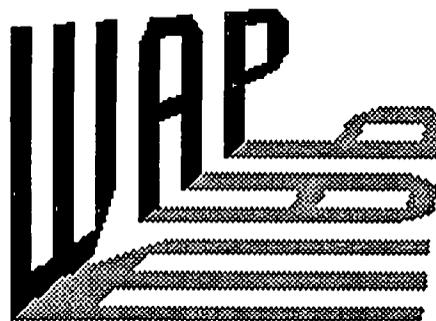
Installation and Use. The diskette contains an installation program. After dragging the program onto a disk with MacPaint, you need only double click on it. In a matter of seconds, your MacPaint program has been expanded to include four new, valuable effects. The effects can only be activated from within MacPaint. If you select the Black Apple at the top of the screen, you will see what appears to be a new desk accessory, Click-Art Effects (see below). This choice is not available at any time other than when in MacPaint. When you select CAE, the usual MacPaint icon menu at the left

changes to the CAE four effects (rotate, lean, perspective and distort).



1. Select the ClickArt accessory
2. The MacPaint Menu Changes

The Effects. You almost have to see them to believe what they can do. How about the following examples. First, using the perspective option, you can take letters and give them depth. You select your text using the rectangular border (in this case two version of the letters WAP) and point to a corner of it. By clicking and grabbing, you determine how much perspective is applied. In the example shown below, I had to match up the two versions of the letters so they came together smoothly.



You can use rotate to tilt images or text as follows:





FREDERICK APPLE CORE

A SLICE OF THE WASHINGTON APPLE PI



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

The SIG MAC of the Frederick Apple Core meets the fourth Tuesday of each month in the same location and at the same time. MAC owners in the local area are welcome. Call Lynn R. Trusal for details.

Upcoming Programs

September 12, 1985 - Modems
October 10, 1985 - Computers as home controllers

SIG MAC Upcoming Programs

August 27, 1985 - Demonstration of Lotus JAZZ
September 24, 1985 - Copy and spelling programs

CIRCLE THE MACINTOSHES - Survival in an IBM Environment: Memories of the First Year by Lynn R. Trusal

As a Macintosh owner and enthusiast for over one year, I have quietly been fighting a guerilla war to establish the Macintosh as a viable alternative to the IBM beachhead in my Research Institute. As microcomputers became more accepted by the head of the computer science group, various microcomputers began appearing within the Institute. I could take a rough census by counting the number of empty computer boxes that littered the hallways outside laboratories and offices. Apple IIe's and IBM PC's appeared to be neck-in-neck, and the decision of which to order was the subject of much discussion and friendly rivalry. The battle lines were drawn as Apples took an early lead only to be surpassed by "Big Blue" down the stretch. Within the Institute, each Division appeared to make its decision based largely on which investigator took the most interest and which computer he or she knew best. Many Apples were dedicated to data acquisition chores such as number crunching for ELISA readers and never saw the light of word processing or the thrill of graphics output. Some Apple IIe's, were placed on movable carts complete with drives and bolted down printers to respond at a moment's notice to special needs. IBMs were often found on desk tops serving as personal computers to

individual investigators, until they realized that there was no more room on the desk top. To alleviate this problem, special carts were purchased to house the IBMs and accessory equipment so that the desk top could be reclaimed. Investigators who ordered personal computers quickly found many uses to increase their productivity. As resistance faded, more and more scientists saw what could be done with their own microcomputer and quickly inquired how they could order their own.

Then I purchased my Mac through the Washington Apple Pi's group buy and quickly lost interest in my Apple IIe. Don't get me wrong; the IIe served me well, but the Mac was "something else." I began to see more and more uses that would make my job easier. Although I have never considered myself a good writer, I found it much easier writing manuscripts using the Macintosh. Large productivity gains began when I was able to go from the brain to the keyboard without using previously written output. There are still a few old timers who insist that scientists have better things to do than to word-process their own manuscripts. They prefer to write it out by hand or to dictate into a dictation machine for the secretary to word-process. I have never know anyone who
contd.

can organize thoughts in their head well enough to use a dictation machine without numerous rewrites. Dictation also requires special care to organize punctuation, etc., for the typist. I would agree that if the manuscript is first written out by hand and then put into the computer by the investigator, not much is gained. I now feel comfortable getting a rough organization in my head and then entering it into the computer. The capability to read the output and do instant editing on the screen makes the job go much faster and the result is more polished. I am also able to devote an entire day to the manuscript by doing my own editing. If I wrote it out in sections and gave it to the secretary it would be days before I received it back with more editing and rewrites required before the process repeated itself. I submit that this is much less efficient than doing most of the work myself.

After several months, I felt comfortable enough to haul the Mac into work to show my boss. I set up the Mac in the small conference room and proceeded to demo it for two people. Before I realized, there were about ten people standing behind me viewing the demonstration. Little did I know, but the invasion of the Macintosh into the Institute had begun.

We quickly ordered two 512 K Macs; one for myself and one for my boss. Within several months of their arrival, I was asked to demonstrate the Mac as one of several possible "desk-top personal computers" that investigators and administrators could order. In addition to the Macintosh, there was an IBM PC and a DEC VT 240 terminal that could talk to the VAX but not much else. Onlookers quickly saw that "dumb terminals" were not the way to go and the Mac and the IBM PC were in a battle for user attention. Within months, Macintoshes showed up on the desks of the editor, two division directors, three department heads, and assorted investigators like myself. At last count, there were 12 Macintoshes in the Institute. Was "Big Blue" now dead in the water? No, IBM PC's continued to be ordered in the form of XT's and more recently AT's, but the Mac was firmly entrenched. Investigators who had not been part of the microcomputer revolution realized that the Macintosh was much easier to use and had a considerably shorter learning curve than the IBM PC. As a side light, I have found that as far as military users are concerned, there seems to be an inverse relationship between the user's rank and the ease of use. You figure it out! I was pleased that one of the Institute's most knowledgeable IBM users recommended that one of her colleagues buy a Mac when he asked for advice. The smaller size of the Macintosh is a big selling point when investigators realize that putting an IBM PC on the desk often means removing the telephone, books, papers and anything else in order to make room.

In spite of the Macintosh invasion, we continue to have friendly discussions and verbal battles about the Mac versus the IBM. I arrived one day for work only to find the international symbol (i.e., a circle with a line through it) surrounding the Apple logo pasted on my office door. I have since retaliated by putting a bumper sticker which says "I'd rather be driving a Macintosh" on top of that particular IBM user's "Symphony" poster. To this day, he has not seen it. I recently delighted in inviting four IBM users to watch a demonstration of Switcher used in conjunction with MacWrite, Multiplan, and Chart for designing, analyzing, and

plotting research data. They looked in awe as I quickly copied spreadsheet data to the clipboard and, with a key stroke, switched to Chart for pasting the data into a data box. After several switches, the graph was finished and pasted into a MacWrite document for later enclosure into a research notebook. They left the office shaking their heads in amazement. As another side light, I recently passed an office where an investigator was trying to print out a data table with a double strike mode on an Epson printer. He was using an IBM PC and Word Perfect. When his efforts were not meeting with much success, I heard him mutter to himself that, if he had a Macintosh, he would have been done by now. A colleague standing next to him said that maybe he should get a Mac, in spite of the fact that he had already ordered an IBM. The war goes on, battles are won and lost, but the Mac is here to stay.

Within my own Division, we now have five Macintoshes, and I have ordered an Apple LaserWriter printer and AppleTalk connectors to network the Macs to the laser printer. The individual Imagewriters will still be used for the bulk of printed output and number crunching but the LaserWriter will be able to produce high quality text and graphics when needed. I am also planning on purchasing a 70-Mbyte hard disk with removable backup tape cartridge for completion of the Division's Macintosh local area network (LAN). Eventually the hard disk will serve as a file server and print spooler. I will format the hard disk to give each user 10 to 15 M bytes of room and transfer the system folder to the hard disk to free up a badly needed 247K for disk space. Many of the IBM users have purchased 20-Mbyte removable hard disks for their PC's at about \$3000 each, but I will be able to provide 70 M bytes for about \$5200, resulting in significant savings. The ease of hookup and the cost of only \$50 a connection make the AppleTalk network very economical for small working groups within our Division. Eventually we will hook the AppleTalk LAN to a planned x.25 twisted pair LAN which will be replaced by a coaxial LAN to be installed in the near future. Gateways and protocol converter are under development to allow the AppleTalk LAN to communicate with these other networks. Eventually, each Macintosh user will have the ability to use their Mac as a free standing computer, share a file server and laser printer, or gain access to the VAX minicomputer or Amdahl mainframe located on the post.

While Apple Computer still seems to be trying to find the right target for the Macintosh Office, their latest effort appears to be more on target. The Macintosh is an ideal personal computer for small working groups, such as in research laboratories. Some divisions may choose to go with IBM and others with Macintoshes to fulfill their individual needs. There is no reason that both the Mac and "Big Blue" can't coexist within the same organization (see *PC Magazine*, July 23, 1985 issue, "PC vs. MAC", p. 110). As more and more products are developed that allow sharing of expensive peripherals such as laser printers and file servers, the development of LAN's and protocol converters will allow Apples and IBMs to peacefully coexist. Battles will go on but neither side needs to lose the war! ☺

FROM TYPE SLUGS TO LASERS: PRINTER HISTORY - Part 2

by John S. Lee

(Ed. Note: This is the second part of an article that appeared in the August Journal, page 16. This part was omitted in error from the August Journal, and we wish to express to the author our regret at this omission. Part 2 begins with a continuation of "Ink Jet Printing".)

INK JET PRINTING (contd.)

The advantages of the ink jet printer are its low noise (<50 dbA), fast printing speed of 150 to 200 cps, light weight, and portability. Also, given the right model, the ink jet printer is also capable of producing astounding, sharp, truly colorful graphics.

Its disadvantages are the cost of replaceable ink cartridges or replaceable head/ink cartridges and the higher cost of special paper for this type printer.

LASER PRINTERS

Until 1980, laser (electrophotographic) printers were typically large systems, only affordable by companies that required electronic on-demand printing of manuals, brochures and literature. But just over three years ago, the first tabletop laser printers appeared from Japanese manufacturers. The new machines printed so quickly that a new rule of measure came into being. Characters per second (cps) now gave way to pages per minute (ppm).

Yes, laser printers were now more affordable and smaller, but one could really still only justify the purchase if the printer was linked to several computers and the company could eliminate the use of a print shop or typesetter.

The technology behind the laser printer is a little too complex to describe in this article. However, the technology is similar, in some aspects, to a photocopier, because xerography is used in the printing of the laser-generated images. How the images are generated by the laser to the photoconductor drum is another story. Some of the major problems plaguing the technology have been determining a standard input for the printer and then determining how the printer should interpret the signals for high resolution graphics, ASCII text, and different fonts and font sizes.

Of interest is the fact that Apple Computer and QMS both use the PostScript language, developed by Adobe Systems Inc., that stores characters as a series of vector plots. This allows the printer to use only one set of vector data to calculate the size and scale of fonts, anywhere from four points to a size larger than the paper itself, without the need of extensive memory for each font size.

The major advantages of the laser printer are speed, speed, speed, and sharp character definition. The printer is extremely fast - capable of 100 ppm plus - and provides dot densities as high as 480 dpi. And if you want your cake and eat it to, the

laser printer does all the above in a very quiet way.

ELECTRO-EROSIVE PRINTERS

A very little heard of printer technology, and a very unusual one, electro-erosive printing, also just happens to be a very fast form of printing, with speed capabilities of well over 6 ppm. In their basic design, these are high-speed, spark printers, where a brush contact, or array of contacts, receives a high voltage DC charge whenever a darkening of a special conductive printer paper is desired. Did you say special paper? Here we go again !!

The major advantages of this type of printer is its high printer speed, its ability to produce dot densities of 600 to 800 dpi, and the simplicity of its mechanism that allows the printer to be scaled down, even smaller than a desktop laser printer.

But this printer is not for everyone, especially if you work in an environment that contains volatile, flammable gases or high oxygen-content, because your first experience with your new printer may be your last experience.

THE FUTURE

What the future holds, no one can really say for sure, because today's dreams are tomorrow's realities. The printer of the future may not even be on paper today, but here are a few thoughts on where printer technology is headed.

The true letter-quality, fully formed, character printer will probably still hold its own but will mainly be used for quality text printing only, like business correspondence and reports with no graphics.

The dot matrix printer has been and will continue to gain wider acceptance in all areas - home, business, and wherever. The reason for this is that the dot matrix printer is flexible and capable of producing so many different types of print plus graphics with little hassle. The trend in dot matrix printers will be to make its features easier to use (what good are all the fancy features if you don't know how to use them?) and also to improve the resolution and throughput of the print with more pins and faster transports.

As far as thermal transfer printing is concerned, even today the designers are working on thermal re-inking system. The most promising is the reservoir thermal ink replenishing system. This system constantly re-inks a donor carrier ribbon. This allows the elimination of the disposable ribbon cartridge, a major disadvantage with today's systems. This system, because of the higher viscosity ink, may allow the use of standard paper, the second disadvantage to today's thermal transfer printers.

Ink jet printers are being developed that have page-wide ink jet systems that may rival low-end laser and electro-
contd.

photographic systems. This, as well as color capabilities, may keep the ink jet alive in certain specialty areas.

Laser printers will become popular as prices fall and a better standard is developed on interfacing them to computers. In the works are colored graphics, which are presently being driven by the color photocopier market. The same technology used in color photocopiers will then be adapted to the laser printer.

Another thing to watch for is combinations of the above. Some printer companies have already released printers that have both a daisywheel and dot matrix printhead on the same transport bar. Maybe they will come up with other combinations.

What else lies on the horizon is hard to say. Color, as well as text mixed with graphic, appear to be becoming more and more popular. It would be relatively safe to say that printer designers will cater to the needs of the masses. Beyond this, the only fact that is certain is that printer technology, like computer technology, will continue to change.

SOURCE MATERIAL

- "The Speed of Light", Digital Review, Oct. 1984.
- "Meet the Jet Set", Popular Computing, Dec. 1984.
- "Printers and Plotters", Electronic Engineering Times, May 20, 1985.

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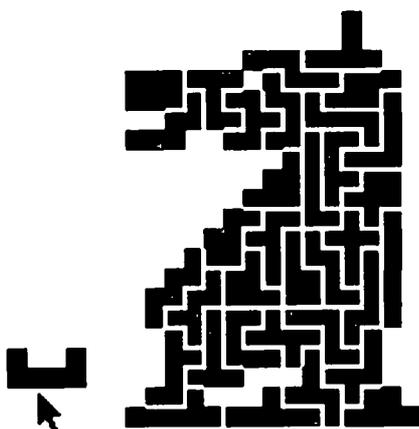
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MacNosy™: A Review

By Jonathan E. Hardis



On June 6, the SigMac Programmers' group hosted Steve Jasik, author of MacNosy, who demonstrated and spoke about his product. Overall, he was well received, and most in attendance were rightly impressed. This review is for those of you who didn't attend, and even for those of you who did. MacNosy is a creative and useful product, that falls somewhat short of what you might expect and hope for in a commercial offering.

By its title, MacNosy leaves a first impression of being somewhat naughty. The "Nosy" refers to snooping - the "reverse engineering" of other people's programming. I'm going to defer until later a discussion of what MacNosy is good for and why you, as an honest person, might want to buy it. You should know that it is a legitimate product, licensed by Apple to include the Mac system software, and it is included on the official Mac products list. But for the time being, please keep an open mind and don't prejudge the product as a weapon of mischief.

The final, executable form of a program (an Application in the Mac's parlance) is only a distillation of the form the programmer originally wrote it in. While the programmer thinks and writes in terms of English-like ideas, such as ADD, the compiler and assembler translates these ideas into the cryptic patterns of binary ones and zeros that only the computer could love. High-level languages, such as Pascal and BASIC, allow the programmer to ignore the details of the specific type of processor being used, while Assembly language helps to make those details manageable. A programmer may name a section of computer memory, to help her to remember what it's used for. Likewise, he might assign names to subroutines and branch points in order to remind him what they do. Additionally, good programmers leave explanations (in English) of their work and why they're doing it. These additional reminders also help others to understand it as well.

MacNosy's purpose is to reverse the program development process. Starting with Mac program code, MacNosy helps you to acquire a human-readable program listing back again. Program code can either be an entire Application, the ROM itself, Driver segments (such as Desk Accessories), INIT segments, or any other Macintosh resource that is executable code. MacNosy only goes back to Assembly language, not to high level languages, as is typical for such programs. And, of course, MacNosy has no way to reconstruct the programmer's comments and namings.

If you do not understand 68000 assembly language, neither MacNosy nor the rest of this review are for you. If you want to see a simpler disassembler, I recommend the BASIC program MacMonitor on SigMac Disk 4.

While most disassemblers only translate small sections of code, without trying to get the overall view of the program, MacNosy claims to be an "intelligent disassembler". Starting at the program's entry point, it tries to block off what is code, and what is data; what are subroutines (procedures), and what are branch alternatives. Through what Jasik describes as a "treewalk and global flow analysis", MacNosy attempts to reconstruct a structured program in a structured way. Not only are procedures cross-referenced (even across CODE segments), but it picks up the names of the Macintosh A-traps and low-memory globals. And if the original program was written in Lisa Pascal, MacNosy will incorporate the symbol table if it was left around after debugging.

For example, the MDS source code:

```
LOOP  _SystemTask
      CLR.B  -(SP)
      MOVE  #-1,-(SP)
      PEA   EventRecord(A5)
      _GetNextEvent
      MOVE.B (SP)+,D0
      BEQ.S  LOOP
      MOVE  What(A5),D0
      ADD   D0,D0
      MOVE  ETable(PC,D0),D0
      JMP   ETable(PC,D0)
ETable DC.W  LOOP-ETable      ; null
       DC.W  MSEDWN-ETable    ; mouse down
       DC.W  LOOP-ETable     ; mouse up
       DC.W  KEYDWN-ETable   ; key down
       DC.W  LOOP-ETable     ; key up
       DC.W  LOOP-ETable     ; auto-key
       DC.W  LOOP-ETable     ; update
       DC.W  DSKINS-ETable   ; disk inserted
       DC.W  LOOP-ETable     ; activate
       DC.W  LOOP-ETable     ; abort
       DC.W  LOOP-ETable     ; network
       DC.W  LOOP-ETable     ; I/O driver
```

can appear after MacNosy recovers it as:

```
loc_1  _SystemTask
      CLR.B  -(A7)
      PUSH  #$FFFF
      PEA   glob9(A5)
      _GetNextEvent
      POP.B  D0
      BEQ   loc_1
```

```

MOVE    glob9(A5),D0
ADD     D0,D0
MOVE    data1(D0.W),D0
JMP     data1(D0.W)
JBIAS   0
data1   JUMPL  loc_1
        JUMPL  loc_3
        JUMPL  loc_1
        JUMPL  loc_2
        JUMPL  loc_1
        JUMPL  loc_1
        JUMPL  loc_1
        JUMPL  loc_16
        JUMPL  loc_1
        JUMPL  loc_1
        JUMPL  loc_1
        JUMPL  loc_1

```

Here, we can begin to see some of the ups and downs of MacNosy. It did a good job of recognizing the existence and structure of the jump table, and it even used a special Macro instruction to call our attention to it. (The Macro also allows for an offset, defined by JBIAS.) However, those loc_n symbols mean local labels. Instead of presenting them as @n, as MDS would take them, Jasik chooses to use the convention found on his old Cyber 170 assembler. He expects us to edit MacNosy's output to make it usable.

The road from Application to MDS source code is hardly traveled in automatic. After doing the tree walk, MacNosy lets the user supply more information, often badly needed information. MacNosy lets you classify and reclassify blocks as being of code or data. You can change the generic label names to ones more meaningful to you. And you can reformat how data sections are presented.

But the command language to do all of this is not friendly to use, and the documentation is obtuse and badly presented. For example, to "Review" block number 1, that is, to be offered the chance to change its classification, you have to type "R1". If you type a space between the R and the 1, you are told there is a non-digit in your number. If you type "1R", you get the big bomb. Few commercial products skimp so badly on the user interface. (MacNosy doesn't use the Mac user interface in order to be adaptable to other 68000 machines in the future.) You don't have to be a stickler for organization in order to be put off by a menu that reads:

```

Review {Untyp|All}{d#}, Allproc{seg#}, Proc_byname,
By_attr addr, Display, Explore Search <Addr_ref
name_list|Trap_ref name_list|Rsrc_type char4|String
chars>, Tbl_dmp, Hardcopy, Jrnl, Wait, conVert {a#},
List_rsrc{type}, ref_Map, Outredir(file), Quit

```

So, like many of the developer's tools available for the Mac, MacNosy requires trial and error learning and a period in which to develop expertise. Fortunately, Jasik is taking pains to bring MacNosy users together in order to share what they've learned and done. MacNosy is able to produce a "Journal File", which allows other users with the same original program product to "play-back" a MacNosy session on it. Though a private Forum on Delphi, MacNosy owners will be able to

exchange journal files and other forms of help. My experience with the Journal facility has been mixed - like the rest of MacNosy, it doesn't always work as expected.

Why might you want to buy MacNosy? Its two main uses are to study Mac software, and to change Mac software. Also, it has been used on at least one occasion by a software developer to recover source code that hadn't been backed up.

Jasik himself seems particularly interested in disassembling the Mac's ROM. Beyond the curiosity about how all the "magic" really works, there are those who want or need information beyond that provided in Inside Macintosh. The folks at General Computer, for example, were reputed to have used MacNosy to learn how to design the Hyperdrive. Jasik spoke at the SigMac meeting of a project to add comments to the entire ROM code.

Potentially, MacNosy could be useful for those writing a program which is intended to be compatible with another. You would use it to look for features and pitfalls which wouldn't otherwise be obvious.

Also, for those of us trying to learn how to write Mac programs correctly, MacNosy allow us to produce simple, working examples of source code. Desk accessories and simple utilities are often short enough to be manageable.

The other main application of MacNosy is that the source code it produces can be fed back into MDS (after a bit of cleaning up) to produce a modified version of a program. Here, we enter some very touchy ground. There are those who see MacNosy as another tool to defeat copy protection. While few will object to what you do for pure fun and personal purposes, modifying and redistributing commercial programs would not only infringe on the copyright, but it would also damage the "good name" of the firm if the modified product behaved differently than the original in any respect.

But all is not illegal or immoral. There are plenty of public domain programs which almost work correctly, or not quite the way you'd like them to. Using MacNosy is a way to vent your anger while trying to improve them, and while learning about Macintosh programming in the process. This is not to suggest that things go quickly. It's been a month already since I first started unwinding a short but faulty Desk Accessory that MacNosy and I were able to disassemble in an hour.

In summary, MacNosy does an adequate job of achieving its goals. However, it does not have the polish nor the safety features I would expect in a commercial program in its price range. You are left to wonder why, after going 97% of the way to produce a likable product, Jasik holds up on the last, frustrating 3%.

MacNosy runs on a 512K Macintosh, or a 1M XLisa running MacWorks. It is available directly from the author, Steve Jasik, at 343 Trenton Way, Menlo Park, CA 94025. The price (about \$60) and the revision date are subject to change; phone (415) 322-1386 for current information. ☞

MACINTOSH REVEALED: VOLUME ONE

UNLOCKING THE TOOLBOX: Book Review

by Bonnie L. Walker

Macintosh Revealed: Volume One Unlocking the Toolbox (516 pages, \$25.95 --paperback) by Stephen Chernicoff is finally off the press. I say "finally" because I originally read about this book last summer (1984) in *MacWorld* magazine and sent in my check to Hayden Book Company. A few weeks ago (June 1985) my copy finally arrived. The publishers tell me that Volume Two: Programming With the Toolbox will be sent to me in August.

"At last," I thought, when my copy arrived, "Here is a book about the Mac for programmers and not for users." The first thing I observed; however, as I perused Macintosh Revealed, was that it was extremely similar to Apple's "infamous" documentation, that voluminous set of loose leaf notebooks called *Inside Macintosh*, for which I paid Apple \$150.00 plus \$100.00 for updates. The reason for this, I soon realized, is that the author served as Editor-in-Chief of Apple Computer's publication department and helped write *Inside Macintosh*.

Most importantly, for potential purchasers is that Macintosh Revealed, like *Inside Macintosh*, assumes a knowledge of Pascal and/or 68000 assembly-language. Although the book will be most useful to Pascal and assembly-language programmers, the Toolbox, the term for Mac's 64K of ROM routines, doesn't care what language you use, as long as you follow the proper rules and conventions. Thus, BASIC or C programmers can find useful information in Chernicoff's book.

Chernicoff explains in the book that when Apple first began developing Mac software, they used the Lisa (now known as the Macintosh XL) --both of which have since been discontinued. The Lisa programming environment with its Pascal compiler and 68000 assembler became the *de facto* standard for programming the Macintosh. Apple has since released a software development system that includes the Pascal compiler and 68000 assembler for Macintosh developers. Chernicoff's book, however, was completed prior to both the discontinuation of the Lisa and Mac XL and the release of the Mac 68000 development system. Thus the example program which was compiled on the Lisa and which forms the core for Volume Two of this book may not be entirely compatible with Apple's Mac development system.

Volume One covers the principles of the Toolbox.

Topics include the basic conventions for calling the Toolbox from an application program, memory management, fundamental concepts behind the QuickDraw graphics routines, how to use QuickDraw to draw, Macintosh resources, how to start programs and load code into memory for execution, and how character text is represented inside the computer and displayed on the screen. Volume Two covers the parts of the Macintosh user interface such as events, windows, menus, cut-and-paste text editing, controls, alert and

dialog boxes, and disk input/output. Volume Two will include an example program with a simple interactive text editor which will provide a framework for developing an application program. A software disk containing the source code for that program is also promised.

Meanwhile, back to Volume One. Chernicoff's book is well-written, attractively laid out, and well organized. For people looking for the type of help it provides, it is the best thing currently available. With the exception of Chapter 1, each chapter consists of two parts: an overview of one feature of the Toolbox and how to use it called the Guidebook, and a reference section called the Handbook. Although this book is not for beginners, Chernicoff makes a remarkable effort to thoroughly explain the extremely complex nature of the innards of the Toolbox, the ROM code that ensures that "all Macintosh software shares the same easy, intuitive user interface."

Topics included are: The Trap Mechanism, the Stack, the Pascal Interface, Stack-Based and Register-Based Routines, each illustrated by programming examples given in Pascal form with additional information on how to use them in assembly language. "Thanks for the Memory," compares the memory organization of the 128K and 512K Mac as well as the 512K and 1M Macintosh XL. Throughout the text, Chernicoff provides numerous charts and figures that clarify the information.

Two chapters are devoted to explaining the graphic routines called QuickDraw which puts everything you see on a Macintosh screen including text, pictures, windows, and menus. Chapter 4 discusses the underlying principles and concepts behind QuickDraw; Chapter 5, "Quick on the Draw," explains how to use QuickDraw.

Chernicoff presents a thorough tutorial on the subject of resources (menus, icons, character fonts, dialog and alert boxes) along with the detailed reference section. Chapter 7 discusses the way code is loaded into memory for execution.

You will need this information if you plan to produce "stand-alone" programs that can be started directly from the Finder or to define your own icons for the Finder desktop. Topics include: Packages (a collection of routines grouped together), Signatures and File Types, Finder Startup Information, Finder Resources, Drivers and Desk Accessories, and the Desk Scrap. The last chapter explains how text is represented internally and how to display it and control its appearance on the screen.

Volume One concludes with several useful appendices. The Toolbox Summary lists information by chapter, repeating the information given in the reference sections. Appendix B, Resource Formats, details each Resource Type. Appendix C summarizes Macintosh Memory Layouts. Appendix D, Key Codes and Character Codes, is a quick guide to the

contd. on pg 59

LEVCO 512K MAC UPGRADE KIT: A Review

by Jeffrey R. Walsh

In spite of warnings about the Mac motherboard with non-Apple products, I couldn't avoid the temptation of trying out the new Levco Memory Upgrade kit. Since the price of 512K ram chips has fallen significantly over the past few months, the cost of the upgrade has been significantly reduced. Although Levco sells a complete kit including RAMs for less than \$200, I was able to complete the job for less than \$100. Not bad for something which came out six months ago for \$1000.

Levco offers three kits, the first of which has instructions and all parts necessary excluding RAM and sockets. The second kit includes sockets and the third includes the RAM. I chose to buy the first kit and supply the sockets and RAM myself. The most expensive component, the 512K chips, cost less than \$8.00 each from Levco, and even less from other sources. For someone doing just one upgrade, I would recommend buying the complete kit from Levco.

Each kit contains a package of instructions and parts necessary for the upgrade. These parts include some resistors, a capacitor, an integrated circuit, and a small printed circuit board. This PC board is necessary for earlier revisions of the Mac Digital board. More recent versions utilize the same board for both 128K and 512K Macs, so this extra PC board is not required.

You can tell which version of the board you have by comparing it to the picture in the November issue of Mac-World. The later version has boxes indicating 128K/512K boards. Earlier versions were only made for 128K of memory. Opening the Mac case is not simple, so I recommend buying the special toryx driver (5\$) from Levco along with the upgrade kit. This driver fits into a standard nut driver so it can reach the screws under the handle.

The basic procedure for upgrading the memory is as follows. First, the Mac must be opened up and the digital board removed from the case. Then the 64K chips are cut off the board, to facilitate removal of the individual pins. Next, the pins are removed and the solder is cleaned from the holes using a solder sucker or other suitable tool. When all solder has been removed, the sockets are mounted on the board. At this point, the extra integrated circuit is attached to the small PC board or soldered directly to the digital board. If the small PC board is required, it is then attached to the digital board. Finally, the RAM chips are inserted into the sockets.

The do-it-yourself memory expansion kit is not for everyone. It requires about 4 hours of assembly time, and experience with desoldering. Since a total of 256 pins must be desoldered, there is always a chance that things may go wrong. Improper technique may damage the board and leave it beyond repair, but only in extreme cases. There are many pins to be cut, holes to be cleaned out and resoldered, so the job is very tedious. Obviously, Levco assumes no responsibility for damage to your Mac. Nevertheless, with careful attention to detail and a bit of patience, the job can go very smoothly.

The only problem I had during the procedure was removing and desoldering pins 8 & 16 on each chip. This is because these pins provide power connections, connecting to several layers of the board. Since this acts as a considerable heat sink, more heat is required to remove the pins.

The instructions included with the kit are clear and concise. There is also an addendum devoted to troubleshooting should a problem arise. Levco offers telephone support for those who cannot resolve the problem, although I did not need to call for help.

Since the above kit involves opening the Mac case and modifying the digital board, it certainly invalidated the warranty from Apple. It also raises the question as to how the board would be repaired in case of trouble arising due to the upgrade or an unrelated problem at a later date. Apple dealers normally swap in a new board without troubleshooting the old one, so it is not clear what would happen when they receive a modified board. I suspect that repair under those circumstances may cost a bit more than usual.

If you want to save lots of money, are experienced with desoldering, and enjoy doing things yourself, then consider buying the Levco kit. Alternatively, you could wait until Apple reduces its prices a little more. By purchasing enough chips to modify 5 machines, we were able to provide the upgrade for less than \$100! ☛

Mac Revealed contd. from pg 58

Hexidecimal code for each character. Appendix E, Error Codes, lists the Operating System error codes including those not covered in the text of the book along with a list of "Dire Straits" Errors which are reported directly to the user. Appendix F is a Summary of Trap Macros and Trap Words. Appendix G is a Summary of Assembly-Language Variables. Finally, Macintosh Revealed, includes a useful and very detailed glossary as well as an unusually detailed index.

As a Mac programmer involved in developing what will eventually be a "stand-alone" application program, I am looking forward to Volume Two of this book. As an old Apple II programmer, used to BASIC, I have resigned myself to the fact that Mac development dictates learning to either love Pascal or switching to assembly-language. Even though there are a growing number of high level languages available for programming on the Macintosh, an application programmer seems better off working in the Mac's native language if only because the degree of support from Apple Computer will probably be greater. ☛



by James M. Burger

A Users Group...

Even during my business trips, despite the lack of a lap Mac, I cannot get forget about Apple. This trip I dropped in on the local Apple Users Group, and what a group it was. Would you join this users Group: like Washington Apple Pi - a membership card, monthly meetings for //, /// and Mac users, Special Interest Groups, a monthly journal (although in color and typeset), disk sales, and a library. But in addition it offers: a multi-user mainframe bulletin board system (but only the first 30 minutes free, \$20 per six hours after that), free seminars, an entire floor in a modern downtown office building, numerous //s, ///s, Mac's, MacXL's and Laser-writers available, open 12 pm to 7 pm, 10 full-time professional staff members, a 7-day 7-hour hotline, credit for purchases from dealers (and member discounts at dealers, club arranged "Apple-Fests", and group trips to Cupertino to visit Apple.

This user group actually exists, but attending meetings involves a little travel. The name: Le Club Apple. Location: 43, Avenue de la Grande-Armée, 75116 Paris. Telephone: (33) (1) 501.55.05. Dues: 400 French Francs (about \$45) if you live in France or 580 Francs (about \$67) for others for one year (this does include a stiff 18.7% tax).

Actually, I stumbled upon Le Club by accident. Recently, I had a short business trip to Paris. (Ah, July in Paris, my favorite city, except too many Americans). Some documents needed to be filed with the French Government. It seemed that it would be a great convenience if I could find a Mac and a printer there if I needed to make changes. The French equivalent of the yellow pages sent me to a local dealer near my hotel.

Dealers seem to have their counterparts worldwide. Even in my broken French it became clear that I was not there to buy. The dealer quickly ushered me out. But, I was handed a card with Le Club's address.

While I am fondly attached to our Bethesda office, I was not prepared for Le Club's quarters. Only 2-1/2 blocks from the Arc de Triumph (the Etoile), a hand lettered sign in the lobby of an office building directed me to the 8ieme floor. I expected the French equivalent of Woodmont Avenue. Instead, I was greeted by a very busy receptionist surrounded by ringing phones. To the left was about 3,500 square feet of meeting room space with about six Apples of various lineage, a large TV monitor, a library and a seating area. To the right was about the same amount of space devoted to offices and seminar/workshop areas loaded with Apple equipment, including at least one Laserwriter. Recovering from shock (this is a users group?), I asked if I could talk to an official.

I was ushered into a pleasant office and introduced to the charming Sophie Heuzé. Mme Heuzé works full time as the Club's manager. (If we had as nice an office, including the

view, for our President, Tom might quit the practice of law).

Mme Heuzé said that Le Club was only one year old but that it had 8,000 members. In addition to herself and the receptionist, the other full time employees are their journal editor (L'Écho des Apple - Apple's Echo), a secretary, an accountant and five full-time hotline persons. (Our Journal and the numerous hotline volunteers visibly impressed Mme Heuzé).

Asking on behalf of Ed Myerson (and the rest of the WAP Board that carefully watches every penny of our money), I asked how could Le Club afford their grand facilities, professional staff, etc. when each member spent under \$45 a year in dues. Mme Heuzé was quite candid and explained the roots of Le Club.

Apple France, then under the leadership of Jean Louis Gassé, recognized that no matter how expert, dealers could not adequately support a vast body of users, especially small business people. (50% of Le Club's members use their Apple's in small business). But Gassé believed that buyer confidence needs a support system. So Apple France was a leading element in the founding of Le Club. Apple France provides a substantial subsidy and helps promote Le Club. Dealers are encouraged to send new buyers to Le Club. Gassé's efforts in selling Apple's in France were recognized by his recent promotion to Apple headquarters in Cupertino.

I asked Mme Heuzé the price of such dependence. She said that Apple did not exercise editorial control over the organization or the Journal. But while L'Écho des Apple is quick to point out "bugs", the distinct impression was that criticism of Apple policy would be a more delicate subject. Instead of group buys, however, members get a discount at local dealers (in France this is more significant than here, since dealers usually charge list price and ordinarily don't give discounts.)

While, I have pressed for a closer relationship between Apple and its user groups, I'm not too sure that the French model could be cloned here. Although I don't always agree with our Board's positions or those espoused by individual members in the Journal, I treasure our independence; as do many other members. Nevertheless, Apple should do more to encourage users groups in this country and, on our part, we can work closer with Apple without giving up our independence. Apple and the users groups can work together for the mutual benefit of all present and future Apple owners.

Meanwhile, Washington Apple Pi and Le Club Apple have exchanged memberships. For those of you that read French, the last four issues of L'Écho des Apple are now in our Library (an incomplete micro dictionary follows) and we will receive future issues. Visiting WAP members are welcome to drop by Le Club's offices in Paris. (If any of you

cont'd.

write decent French (I don't) please contact me. L'Écho des Apple would be interested in publishing an article in their Journal about WAP). Also, if any WAP members are interested in French public domain software, let me know. We will be getting some from Le Club.

LE DICTIONARY

[Many terms are Français (i.e. adapted English), for example, le modem, Le Kit d'Upgrade, and I have not included them.]

Les Accessoires de Bureau - Desk Accessories
Applemaniaque - Apple Fanatic
Assembleur - Assembly Language
Bloquage Majuscule - Caps Lock
Les Boîte de Rangement Pour Disquettes - Disk Storage Box
Les Buggs - Bugs
Le Clavier - Keyboard
Les Colones - Columns
Les Concessionnaires - Dealers
Corbeille - Wastebasket
Cristaux Liquides - Liquid Crystal (LCD)
Un Développeur - A Developer
Disque Dur (...intégré) - Hard Disk (internal...)
Disque Virtuel - Virtual Disk
Disquette (...de travail) - disk (working...)
Dossier (...système, ...vide) - File (working..., empty...)
Double Haute Résolution Couleur - Double Hi-Res
Fichier - File
Graphisme - Graphics
Gros Systèmes - Main Frames
Les Icônes - Icons
La Imprimante - Printer
Interpréteur (...Basic) - Interpreter (Basic...)
Jeux d'Aventure - Adventure Games
Le Lecteur (...externe) - Drive (external...)
Une Liaison - Connection *
Logiciel or Le Programme (...de domaine public)- Program (public domain...)
Majucules - Upper Case
Un Mégaoctet - 1 Megabyte
La Mémoire - Memory
Mémoire Vive - RAM
Menu Pomme - Apple Menu
Micro-processeur - Microprocessor
Miniscules - Lower Case
Une Normalissator - Standard
Un Octet - Byte
Ordinateur Personnel - Personal Computer
Le Panneau d'Affichage - Bulletin Board
Pilotage de Périphériques - Peripheral Control
Port Série (cart...) - Serial Port (...card)
Un Retour Charriot - Carriage Return
Le Ruban - Ribbon
Un Saut de Ligne - Line Feed
Signal Numerique (...analogique) - Digital Signal (Analogue...)
La Souris - Mouse
Taille - Size

Le Temp d'Accès - Access Time
La Touche - Key
Trés Simple à Utiliser - User Friendly
Utilisateurs - Users
L' Utilitaire - Utility
* Ed. Note: Ah, those French...

PRODUCTS RECEIVED:

Unless otherwise indicated, the products are for the Mac and the price, if indicated in the suggested retail price.

SOFTWARE -

Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. **MacBooster**. A write-thru disk cache. Most frequently used data on a disk is stored in a reserved area of RAM, speed increases of up to 10 times.

INFORMATION RECEIVED:

HARDWARE -

Crescent Marketing Services, P.O. Box 1719, Lawrenceville, GA 30246. Mac-to-modem cables \$25 each, 10 or more \$19.50 each. DB-9 to DB-25, supports 300, 1200 & 2400 bps.

Metaresearch, Inc., 1100 SE Woodward, Portland, OR 97202. **Universal Microcontroller EMM-2048a** \$750. Intel 8031/51 based computer providing data sensing and control by serial lines. **BenchTop Instrument BEN-2048** \$650. A customizable laboratory computer. See below for software support for the Mac for both.

SOFTWARE -

First Byte, 2845 Temple Ave., Long Beach, CA 90806. **SmoothTalker 2.0** \$99.95. New version of software voice synthesizer. Female voice added and works with Microsoft Basic 2.0.

Future Design Software, 13681 Williamette Drive, Westminster, CA 92683. "Strictly Business" Accounting System. Module One: General Ledger \$395. Demo \$10. Accounting system with "SmoothTalker" driver (check numbers without looking at the screen).

Metaresearch, Inc. (see hardware above). Serial Products: **GriffinTerminal** \$89. Tektronix 4012 emulator, Unix vi editor with Quickdraw support. **GriffinText** \$69. "No frills" ASCII Editor with fast scrolling, search, printing and easy formatting. **Assembler/Editor/Loader for MCS-51 (Intel) CPUs** \$250. Programming of Intel 8051/8031/8751 microcontrollers from the serial port. **Rascal** \$99. "Real-time Pascal" for I/O oriented development.

SoftDesign, 14145 S.W. 142 Ave., Miami, FL 33186. **TimeBase** 10% rebate if bought from dealer. Time management system, calendaring program with project/event manager, "links" with (other vendor) word processor, data base or spreadsheet, plus own limited database. ☞

VERSATERM™: A Review

by John Voglewede

VersaTerm™ is a terminal emulator for the Macintosh. If you are using your Mac for telecommunications, or are considering it, you may be aware of the wide variety of terminal programs that are now available for your machine. Several of these programs are sold as part of an integral package, including both modem and software. The package cost may be high. In the public domain (that is, at no cost), MacTep and its progeny offer adequate, but somewhat cumbersome service. This is because MacTep is written in Microsoft's interpretive BASIC. As an alternative, FreeSoft's Red Ryder is a stand alone, "clickable" application. It provides state-of-the-art file transfer capability and automatically executed command files called Remote Service Procedures. These RSPs allow your Macintosh to work while you sleep. Red Ryder has many such features, but is not easy to use. It may also exhibit some "bugs" because it is an evolving product. Finally, Apple Computer's best-selling MacTerminal, offers a rugged but unimaginative terminal program for the conservative Macintosh user.

So why consider anything else? VersaTerm does offer an alternative to the more widely-recognized terminal programs. Like MacTerminal and (the most recent version of) Red Ryder, VersaTerm provides DEC VT100 emulation. The VT100 terminal is widely recognized for its sophisticated screen editing and graphics features. The VT100 protocol is also supported by a number of mainframe computers and online information services (e.g., CompuServe). VersaTerm's emulation of the VT100 includes cursor control, erase commands, line drawing graphics and a version of the VT100 keypad which uses the Mac's optional numeric keypad. If you require VT100 emulation, VersaTerm may meet your needs.

There are also differences between VersaTerm, MacTerminal and Red Ryder. In addition to the VT100 emulation, VersaTerm also offers the Tektronix 4014 graphics display terminal and, to a limited extent, the Data General D200 terminal. The Tektronix 4014 is an industry standard, high resolution graphics terminal. VersaTerm's emulation of this terminal includes four program-selected character sizes; mouse-driven, full screen cross-hairs; incremental plot and point plot modes. Graphics displays can be dumped directly to the printer or saved as MacPaint documents. The Macintosh cannot compete with the high resolution Tektronix display (the Mac has a 512 x 342 pixel display compared to a 1024 x 768 pixel display on the Tektronix). However, VersaTerm does provide a Tektronix compatible working environment for graphics software used on many mainframe computers.

VersaTerm may have been given its name because of its versatile file transfer capability. The File Menu offers protocol-free ASCII, Kermit, and several XModem protocols, including an XModem compatible with MacTerminal's X-Modem. Mac owners should note, however, that an "ultimate" file transfer protocol for the Macintosh (MacBinary) has recently been proposed and is not supported by most terminal programs. Red Ryder supports MacBinary. VersaTerm does not.

The Edit Menu looks and functions like the standard

Macintosh desktop menu except that the Paste function will paste the Clipboard to the output stream (to the telephone line) if the VersaTerm window is active. The VersaTerm window is shown in the figure. Paste performs its basic editing function in other windows. This includes VersaTerm's directory of telephone numbers. A Copy-Paste function is also offered. This function copies selected text from the VersaTerm window to the Clipboard and also pastes the text to the output stream of the terminal.

Baud rates are selected from the Baud menu. VersaTerm operates at data rates of up to 7200 baud with VT100 text and up to 9600 baud with vector graphics, without flow control. Higher data rates, up to 19200 baud, are supported with XON/XOFF flow control. Ninety-six lines of scrollable text are kept in memory for easy reference during the terminal session. Any scrollable text can be selected and printed, or the incoming data stream can be logged directly to the printer. User-defined printer text widths of 80, 120 and 132 columns are supported, with vertical form control and adjustable indentation (left margin).

The Settings Menu is used to select Xon/Xoff Flow Control, Local Echo, Parity, Character Bit Length, Number of Stop Bits, and other terminal parameters. Terminal settings are saved and tagged to each phone number in VersaTerm's directory. A user need not exit the desktop or load a new file to select a different phone number. The new number is simply clicked. A Mouse option in this menu can be set so that cursor movement commands are automatically sent to move the text cursor from its current position to the position of the mouse.

The pull-down Phone Menu provides eight user-defined dialing sequences with their attached labels. Because the VersaTerm dialing sequence may include any ASCII character, virtually any keyboard command sequence can be transmitted to the modem by clicking. This flexibility allows any command-driven modem to be used with VersaTerm. Automatic redialing is also supported with any modem.

The Emulation Menu allows the user to select the VT100, Tektronix 4014 or DG D200 emulations discussed previously. Tektronix character size can be selected (132 characters per line of text on the Macintosh is almost legible). A Full Page and True Page option are also offered. True Page will produce a slightly reduced Tektronix plot, but with the proper aspect ratio.

An additional set of user defined commands are available by means of the Commands Menu. These commands are sequences, of up to 128 characters each, that are sent to the terminal's output stream whenever the command is selected by the mouse. The feature is useful for frequently occurring character strings, such as passwords or logon sequences. They do not include terminal commands and are not the same as the Remote Service Procedures offered by Red Ryder.

A particularly strong feature of VersaTerm is its ease of use. Switching between different emulation modes or different terminal settings is rapid and trouble-free. The menu and

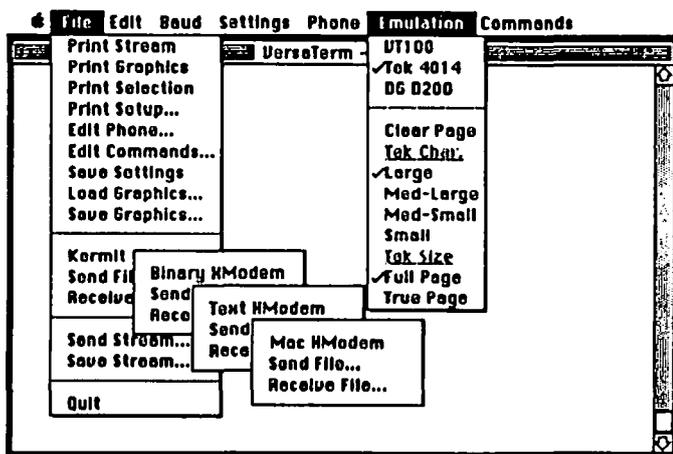
contd.

command layout is professionally done (as opposed to the somewhat haphazard appearance of Red Ryder's desktop). The User's Manual is small, but adequate. The slick paper and photography of the MacTerminal User's Manual are absent, but this is also the case with Red Ryder and VersaTerm doesn't suffer much as a result.

For those Macintosh owners considering MacTerminal, VersaTerm provides a superior product in almost every way with the exception of the box MacTerminal is shipped in. VersaTerm should be seriously considered as an alternative. Mac owners who require Tektronix 4014 emulation now have a low cost (reduced resolution) alternative with VersaTerm and should also consider this program. However, if one requires the very latest in Macintosh file transfer capability, or wants automatically executing terminal command files, VersaTerm is not an option. Neither is anything else (but keep your eye on Red Ryder)!

The hardware requirements of VersaTerm are a single-drive, 128K Macintosh with modem and (optional) printer and numeric keypad. List price is \$99.00 (including one backup disk). A non-copy protected disk is available for an additional \$15.00. VersaTerm is distributed by: Peripherals Computers & Supplies, Inc., 2232 Perkiomen Avenue, Mt. Penn, PA 19606, (215) 779-0522.

Advertisements for VersaTerm can be found in recent editions of MACWORLD and InfoWorld.



CORRECTION TO "SMALLTALK ON A HOME COMPUTER"

by Kurt J. Schmucker

The following is a correction, which was provided by Apple Computer, Inc., to the article in the July issue of the WAP Journal.

For information about current pricing, machine capability, and ordering procedures for Macintosh implementation of Smalltalk, write to: Engineering Services, Apple Computer 20525, Mariana Mail Stop 22G, Attn. Eileen Crombie, Cupertino, CA 95014. (Do not simply send a check to RSI, as suggested by the article.)

A MACINTOSH REPAIR STORY

or HOW I SPENT \$250 TO FIX A FACTORY DEFECT IN THE COMPUTER FOR THE REST OF US.
by T.F. Lee

My Mac operated normally in all respects except that it would occasionally abort or exit out of an application, for no apparent reason, and present the desktop again. It did this only twice during the first 90 days that I owned the Mac and it didn't occur to me that there was a serious problem; in fact the first time it occurred, I thought I had touched the wrong key by accident. By the time I realized the problem was not in the software, my surge protector, etc., the 90 day warranty period had long since passed. The problem became more apparent when the Mac began to abort from an application more frequently.

I took the Mac to my dealer, Universal Computer Inc., Alexandria, VA., and explained my problem. The technicians ran a diagnostic check and could not find a problem in the computer and were prepared to say the problem was not in the Mac, when the system aborted after two hours. A decision was made to replace the logic board to see if that would cure the problem.

The new logic board (\$96.00) and labor (\$40.00) appeared to cure the problem and I picked up the Mac a few days later.

Within a few days, I saw that the problem was not solved; the Mac would still abort from an application; it was only less frequent than before. The Mac went back to the dealer for another look. This time a new power supply was tried, but there was no improvement.

Before anything else could be tried, a damaged CRT socket cable was noticed. One of the screws that holds the back cover on the Mac had apparently gone through this cable during assembly and had caused all the problems. My bill this time was for one CRT socket cable (\$8.40) and labor (\$100.00).

The dealer concedes that the logic board that was replaced was likely not defective, but cannot give me a refund since the board was sent back to Apple before the source of the problem was discovered. The dealer says he has discussed the repair of my Mac with Apple and that the board price will be refunded. It is not clear yet whether Apple will also cover the labor or CRT cable cost.

I've called the dealer several times since I paid the last bill on March 22, 1985 but the response I get is that he is waiting on Apple to respond. I called Apple and talked to a customer service representative, but she told me I should continue to work through the dealer to solve the problem, but to call back if I can't get it resolved.

So, at the present time (June 15) I have not heard from anyone at Apple about the \$248.58 (including tax) that I paid to fix a defect that occurred during assembly of my Mac. (This doesn't include the cost of four trips to the dealer and a call to California.) If anyone has a repair story to top this one, I'd like to hear it.

YOU, YOUR MAC AND YOUR TECMAR HARDDISK

by Robert M. Masso

The MAC has a lot of good things going for it, including a powerful and STANDARD user-interface, a high resolution monitor, a powerful CPU, and a lot of innovative hardware and software engineers. However, in many ways it is a racing-car with a governor reducing it to dirt-road speeds. Many of us second-guessers wish Apple had given the MAC a co-processor to zip through the MAC's heavy graphics workload, a video-IO jack to allow use of an external monitor, and an open (for "open" read empty card slots) architecture to allow easy expansion of your system.

Well, Apple does have a response to the last item on that wish-list. You want slots? We'll give you VIRTUAL slots!

To those not in the know, in computerese the term "virtual" has a special meaning, as in the case of a large multi-user computer which can support, say 16 users at once, each with 256K of "virtual memory" available to run his program(s) even though the system has only 3 Megabytes of memory installed, of which the operating system takes up 1/2 to 1 Megabytes. If you think you count a discrepancy, you're right; however by rapid swapping in and out of main memory the system presents to those 16 users the illusion that they have upto 256K of main memory available and resident throughout the log-on session. Thus 3 Meg. in hardware operates as 5 Meg, and also your two peripheral ports on your MAC can operate as if you had three, four, or more. Or at least they will, when Apple and follow-on firms provide the hardware and software to take advantage of the AppleTalk protocol. As yet very few items are available which do so, but one of the is the Tecmar HardDisk for the Macintosh.

There were several reasons why I bought a Tecmar when I decided I needed a harddisk. One was price. At the time of purchase, the basic harddisk (one drive, either 10Meg fixed or 5Meg removable) retailed for \$2,000, but I found a dealer with overstock problems selling one for \$1,000. The current price I have seen quoted in the discount mail-order houses are not that low yet, but do go as low as \$1,300. Another reason was the fact that I could get it with a removable cartridge drive, and later even upgrade it by adding a second drive. You may THINK that the 10 megabytes in your average fixed drive is enormous, being equivelant to about 35 of your old Apple][floppies, but if you wish to operate a BBS off of your machine, want to build one or more LARGE databases, want to put all of your 1001 public-domain games, utilities, etc. on-line, you can eventually find yourself with the feeling of a man with size 10 feet and only size 9 dress shoes for his job interview. With a removable cartridge you can buy several cartridges and dedicate each one to each of these categories. Tecmar cartridges can be gotten mail-order for \$45 each (retail is \$125), so for \$135 you can buy three spares and have a virtual 20Meg drive.

My other reasons mostly have to do with the Tecmar's limited usage of AppleTalk protocols. I currently have hooked up to my MAC a printer, a modem, a harddisk, and an external drive, all available at the same time - no ABC

switch involved. To do this I have my Tecmar connected to my printer port, and my printer piggy-backed to my Tecmar via a port for this purpose on the back of my harddisk. (This has an added benny, as Tecmar found that as long as they were going to use their harddisk as an intermediary between your computer and your printer anyway, it was an easy task to give you some print-buffering as well.) The HyperDrive also allows you to hook up all your equipment, but only at the cost of major surgery on your MAC and it's motherboard and the possibility of future incompatibility with the rest of the MAC universe. The remaining drives I know of all require that you disconnect SOMETHING to be able to connect them up.

Now as to actual use. At first I thought I had bought a turkey, because when I got my unit home, I was unable to successfully format my disk. Not to panic, though, as it turned out to be a defective cartridge. My replacement cartridge, as well as the others I have bought since all have worked well since. Once formatted (takes about 5 minutes), I had a cartridge containing the Finder, a backup utility (to allow you to backup a file greater than 400K on several disks), and THE VOLUME MANAGER. The last is the most used, as in order to get around the MAC Finder limitations regarding maximum number of files on a disk, you use it to divide up your disk into volumes. On the one I have in at this moment, I have three volumes defined: a 1.6Meg THE_SYSTEM volume, an 800K GAMES volume, and a 1.6Meg PASCAL volume. My THE_SYSTEM volume is the one which is already "mounted" after system bootup, and contains those programs and files I wish to always have on-line. The other two volumes are invisible until I click the volume manager icon and mount them as well. I originally used my Tecmar on a 128K MAC and found it all too easy to overload the Finder with too many files. Now with a 512K MAC it does not happen unless I purposely try to. When I feel a need to play a game, I mount the GAMES volume. When I want to edit and compile a Pascal program (Softech, not the copy protected MacPascal) I mount PASCAL.

Comparisons. Well, I don't own other harddisks with which to run my own comparisons, but I am perfectly willing to concede that the Tecmar allows you to access your files only twice as fast as with a regular Apple drive, as opposed to 4x as fast on some other model. However with the print-buffering you can make up that time difference easily if you find yourself sending a lot of files to the printer. Noise. Not a whole lot to complain about here. It is a lot less noisy than my regular drives. I actually think most of the noise I can hear comes from the fan inside, as opposed to the "washing machine" effect you can get when you have an object spinning at ultra-high speed. So instead of an irritating whine, I hear what is basically white noise. Reliability. In four months of use, I have yet to lose any data, an all too common occurrence on many harddisks. Nor have I been forced to

contd. on pg 70

THE BEST OF THE MAC ABBS

by Regina Litman

From WP6861 to ALL 06/05 MacTerm Auto Dialer

I have just downloaded and converted a nifty desk accessory that will autodial from MacTerminal. It automatically selects the number out of your terminal file. Continues dialing until it gets thru and then notifies you once the connection is made. Anyone interested please leave me a note. Dave WP6861

From WAP470 to:WP4228 06/09 Autodialer

Autodial is designed to be melded with MacTerminal with either Resource Mover or Resource Edit. By itself, if you try to run it nothing will happen or it may bomb. You need the docs. in order to get it to run properly. Phil Noguchi

From WP6861 to ALL 06/10 Auto Dialer V1.7

1. Use Fedit to change file attributes. (File type=DFIL, orig=DMOV) 2. File icon should now be of the new D.A. type. 3. Move into System File using new Font/DA Mover. Dave (WP6861) 4. (P.S. I also used Fedit to change the default delay to 25 seconds because 15 seconds didn't leave me enough pause time.)

From WP4893 to:WP4228 06/09 Redialing

Ellen: For a quick and dirty fix for redialing with MacTerminal and the Apple 1200 baud modem, see MacWorld, June 1985, page 149.

From [YOU] to:WP5292 06/15 Autodialer Resource

Although not a MacTerminal user myself, I have seen an automatic dialing resource available on Terry Monks' Macintosh BBS, (703) 471-1378 (local call if you can call Northern Va. locally). (300 baud only for now.) Lately, the downloads have not been online, but you may want to check - I believe the directory is available even when the downloads aren't.

From WP6861 to:WP5292 06/14 Auto Dialer V1.7

I downloaded the file from CompuServe before they changed to three SIGs. It is probably still somewhere on their disks but I don't have too much of an idea where. I'm in the process of investigating the locations of neat stuff on C.I.S now. Good places to look might be in the Mac Users SIG (not Developers), in the Telecommunications Data Library or I would try in any areas with the key words of DESK ACCESSORY. Dave

From WP2754 to ALL 06/05 Questions...

1- Is it that Apple is offering free software with a 512 upgrade or just updates? Does this apply if you purchased a 512K Mac to begin with? 2- How can I use the Font Mover program on a disk which has no room to copy it on to?

From [YOU] to:WP2754 06/07 S/W With 512K Mac

Apple threw in free MacProject and MacDraw to those who upgraded a 128K Mac bought before 9/10/84 and who sent in their cards by 3/31/85 (this date may have been extended). It

does not apply to Macs bought new with 512K. I got my Mac a year ago yesterday (6/6), got my upgrade 12/15, sent in the card 12/17, got MacProject 1/29, and am still waiting for MacDraw.

From WP5416 to:WP2754 06/07 Answers

Of course you should check with your dealer, but I still think the software offer still holds - if you bought a 128K Mac before the 512K upgrade was announced, you have claims to a free MacDraw and MacProject. A software upgrade (Finder/Paint/Write) is now available to all owners, regardless of when they purchased which machine.

From WP5416 to:WP2754 06/08 Answers (#2)

Which Font Mover program? The old one or the new? I think that the new one lets you do what you want. With either, you can also move it, the System File, and the Fonts File to a separate disk, run it there, and then copy the System File back to where you want it.

From WP4621 to ALL 06/10 Upgrade Or 2nd Drive

I have bare-bones 128K Mac, 1 drive. I find I need 2nd drive. If you had to choose, would you (1) buy 2nd drive or (2) upgrade to 512K and use RAM Disk program. If (2), as I've read accomplishes same objective as (1), can you kill 2 birds with 1 stone? Any help would be appreciated. Ron Wartow

From WP4621 to:WP4228 06/11 Upgrade V. 2nd Drive

Ellen, I received several pieces of advice. Most said just get the second drive because of the minimal speed improvement of the upgrade. A few said that the upgrade was smarter to take advantage of some programs while waiting on the 2nd drive and get a double-sided one. Since no programs I want or anticipate wanting require 512K and I'm tired of swapping all of the time I'll probably do that. By the way, forgetting this technical stuff, how's ZORK I coming? Ron

From WP4621 to ALL 06/09 Aegis & Brainpower

These two companies deserve our support to seriously evaluate their software. Upon hearing of the scheduled SigMac meeting games demos, Aegis downloaded to my Mac the newest version of Pyramid of Peril, and Brainpower sent by UPS Blue Label the latest version of ChipWits. Reviews in WAP Journal coming. Ron W.

From WP4228 to ALL 06/16 Mac&Superfone "Talk"

Success at last with the MacTerminal/Superfone connection!! Last night I was able to carry on communications with a man in Brooklyn via his Superfone set at: HD "ON", ASCII "ON", Originate "ON" (he called me), and 300 "ON". My MacTerminal settings and his Superfone settings will be published in a blurb I am preparing for the WAP Journal and for MacWorld and for the Silent News and one other publication for the deaf. The greatest advantage of using this method vs. the use of a telecommunications service for the is that there is no "middle" person to hear everything that is said. The increase in freedom of communication is great! I did find out contd.

that "HD" meant "Half Duplex". Isn't technology wonderful?!! Ellen

From WP6826 to ALL 06/12 Legal?

Is it legal to trade unwanted software for something that you may want? I have some software I don't particularly care for but I don't know if it is legal to trade it for something I need. Can anybody help me in the legalities of this matter? Troy WP6826

From WAP885 to:WP6826 06/14 Maybe

It is legal to trade software only if you give them all the copies that you have and they give you all the copies of the software that they have. It is only illegal when a person trades "backups" which is a weasel term for pirating. Hope this helps you. Larry Halff

From WP6826 to:WAP885 06/14 Another Question

Is it illegal to trade "backups" if no money is involved? If I trade software with someone and keep my backups is that illegal? Thanks, Troy WP6826

From WP5416 to:WP6826 06/15 Trading Software

You have the right to sell/trade/give away any software you have a license provided you get rid of all of it. That is, you must not keep a copy for yourself. Likewise, if you trade, the other party must not keep a copy for him/herself. All this supposes the software is copyrighted, with restrictions. You can do anything with public domain stuff (SigMac disks).

From WAP885 to:WP6826 06/21 Pirating

Yes, It is illegal to trade backups even if no money is involved. The reason the company gives you a backup is for your PERSONAL archives in case something happens to the original. When you use a piece of software you are automatically agreeing to a contract that is stated in the documentation or the box. It is not illegal to use a bit copy program to back up a copy protected disk. For example most contracts go like this: "You may use the software and its documentation for personal use on a single system [note: this means you cannot load the program into more than one machine or hand it around the office for other people to use there]. You are permitted to make archival copies only. If software is given away or traded, all personal copies must be destroyed or given to the new owner." I hope this helps straighten things out. Larry Halff

From WAP029 to ALL 06/15 SigMac PD Disks

Although the programs on the SigMac disks (and the regular WAP disks) are public domain, the collections where possible are copyrighted by WAP. This means no giving it to your friends. The exceptions are the shareware programs such as the Mock DAs and Red Ryder where you sent a payment to the author. -- Bruce Field

From WP5416 to:WAP029 06/15 SigMac Disks

Bruce, you've been at this longer than I have, but all SigMac disks, including the Mock DAs and RedRyder carry a WAP Copyright notice. Since the club has no proprietary rights over most of the disk's contents, anyone can certainly give away individual programs from the disks. The only issue is that of the value added in forming the collection. Since true public domain stuff may be sold (lots on SigMac disks aren't

PD, they're copyrighted with redistribution rights granted), I can understand WAP trying to make sure no one profits off our work. And then there is the small income WAP gets from disk sales. But whether or not the program is shareware (fee to author), WAP has no claim on the redistribution rights of individual programs.

From WAP029 to:WPS417 06/23 Copyright

I'm not a lawyer (thank goodness) but as I understand it is possible to copyright a "collection" of public domain software. This apparently is similar to copyrighting a book that contains public information, i.e. an almanac. -- Bruce Field

From WP2754 to ALL 06/12 HP LaserJet

Has anyone seen the HP LaserJet (or have one)? How does it compare to the LaserWriter? (Probably not as well). It does have the advantage of being quite a bit cheaper (around \$3500 I think). Thanks <WP2754><Marco>

From WP1694 to ALL 06/14 HP Laser

I forget who asked about the HP, but my company has one. It's a very nice machine, with excellent output, but it's a royal pain in the donkey to use. I've seen escape sequences up to 20 characters long to do what we Mac-ers do with a single click. There is a Mac driver for it, but I haven't seen it in action - we use it with a VAX. To get any fancy fonts with the VAX, we had to spend nearly \$1000 on additional font cartridges. If this is required in order to get professional output with the Mac, the price advantage almost disappears. Another disadvantage -- I understand that its limited memory severely limits the size of any graphics it prints. It's probably worth looking into with the Mac driver, but don't expect Apple Laser performance.

From WP5099 to:WP2754 06/16 HP LaserJet

The HP LaserJet is a great printer ... Quality is first rate, better than daisywheel. You can change fonts, tho not over as broad a range as the Apple printer. Speed = 8 pages/minute. Reliability is very high. Until changing jobs recently, I was in charge of a dept that ran hundreds of pages/day with no hitches in 9 months. Discount price about \$2200. The HP will NOT do graphics like the Apple, though, so you're giving something up to save \$\$\$. If what you want is competent text printing, not graphics, I'd strongly recommend it.

From WP6558 to ALL 06/13 Gato

If you haven't seen or tried Gato yet I suggest you do! I got it a couple days ago and have had trouble leaving it, it's the best game I've seen for those that like simulations, now if only someone would make Flight Simulator for the Mac I could really be content. --Rick--

From WP4621 to:WP6826 06/13 Gato

Comparing Gato to Airborne! is like comparing the Little Tavern to Lion D'Or. The latter has spectacular sound (8 secs. on 128K Mac and 20 on 512K Mac) and is merely an arcade game. Gato is a complex (but easily playable entirely with mouse) simulation, so detailed that on some you need to know Morse Code (the program has a tutorial to help) and its own mission creator. I dislike war games intensely, but this is an exceptional program, the best game out on the Mac (whoops, I forgot ChipWits and Ultima II). Clearly a must contd.

buy. Ron W.

From WP5416 to:[YOU] 06/15 Resource Editor

The Resource Editor (as are all of Apple's developer's tools) are not public domain. Apple holds a valid copyright, and has not given permission for uploads to any BBS, except MAUG. They do allow incidental, non-commercial redistribution. The current version is also very buggy and tricky to use. I hope to see a newer one on a SigMac disk later.

From [YOU] to:WP5416 06/15 Resource Editor

The MacWorld article said it's "free from user groups or MAUG." I felt bad that our user group, SigMac of WAP, has not put it on a disk yet, particularly since there were no new disks this month. But I'll bet it would be difficult for Apple to prevent someone from getting it from MAUG and then uploading it to a bulletin board such as Barry Fox's.

From WP5416 to:[YOU] 06/15 Resource Editor

Regina, Tony is overwhelmed with work getting the SigMac disks out. Perhaps you could be of service by getting official permission from Apple (in writing) for WAP to redistribute the programs from the "Software Supplement" (including ResEdit) on SigMac disks. Check with Tony first, he may have already done it. (I think they grant permission for all programs with the exception of a disk copying utility which doesn't respect copy protection). Yes it is difficult to prevent local boards from uploading it. But as Dennis Brothers takes pains to repeatedly point out, local BBSs have not been given permission to do so. It would be as if NBC broadcasts a program, and local stations then tape it and rebroadcast it. By limiting "official" uploads to only MAUG and maybe Delphi, Apple can protect their "good name" by making sure only the most recent, safest versions are available, and by making sure users understand the flakey nature of the programs.

From WAP538 to:[YOU] 06/21 Resource Editor

Come now, Regina, you know better than to suggest that merely because it would be difficult for Apple to stop someone from uploading Resource Editor (or anything else like it) to a BBS, it means you can do it. If something is illegal, which uploading R.E. would be, it shouldn't matter whether Apple could "stop" you. You just wouldn't do it in the first place. -- Tom Warrick

From WP5099 to:WAP538 06/22 Legal Issue

Why is it OK for CompuServe to carry Resource Editor and not OK for someone to download it from CompuServe and put it up on another board? Not being an attorney, the subtleties elude me.

From WP6597 to:WP5099 06/22 Legal Issues

About the CompuServe thing.... If Apple wants to issue a license for a single user of Resource Editor to post said editor on a Bulletin board, then they can. The license can preclude any other board from posting the RE program. So, just because the program is available on a videotext service which offers free access to download the RE, it does not mean that Apple has forfeited the right to prevent the distribution of Resource Editor in the public domain. If Apple wanted to be really obnoxious, they could say that distribution of any kind beyond the original download from CIS was unacceptable, i.e. none of us [the Mac owners] can make copies for other Mac owners. Silly stuff. P.S. This was written after consultation

with my attorney. He suggested that WAP call Apple and ask for a license like CIS most probably has for limited distribution to our members. I hope this msg. is helpful to you in understanding the intricacies of licensing. Rick WP6597.

From WP5099 to:WP6597 06/23 Limited Licenses

Thanks for your message ... most informative. Now as to the logic: WHY would Apple be willing to broadcast the file via a service like CompuServe and not via other boards? I use the word "broadcast" intentionally; they know that a good program posted on CIS will quickly reach the farthest corners of Macdom, so why prevent the program from being distributed locally by local BBSs? Compared to the original CIS broadcast, the additional penetration by local boards is fairly small. I just want to understand their motivation. Additional question: everybody seems to be concerned that Apple is going to protest local distribution of their "broadcast" programs, but is there any record of Apple ever asking anyone to stop this practice?

From WP5416 to ALL 06/24 Apple Software

A few remarks to those of you complaining about Apple's copyright on the Resource Editor and other Software Supplement programs. Why not just write and ask them for permission to redistribute them on SigMac disks, as I suggested here a while back? They tend to grant such permission, except when the audience might use them for more harm than good. MAUG hosts an audience of developers, who know better than to run crying to Apple, their dealer, or their lawyer when these admittedly buggy and dangerous programs damage months of valuable work. Apple has interests to protect, including their "good name", the integrity of their (and others') commercial products, and themselves from needless lawsuits. By limiting such BBS uploads to a few (but widely available) locations, they have a shot at controlling updates, corrections, and warning notices on short notice. As to the legalities of it, they probably have received an opinion from their counsel that they can act as they are. In practice, they have in the past okayed and otherwise ignored casual person-to-person redistribution, such as by university user groups. They may very well look kindly at WAP, too. (Sorry, this message was way too long.)

From WP5099 to:WP5416 06/24 Apple's Permission

I've noticed several boards around the country that have "DL5" sections with Apple "developer programs", including Resource Editor, with banners that say they asked for and got Apple's permission to put up the files.

From WP5090 to:WP5518 06/24 Licensing Law

Just because they haven't done it yet doesn't mean that Apple can't sue you if you violate their licensing agreement. A license to do anything is given at the whim of the license holder (i.e. Apple). It can make the license as broad or as narrow as it likes and can certainly make it non-transferable, e.g. the state issues you a driver's license on certain conditions. You can drive a car legally with that license. You cannot however give that license to someone else and thereby entitle that person to drive legally. Although Apple is unlikely to pursue individual violators, it might well go after a BBS or user's group that violated its license and their lawyers are bigger than your lawyers).

contd.

From WP5518 to:WP5090 06/25 License

What license agreement? Did you see one when you downloaded any of the Apple stuff from MAUG? Where are the restrictions listed?

From WP5416 to:WP5518 06/27 MAUG Downloads

Apple software uploaded to MAUG is marked as copyrighted both on the software itself, and in the file description (S/DES in a DL area). The meaning of "copyright" is understood in the law.

From WP6597 to:WP5099 06/25 CIS Alone For Update

I would suppose that Apple wants Mac users to have a single source for finding the latest version of the programs that they distribute. If they have but one source, then they will have fewer problems with people using older versions of the program. Actually, I suppose Apple is trying to be helpful. I imagine when the updates of the program are finished, they will release it to wider release. Rick WP6597

From WP5372 to ALL 06/17 DA's

Thanks to you folks who responded to my request for BBS numbers in the DC area. I had so much good luck with that one, that I'll leave another. Does anyone know of a MockTerm-ish DA term program which doesn't rewrite the whole screen each time it scrolls? I'd have bought an IBM PC if I could be content with that stuff... Has to be a DA. Just asking...

From WP5566 to:WP5372 06/19 Terminal DA

Dreams of the Phoenix (904) 396-6952 sells a disk called Quick & Dirty utilities vol. 1, which includes a Q&D Terminal DA that is closely related to Freeterm. BTW, the Q&D disk is worth it for the Catalog Keeper program. Cost should be about \$40.

From WP5372 to ALL 06/21 Haba Drive

Unsolicited comments about the Haba Systems external drive (from me): The drive cost me \$20 more than an Apple drive in the bundle I bought about a month ago from Frederick Computer Products. I bought it partly out of curiosity and partly because Haba is supposedly going to have a superdeal on an 800K retrofit, and partly due to the fact that HabaComm and HabaDex are bundled with the drive. The drive is considerably louder than an Apple drive and on occasion will not fully eject a disk. When it's working right it almost spits them out in your hands. Habadex is so slow even on my 512K Mac that it is useless. HabaComm, in addition to failing to put a cursor on the screen, is nothing to shout about. Drive works fine, but I'd buy an Apple external drive if I had to do it over. PS -- One good thing -- it has a longer cable than an Apple drive... FCP gave me excellent service on the Hayes 1200 baud SmartModem I bought with the bundle. It blew its cookies right off the bat and they replaced it quickly and courteously. Sorry to be so wordy...

From WP5518 to:WP5372 06/24 Haba stuff

I've seen any number of comments that seem to indicate that getting a product to work is very low on the Haba priority list. I think I would rather do business with someone with a better sense of quality.

From WP6223 to ALL 06/21 Proj Mgt

Is there any project mgt s/w (i.e. MacProject) or any pc-based s/w (sorry, I have to ask) which will flag tasks affected when one task is changed? For example, one could manually compare critical paths on before and after printouts, so is there a supported way to identify differences between before and after? Thanks. Andy Gallant P.S. I have not used MacProject, so I don't know its capabilities. P.P.S. I hope the question is clear. For my purpose, it is not enough to lay out the schedule and ID the critical path from one set of tasks: the difference between the results of one set and the new changed set is important.

From WP6729 to:WP6223 06/22 Project Mgt

Andy: I think you will find that MacProject will take care of your needs. A critical path is shown as a very dark line. If you change a task that effects your critical path you will get immediate feedback by looking for the new dark line/critical path. Also, completion dates for all other tasks affected will change automatically. Ides Holdridge.

From WP6223 to:WP6729 06/22 Proj Mgt (r)

I understand that there is immediate feedback on how the changes occur. However, the basic top level structure managed by MacProject is the one project. If instead of looking for those changes within a project, one could see the difference between "projects" reflected by changes at the task level, then that would satisfy this requirement. To oversimplify (perhaps erroneously), it seems that MacProject manages tasks within one (the current) project. I'm wondering if it is possible to manage projects within a program, let's say. At its most complex, there could be a hierarchy of projects (not tasks). At its simplest, one could use the s/w to show the deltas between two projects. Andy

From WP4985 to:WP6223 06/23 MacProject

Yes, Andy, MacProject will permit you to design (and designate) critical paths and try "what-if" options on scheduling, resources, etc, and to see the reflected changes into the future schedule. MacProject isn't the only one about but to my mind, is the best of the "planning stuff." It does take a little getting used to. I suggest you call the Hotline Helper for MacProject since I don't use it even though I have it as a result of my 512K upgrade. Marty Milrod

From WP6861 to:WP4985 06/26 MS Basic 2.1

I received some literature from Microsoft about MS-Basic 2.1. In summary all they are offering is more speed. There are no new commands, functions, etc. The speed increase also is dependent upon program structure and the types of things your program is doing. Dave

From WAP470 to:WP2754 06/23 Delphi

Neil Shapiro did start something on Delphi, but his fangs were pulled by CIS so that MAUG will NOT be on Delphi. They do have their own Mac Sig run by Peter Olson which is smaller, but growing. Red Ryder 6.0 beta version has been put in the Delphi databases by Scott Watson, so it may be a reasonable place after more databases are filled. If you want Maug, only on CIS.

From WP5416 to:WP2754 06/24 MAUG not on Delphi

MAUG(tm) is not opening up a branch on Delphi. According contd. on pg 70

LISA/MAC XL SIG NEWS

by John F. Day

The Lisa/Mac XL Sig meeting will continue to be held at the same time and place as the SigMac meetings. The August meeting was held at George Washington University, and future meetings will probably be held there as well. If you aren't sure, call me or the WAP office.

The August meeting featured a demonstration of Mac XL Smalltalk, an object-oriented programming language that pioneered the development of the Lisa and the Macintosh. The demonstration was given by WAP member Kurt Schmucker, who spent an hour showing the features of Smalltalk to the gathering and answering questions. Kurt, as you may recall, also gave a talk in March about the Lisa Toolkit, and is an acknowledged authority on the subject of object-oriented programming. He is currently writing a book about MacApp, the Macintosh program development system. The book will include chapters about several different object-oriented programming languages, and will be included with your purchase of MacApp. MacApp, and Kurt's new book, will be available in the late Fall of this year. My thanks to Kurt for a super Smalltalk demonstration.

LISA NEWS

Yes, there are still new things under the Lisa sun. On June 19, 1985 a teleconference of persons interested in the continued survival of the Lisa was held. Sponsored by The NETWORKERS and The Peninsula Lisa User's Group (PLUG) of San Francisco, CA, the conference, know as "LISATALK", involved people from Apple, the Media, hardware and software manufacturers, and user groups. WAP set up a centralized delegation for the conference in the meeting room of the club office, and was represented by Pres. Tom Warrick, Gordon Stubbs, Bernie Urban, a number of Lisa/XL Sig members, and me. The purpose of the conference was to talk with Apple about what kind of continuing support we could get for the Lisa, and to generally voice our dismay with the entire Lisa situation. Frankly, I heard nothing new from Apple, and think that most of the promises of support in the future have been published in this column in previous months. I would like to thank the NETWORKERS and PLUG for sponsoring the conference. They went to a great deal of effort and expense to put it on. It is too bad that Apple didn't respond more affirmatively by having more to tell the participants.

Apple has released another update to the Lisa Workshop. The latest update, version 3.9, comes on two diskettes, and contains an exec program that will auto-install the changes. The update includes changes to the Editor, the Filer, and several of the utility programs. New libraries are also provided, as well as general "bug" fixing and house cleaning, and the documentation for all the new features. I believe that this will be the last update that we will see for a while, so make sure you get your copy. You can get your update disks through the normal update channels.

The rumors about a migration program that will transfer from Mac to Lisa, as well as Lisa to Mac are true. I will have a full report next month. If you have to know about it now, give me a call at home.

MAC XL NEWS

The updated MacWorks is now being shipped. To update, you will need to send you original MacWorks disk and \$29.00 to:

Apple Computer Processing Center
Attn: MacWorks XL Upgrade Program
P.O. Box 6272
San Jose, CA 95150

If you send a check, make it payable to "Apple Computer, Inc.". I have the actual upgrade order form if you would like a copy. I brought some to the August SIG meeting, and will bring them to the next several meetings as well. For your effort, you will get two MacWorks XL diskettes, a MacWorks system diskette, and a new MacWorks XL manual. The MacWorks XL disk is version 3.0. It is very distinctive during boot up, and has a new screen at the very beginning that tells you that you are using MacWorks XL, version 3.0. It is much cleaner than the older version of MacWorks, and is the only version that will work properly with Jazz. I strongly urge you to upgrade to this newer version, since it seems to cure a host of ills associated with earlier versions of MacWorks.

I have had an opportunity to use Lotus Jazz, and am impressed with it in general. However, like Symphony, it is a good spreadsheet surrounded by mediocre word processing, terminal comm and graphics. The lack of macros in the spreadsheet was a major mistake on part of Lotus, so look for an update that adds them in the next six months.

I have also seen a "beta" test version of Microsoft EXCEL, and am pleased to say that if you are a "power" user of spreadsheets, this is the one to wait for. EXCEL has everything you could ever want in a spreadsheet. There are so many number formats, functions, and other goodies that you won't get bored soon. Yes, it does have macros. No, it doesn't have Telecomm. Yes, you can use it as a database. No, it doesn't have word processing. (Besides, if you aren't using MS Word for word processing already, get it.) EXCEL will be released in late September, and will cost around \$395.00.

There are several new versions of programs that you should be aware of. Microsoft Word is now version 1.05, and gives vastly improved support of the Laserwriter printer, includes a utility to convert MacWord documents to MS/DOS Word documents. If you are a registered owner, you should have received an update form from Microsoft. The update kit contains one master disk, one backup disk, and a 12 page documentation addendum.

contd.

Think Tank 512 is now version 1.1, and fixes bugs that made previous versions of Think Tank work very poorly on an XL. With the changes, Think Tank 512 has become one of the most useful programs I own. I highly recommend it.

Perhaps the most important program for the XL user to come along in a while is XL Serve. XL Serve lets you set your XL up as the base unit in a Mac Office and lets other normal Macintoshes use the XL's hard disk as a shared hard disk. You may wonder what this has to do with most of you, since 99% of the XL users don't have other Macintoshes. You can also use it because it allows you to set up volumes in your hard disk, gives you the ability to do background printing while you do other things, and uses disk caching techniques to speed up machine execution time. I will have more to say about XL Serve in a future article. XL Serve is made by Infosphere and sells for around \$200.00.

The latest version of Copy II Mac (version 4.0) has an additional program added to the disk called Copy II Mac HD (for Hard Disk). Copy II HD lets you place copy protected software on your hard disk. For example, I tried putting Jazz on my hard disk, and did it without a hitch. When I open Jazz now I don't need the master disk to be in the floppy disk drive. Copy II HD works the same magic for most software. Copy II HD is a must for every XL owner. Copy II HD is made by Central Point Software and sells for about \$40.00.

That's about it for now. The October meeting will feature a discussion of telecommunications for the Mac XL and Lisa. I hope to see you there. ☺

Mac ABBS contd. from pg 68

to a story told at the last SigMac pgmr's meeting, CIS gave head-SYSOP Neil Shapiro the (90 day?) cancellation notice. In the discussions which followed, Neil got the expanded CIS facilities he wanted, and CIS got the lack of competition they wanted. Delphi continues to offer a competing service, though.

From WP1717 to ALL 06/24 What Terminal Prog?

I'm a non Mac owner but got asked by a co-worker for advice on what terminal program he should get. The main application would be to plug into our new Rolm telephones, which will have RS 232 plugs on them. Through the PBX and the modems built into it he would then dial Telenet. How exactly the PBX will work we don't quite know, e.g. how one dials is not known to us.

From WP5416 to:WP1717 06/24 Terminal Programs

All the terminal programs should work if the phone is RS 232 compatible. (You may have to diddle one wire of the cable, but that's minor.) Hayes' Smartcom is getting very high marks over on CIS. If you have to emulate some bizarre Brand-X terminal, Telescape also comes recommended. But the price/performance leader has to be the \$40 Red Ryder, on SigMac Disk 17. ☺

Softviews contd. from pg 51

Another nifty example of adding depth to your Mac Paint pictures:



Documentation. The accompanying manual, while "28 pages" in length, is not a voluminous tome since the document is printed on 3" by 3" pages... However, it does tell you clearly how to install and use the program (which is very easy anyway). The manual includes a number of hints which should give you several creative ideas. The disk includes Paint examples which you can play with immediately to learn the full potential of the four new effects.

All in all this is a valuable utility to enhance your MacPaint. From T/Maker Graphics, 2115 Landings Drive, Mountain View, CA. 94043. Phone 414/962-0195. Price \$49.95. ☺

Tecmar contd. from pg 64

reformat a cartridge. Recommendations? Well, by the end of the summer you should have available two other choices, the Apple 20Meg harddisk, and the Sider 10Meg, both of which look interesting. Those interested in either a Cadillac or a VW (respectively) in diskdrives might want to consider one of those models, however of the current crop I would still pick the Tecmar. ☺

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Note: DOS 3.2 disks (Volumes 1 - 40) have been discontinued. The office will maintain an "archival" copies.

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Tutorials at \$10.00 (with equipment) Tutorials at \$15.00 (without equipment)

SigMac is sponsoring a series of two monthly tutorials for the beginner. The fee for two tutorials is \$20.00. They will be held at the office, from 7-10 PM on Monday evenings.

- Monday, September 23 and 30
 Monday, October 21 and 28

The following "non-regular" Apple tutorials are being offered on Saturdays from 9:00 AM - 12 Noon at the office. Attendees should bring their Apples, monitor, disk drive and suggested program disks. (Monitors are available for the first five registrants. Call office.)

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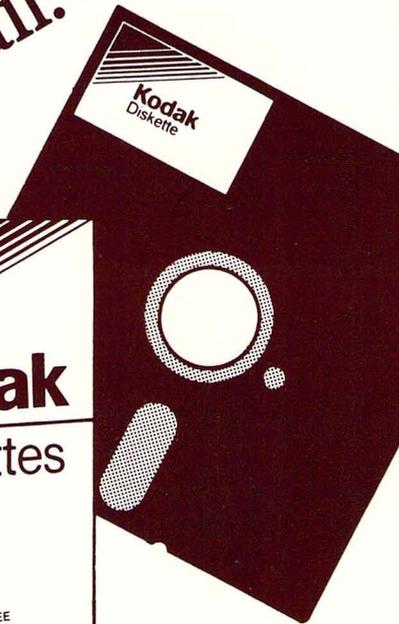
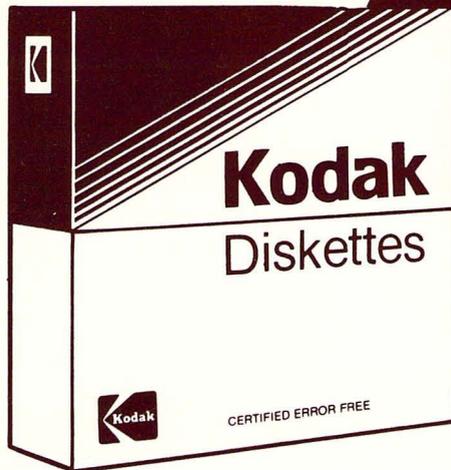
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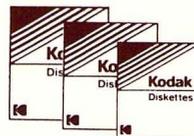
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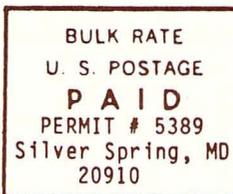
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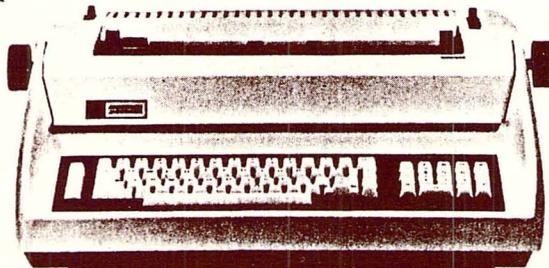
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