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Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 8

April 1986

Number 4

Highlights

A Presentation by Alan Kay

SwyftCard

Toy Expert System in Forth

Cricket Graph & Omnis 3 (Softviews)

Accounting on the Macintosh

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A Special Washington Apple Pi Newsletter Supplement

April 1986

Clearance Items from Clinton Computer p.s.

Clinton Computer operates a Clearance Center at 6457 Old Alex. Ferry Road in Clinton, Maryland, in the same shopping center as our retail store. Here you can find demo and used equipment as well as discontinued software, peripherals, and accessories-- ALL AT SUBSTANTIAL SAVINGS!

Mark Krenik, Sales Manager of the Clearance Center, has a wide variety of product in stock right now and invites Pi members to visit the store.

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<i>Product Training Paks for AppleWriter III, Mail List Manager, VisiCalc III, or Business Graphics.....\$10.00 each</i>			
<i>III E-Z Pieces</i>	<i>\$59.95</i>	<i>COBOL</i>	<i>\$125.00</i>
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Group Purchase of the Month

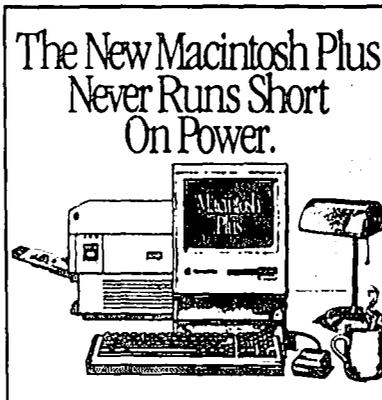
Fifty Unidisk 3.5 (A2P2099) are available as a special group purchase for Pi members at \$324.35 -- that's 35% off the list price of \$499! These drives are available at either of our retail locations. Sorry, no purchase orders, please. Note: Apple //c owners with serial numbers less than F6051GF will need a ROM upgrade; //e owners will need a board (A2C2002), Pi priced at \$51.75.

Lisa/MacXL Trade-In

If you own a Lisa/MacXL you may trade it in on a Macintosh Plus and Hard Disk 20 between April 14 and August 29 only. The cost is your Lisa and \$1498. (Pi discounts do not apply.)

Pi Pricing for Macintosh Upgrades

	List	Pi Price*
Macintosh Plus Internal Disk Upgrade (list includes \$25 installation)	\$324	\$243
Macintosh Plus Upgrade from 128K or third party 512K; also requires Disk Upgrade (list includes \$50 installation)	\$849	\$637
Macintosh Plus Upgrade from Apple 512K; also requires Disk Upgrade (list includes \$50 installation)	\$649	\$487
LaserWriter Plus Upgrade (list includes \$50 installation)	\$849	\$637



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*CLINTON COMPUTER is pleased to offer Washington Apple Pi members a 25% DISCOUNT OFF THE LIST PRICE on all Apple brand peripherals and software and on AppleCare. Discount is available to persons who have been Pi members for at least three months. Discount applies to cash and certified check purchases of Apple peripherals and software (no CPU's) and may not be applied retroactively. If the product is not in stock, we can take your prepaid order. Pi members need to present their ID cards up-front. Discount cannot be used in combination with other promotions. Members should primarily utilize the Pi network of experts for after-sale support. No phone or mail orders, please.

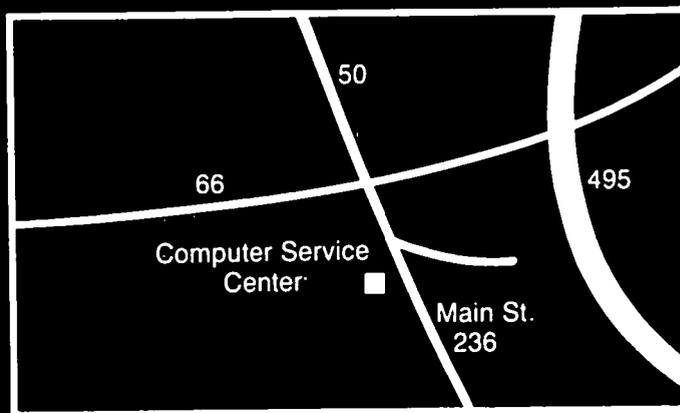
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EDITORIAL

It's working! After all these years of effort, there is evidence of greater cooperation between Apple and the User Groups. WAP has benefited in many ways. That means that you, dear reader, have also benefited. And that is where it counts! Not at the national, regional or club officer level, but where you sit. We are beginning to get through to Apple. How, you may ask?

Well, witness if you will last month's meeting with Alan Kay. He came and enchanted us with visions of the future. Apple Columbia pitched in. Our dPub SIG meeting was replete with loaners of a Mac+ and LaserWriter+. Apple Columbia helped us to make it possible. As this is being written, plans are being completed for the visit of Ellen Petry Leanse to our March meeting. Ellen is, as you already (or should) know, is the Apple User Group Evangelist from

Cupertino. And much more ... Why, we've even heard that someone has been assigned the responsibility equivalent to Ellen's at the regional (e.g. Apple Columbia) level. We've had two follow-on conferences since January, both of which were on MAUG. Nothing concrete from these yet, buy maybe... It means that you can find Apple and Mac tech notes at the office, that maybe soon you can get answers to your own perplexing conundrums via Apple Columbia or elsewhere in Apple. Let's see where all this takes us.

About the Journal, we tried this time to prepare it all (except for the ads) electronically with the assistance of David Morganstein's HD-20 on our Mac+. Nope, it didn't pan out (yet). We ran into unexpected difficulties here and there. Come hear about them at the dPub SIG meeting on the 2nd Saturday in April at the office. ☺



PRESIDENT'S CORNER

by Tom Warrick

The February WAP meeting with *Alan Kay* was, virtually everyone would agree, one of the best meetings WAP has ever had--the best, most said, since the Woz came here to introduce the Macintosh in January of 1984. Alan's presentation covered a wide range of subjects, which is only right for someone like him, who is involved in so many projects on the frontier of computer science.

(See Adrien Youell's summary of Alan's talk elsewhere in this issue.) Thanks, Alan, for lifting all our spirits with a look at what we can do with tomorrow's computer technology. (And thanks, also, to *Mrs. Kay*, Alan's mother, for coming as well.)

Everyone's thanks should also go to three WAP members whose behind-the-scenes efforts made Alan's presentation such a multimedia tour de force. *Leon Moore*, who handles our arrangements with our host USUHS, used his contacts and persuasive skills to make available some of USUHS's first-rate equipment. Thanks also to *John Alden*, our Program Chairman, whom few members get to see at meetings because he's the fellow peering into a videocamera. John's been videotaping the last few WAP meetings, and he managed to capture Alan's presentation as well. If you would like to see the February meeting, or any of the other recent meetings, check with the office and you can arrange to come in and see our videotape. If you're interested in borrowing or buying a videotape of WAP meetings, call the office at 654-8060 and we'll see what can be arranged. WAP may also have available a videotape of the *Steve Wozniak's* recent Apple World conference talk on his days running "Dial-a-Joke" in San Jose and his early college years.

Finally, thanks must go to *Adrien Youell*, our Vice President for Programs, who coordinates (perhaps I should say "choreographs") the many program activities that go on at WAP meetings. Adrien, who is one of the best organized people I've ever met, had even his abilities taxed by all the things that needed to be done at the last minute to get ready for Alan's talk. That things went off so well is an example of Adrien's hard work and dedication. Gentlemen, from all of us: Thank you!

WAP is looking for a few good men and women: The annual Washington Apple Pi elections for officers and directors will be held beginning at our May meeting. All WAP members are eligible—and encouraged—to run. *Jay Heller* and *Mike Ungerman* have agreed to serve as a nominating committee, and they're hard at work this month

looking for *you*. Nominations will be taken at the April 26 meeting. WAP's elected officers are the president, a vice president for Apple // programs, a vice president for Macintosh programs, the secretary, and the treasurer. The Board also consists of seven elected directors-at-large and three members who serve ex officio: the past president, the editor of the Journal and the disk librarian. If you're interested in running, please don't hesitate to contact Jay, Mike, me or any one of the other officers or directors.

One important tradition we have, though, is this: anyone who comes to a Board of Directors meeting is eligible to vote, whether elected or not, unless one of the "official" board members requests a vote of official members--something that happens very infrequently. Most decisions are made by everyone who attends. So even if you decide not to run, you're welcome—and encouraged—to attend.

Apple University: Earlier this month, WAP was invited by Apple Computer, Inc. to come to Cupertino and talk at a session of "Apple University," Apple's name for their corporate enrichment program. I spoke to about 40 of their "rising stars" about the benefits of working with user groups. Although this was intended as educational for the people at Apple, it was, at least for me, quite an eye-opener. Apple's User Group Evangelist *Ellen Leanse* made her office available to me while she was out for a few hours, so I returned the favor by taking phone messages for her. (Incidentally, most middle-level professionals at Apple don't have their own secretaries. When you have a Mac on your desk connected to a LaserWriter, you're expected to do your own typing!) Ellen coordinates Apple's relations with 800 or so user groups, and she gets calls *all the time*. That she can get any work done at all is impressive; that she has managed to accomplish as much as she has in the very short time the position has existed--November 1985—is a testimony to what must be an enormous reserve of energy and spirit.

I enjoyed meeting the people who attended this session. The "students" consisted of professionals from every part of Apple's worldwide operations, including manufacturing, quality control, product engineering, marketing and even, so I was told, a lawyer. The guest lecturers included representatives from many of the groups Apple works with, such as dealers, educators and users. Our purpose was to do a massive download of our motivations, interests, perceptions and concerns. Speaking as a user group representative, I tried to impress upon the participants that user groups were most interested in finding out information about how to use Apple's products. We were also interested, I said, in sharing with Apple our experiences with our computers and software.

Afterwards, several people from the product design and quality control areas came up to me to discuss specific questions Apple and WAP are interested in. Apple, it is no secret, is interested in ideas about future printers, particularly for the market between the Imagewriter II and the LaserWriter. What features should it have? How much would it be worth? (Can we start a discussion of this on the Apple-Link board on BBS contd.)

System 3? After a few weeks we'll forward the information to the right people at Apple.) I also learned that while Apple is aware of the problem the UniDisk 3.5 has when trying to write a one-block file to a write-protected disk, a hardware fix is not likely in the very near future. The current software patch, available from your Apple dealer, will have to do.

After the Apple University presentation, I was able to speak for an hour with the person responsible for the Apple Clubs International program. Apple Clubs International are parent- or teacher-sponsored small groups of schoolchildren (K-12) who meet periodically to learn about computers. Apple Clubs and user groups have much in common, although Apple Clubs are something like the computer equivalent of the Girl Scouts. (You may be pleasantly surprised to learn that more than half of the members of Apple Clubs are girls.) They even have awards akin to merit badges! The program is one with many opportunities for children to have fun, work together and learn about computers--just like we do here at WAP! Can WAP work together with some of the Apple Clubs in the area? If you are involved with an Apple Club in the Washington area, or are interested in volunteering to coordinate helping Apple Clubs from within the Pi, please give me a call.

There's not that much else to report here. I'm sticking close to my telephone, waiting for my authorized Apple dealer to let me know my Macintosh upgrade has arrived. Although I understand why Apple has chosen to put all of its new motherboards into Mac pluses, rather than upgrade kits--Mac pluses make Apple a fair profit, whereas Apple may do little more than break even on upgrade kits--Apple would be well advised to ship upgrade kits to dealers sooner than they have. It's the 512K upgrade problem all over again. Old customers resent being forced to wait while new purchasers get the first crack at the latest improvements--improvements that were suggested by the experience of the many people who bought early. Every time Apple upgrades the Mac, the people who bought early feel more and more like pioneers--you know, the ones you can spot by the arrows in their backs! ☺

General Information

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

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

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

Current office hours are:

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

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday (usually) of each month, both Apple and Mac. Library transactions, Journal pickup, memberships, etc. are from 9:00-9:30 AM and during the Q& A sessions (times for these vary according to the main meeting topic). The business meeting is from 10:30 to 11:00.

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

Following are dates and topics for upcoming months:

April	26	- Dvorak Keyboard for Apple and Mac
May	24	- Apple // open - Hierarchical File System for the Mac
June	28	- Garage Sale

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.) ☺

CLASSIFIEDS

WANTED: A copy of Apple II User's Guide by Lon Poole et al (Osborne McGraw-Hill). Since I have a][+, an old edition is sufficient. Call Lincoln at (202) 387-7641.

FOR SALE: Monitor, Color/BW, 10" Panasonic; Disk II (without controller); and two 80-col./64K cards. Sold for best offer(s). Call Abel in Annapolis, (301) 268-0006 days or (301) 269-0040 evenings.

FOR SALE: 512K Macintosh, \$1250. Imagewriter printer, \$425. Both in excellent condition with 8-month balance of Apple Care maintenance agreement. Call Bill at 493-5564.

FOR SALE: 64K Apple][+ with 2 Apple disk drives, Videx 80-column card and Amdek monitor, \$650. Also available Microsoft CP/M board w/software, \$100; Echo II plus speech and music board, \$60; Saturn compatible 128K Ramboard, \$75. John Willis, work (301) 353-4924, home (301) 694-9410.

FOR SALE: 64K Apple][+, 2 disk drives, CP/M card, MF card, MX-80FT printer, L-100 monitor. Richard H. Duff, (703) 670-0748.

FOR SALE: Lisa 7/7 Accounting Software 50% off Professional level program by BPI. 4 modules: Gen'l Acct'g, A/P, A/R and Payroll. Orig. \$595 each. All 4 for \$1100. If no offer for 4, then any 3 for \$850, or any 2 for \$590. Virtually new; A/P, A/R, Payroll still in shrinkwrap. Call Art (703) 356-1384, 6:30 to 10:30 PM or weekend.

FOR SALE: Macintosh XL, with 2 megabytes of memory and 10 megabytes of RAM. Enjoy a large 12" screen for a really big spreadsheet! Mac Software: Omnis 2, a low-cost single file data base package, \$45; Quartet, a com-
contd.

bination spreadsheet and graphics package, \$40; MS Chart, the perfect graphics companion to Multiplan, \$45; Mac-Fortran compiler, convert your mainframe programs to run on the Mac, \$55. Call David, (301) 972-4263.

FOR SALE: Macintosh XL 512K memory cards by Apple Computer, \$400 each. Also MS Multiplan, \$50; MS Chart, \$35; Hayden Speller, \$25; or all three for \$100. Call Tepping at 593-5860.

FOR SALE: Apple][+, 64K, lower case chip, shift key mod., 5 1/4" Unidisk drive (new), Monitor II (new), View-master 80-column card, some software. \$800. Call Bill Hughes, (301) 753-6678.

FOR SALE: Okidata ML92 printer, with tractor attachment, like new, \$250. Also, Grappler+ parallel graphics interface card for the Apple][+ or //e, \$50. Call Bob, (703) 455-9019, evenings and weekends.

FOR SALE: Bargain prices for three Dow Jones products to track your investments: Market Manager, used slightly, works perfectly except in Canada, listed at \$299, only \$25; Market Manager, used slightly, works perfectly, even in Canada, listed at \$299, only \$40; Market Manager Plus (latest version), used once, lists now at \$249, only \$110. Call Newt Steers, 9AM-9PM at (301) 320-5820.

FOR SALE: General Accounting Software Modules (published by Software Dimensions), latest versions, suitable for Apple][,][+, //e and /// (in emulation): General Ledger-Accounting module, \$150; Payroll module, \$150. Or both at \$275. This is 55% off list price! (301) 262-7823. ☺

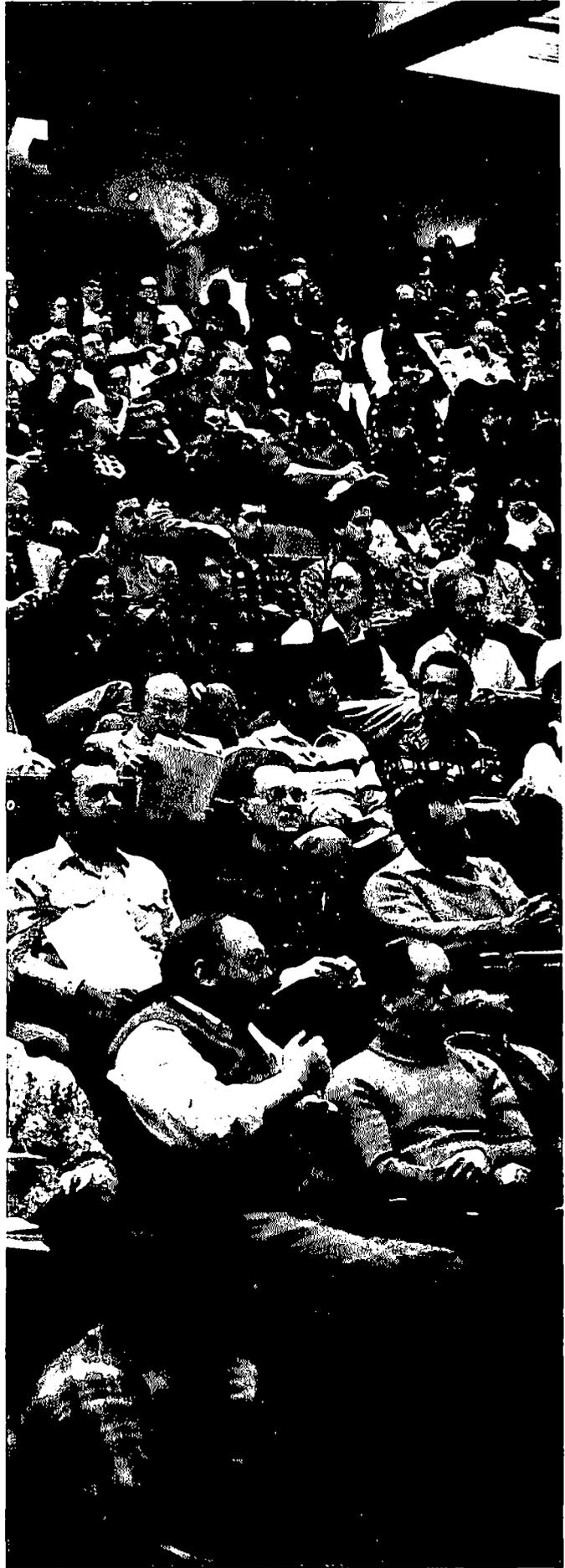
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PUBLIC SERVICE ANNOUNCEMENTS

Computer Learning for Seniors, Inc. is sponsoring five sessions for beginners, covering Operating Systems, Word Processing, Databases and Spreadsheets. Classes are each Saturday at a Maryland location from 9:30AM to 1:30PM. Tuition is free, Registration and Lab fee is \$25. These classes are for age 50+. For information call 971-4490. For reservation, send check to Computer Learning for Seniors, Inc., P.O. Box 34210, Bethesda, MD 20817. Include your SSN, date of birth, telephone no. for day and evenings, and your address.

The Greater Baltimore Hamboree and Computerfest will take place on Sunday, April 6th, at Timonium, Maryland. This event, sponsored by the Baltimore Amateur Radio Club, Inc. "W3FT", is now in its 15th year and is the largest "Ham" and electronic event in the Mid-Atlantic area. The Hamboree started out as exclusively oriented toward "Ham" radio, but with the advent of personal computers and other hi-tech electronics, now supports both interests. Our sales areas (Commercial, Flea-Market and Tailgate) have many vendors that offer great bargains on computers and parts. ☺



* April 1986 *

SIGNEWS

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 Apple// Beginning Tutorial #1 7:30-9:00PM Office	2	3 SigMac 7:30PM-Lady of Lourdes; GameSIG-Off 7:30PM ->	<-Thursday 3rd contd. DisabledSIG 7PM-CCCC	5
-> Monday 7th Deadline for Journal Articles	7 Mac Begin. Tutorial #1 7-10 PM Office	8 Apple// Beginning Tutorial #2 7:30-9:00PM Office	9 Executive Board 7:30 PM Office	10 STOCKSIG 8PM Office; FAC Slice 7:30 MRRID Ft. Detrick	11	12 DPub SIG 12 Noon Where?
13	14 Mac Begin. Tutorial #2 7-10 PM Office	15 Apple// Beginning Tutorial #3 7:30-9:00PM Office	16	17 Pascal SIG 8:00 PM Office	18	19 FORTH SIG 12 Noon Office
20	21 Mac Begin. Tutorial #1 7-10 PM Office	22	23 Apple /// 7:30 Chambr of Commerce Bldg., DC	24 EDSIG 7:30 PM Office	25	26 WAP Meeting - Apple // & Mac 9:00 USUHS
27	28 Mac Begin. Tutorial #2 7-10 PM Office	29 BBS Comm. Office 7:30 PM	30			

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the Chamber of Commerce Bldg., 1615 H Street NW, DC. The April meeting will be on the 23rd.

Apple //c meets each month after the regular WAP meeting.

DisabledSIG meets on the first Thursday of each month at the Chevy Chase Community Center, 7:00 PM. The next meeting will be on April 3. See their news elsewhere in this issue.

dPub SIG (Desktop Publishing) meets on the second Saturday of the month at 12 Noon, WAP Office. The next meeting will be on April 12.

EdSIG - the education special interest group - meets on the 4th Thursday of the month at the office, 7:30 PM. The next meeting will be on April 24.

ForthSIG meets on the third Saturday of the month at the office, 12 Noon.

GameSIG meets on the first Thursday of each month at the office, 7:30 PM. The next meeting will be on April 3. See their news elsewhere in this issue.

LISA/MacXL SIG will meet at 8:30AM on April 26 just before the main WAP meeting.

PIG, the Pascal Interest Group, meets on the third Thursday of each month at the office, 8:00 PM. The meeting on April will be on Apple Pascal and Artificial Intelligence (AI) programming.

PI-SIG meets on the third Monday of each month at the office, 8:00 PM.

SigMac Programmers meet on the 1st Thursday of each month at Our Lady of Lourdes School, 7500 Pearl Street, Bethesda, MD. Macintosh and Apple // meet together on the 4th Saturday (general meeting) at USUHS at 9:00 AM.

StockSIG meetings are on the second Thursday of each month at the office, 8:00 PM.

Telecom SIG meets after the regular WAP meeting on the 4th Saturday. ☺

* May 1986 *

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 SigMac 7:30PM-Lady of Lourdes; GameSIG-Off 7:30 PM	<-Thursday 1st contd. DisabledSIG 7PM-CCCC	3
4	5 Deadline for Journal Articles	6 Apple// Beginning Tutorial #1 7:30-9:00PM Office	7	8 STOCKSIG 8PM Office; FAC Slice 7:30 MRRID Ft. Detrick	9	10 dPub SIG 12 Noon Where?
11	12	13 Apple// Beginning Tutorial #2 7:30-9:00PM Office	14 Executive Board 7:30 PM Office	15 Pascal SIG 8:00 PM Office	16	17 FORTH SIG 12 Noon Office
18	19 Mac Begin. Tutorial #1 7-10 PM Office	20 Apple// Beginning Tutorial #3 7:30-9:00PM Office	21	22 EDSIG 7:30 PM Office	23	24 WAP Meeting - Apple // & Mac 9:00 USUHS
25	26 Memorial Day Office Closed	27 BBS Comm. Office 7:30 PM	28 Apple /// 7:30 Chambr of Commerce Bldg, DC	29	30	31

MEETING REPORT:

February 22, 1986

by Adrien Youell

Most members who can attend meetings probably remain thoroughly confused about our schedules, and this meeting was no exception. The meeting format published in the Journal is the desired *modus operandi* and will be adhered to when possible. But, there was a special reason for any disappointments. Alan Kay was passing by. Strategy demanded new plans and these were effected at last minute notice. We importuned Alan to speak to the Club. Although I may sound slightly mysterious about this our Editor had been speaking to Mrs Kay, Alan's mother, about the possibility of Alan appearing at our regular meeting, and had asked Alan himself while in San Francisco. It was only in the week prior to the meeting that positive acceptance was evident. We all apologize to members that there was insufficient notice to inform people more generally of the impending illustrious event.

It is with this possible disappointment in mind that a separate article is devoted to relate Alan Kay's presentation entitled "A Research Project on how to Invent Computer Agents" which is published elsewhere in this issue.

Alan performed from 9:30 to 10:50 to a packed audience representing all sections of the membership. "Tax packages for the Mac" took over at 11:00 in the auditorium whilst the Apple Q & A was held in the cafeteria. The Mac Q & A was at 12:15 until 1:45 in the auditorium. We really do intend to have something for everyone and the future programs prove we are trying!

My grateful thanks are extended to Ed Myerson who chaired the Mac Tax meeting so graciously, and to Tom Gross (TaxPro, which requires Excel), John Hudson (MacInTax) and Lynn Trusal (Excel templates). Ed presented TaxPrep (which requires Excel). These members put a lot of time into their preparation for the meeting. Thank you. Audio and video tapes of the auditorium meetings are available. We need an A-V tape library volunteer to co-ordinate and arrange the mounting volume of this material! ☺

JOB MART

HELP WANTED: Secretary for congenial office in my home in Colesville/White Oak area. Must have good typing, filing, phone skills, computer experience preferred. Good salary and benefits. 384-8877.

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RESEARCH PROJECT ON COMPUTER AGENTS

A Presentation to WAP by Alan Kay (Reported by Adrien Youell)

Introduction

Alan Kay is a jet-setting Apple Fellow who is participating in an Apple project at a Los Angeles elementary school to study how form and action are perceived by children, and how these perceptions and thinking may generate ideas to improve computer relations with people.

Alan's presentation was a robust sound and graphics essay mulling over the broad questions of the computer user-interface. He utilized lecture style with video tapes and 2x2 slides. The scope and depth of his 'essay' would not have been out of place at the National Academy of Science. This account is an informal report of the meeting. For brevity's sake "he said that's" and aspects of audience participation are expunged. Also, names of pioneers are guessed from the tape rather than researched and checked.

Alan Kay sharpened his wit at Xerox PARC (Palo Alto Research Center) in the '70's where he developed his concepts of the 'Dynabook', and later worked at Atari. I suspect he developed many other things but his biography has not yet been written. Alan is a lecturer in Computer Sciences and co-founder of the Media Laboratory at MIT, and is an Apple Fellow.

Summary

In a world with increasingly available information, are computers truly helping people? Can computers 'decide' what of the plethora of information users want to know? Can the computer, as a servant, perform as a human agent? Amidst a backdrop of brilliant graphics and children's fantasies, Alan built a foundation of models illustrating human thinking and fantastical research. Towards computer development, prophets, philosophers, designers, and technicians need to gain insight into how computers may better interact with humans. Artificial Intelligence will never match the complexity of the human brain, for which there are no dissectable models. Rather more available then, studying the behaviour of animals, the rules of construction and hence motion and response, may better provide a basis of how to think about 'things'.

The distant, manageable aim is development of computers that better serve our 'mechanical' requirements. The Macintosh is an excellent object orientated system but is a lousy servant; it does not (intuitively) know what to do to help us.

Alan Kay's Presentation

Computing problems are as basic as deciding which printer resolution to use and are further obfuscated by questions of a geometric protocol or pixel-orientated graphics. It is the sheer volume of available data resources that is the new big problem. The proliferation of networks has meant an ever broader base of resources that we can log into. The reason we need 'agents' is that there are so many networks our resources are embarrassingly rich. The Macintosh can handle

about a hundred 'objects' and the Smalltalk browser can utilize up to two thousand objects if one uses the system every day, but now in America there are about ten thousand networks all of which have resources. By 1995 there may be up to one hundred thousand networks. By then the chances of finding something that will be of use to us will be vanishingly small. Information retrieval will not be the answer, because if one spends all one's time probing we cannot be sure the results will be useful. In the late '50's McCarthy suggested systems such as an 'advice taker' that would handle transactions as a symbiotic servant. In 1965 Oliver Selfridge called these 'agents' and now in 1986 we realize we should be working on these questions. This talk then is on how to invent computer agents.

Historically, a trip from the earliest real-time graphics to the present day illustrates the development of the Macintosh and points the way beyond. In 1962 "Sketchpad" was the first graphics system and the first non-procedural programming system on a TX-2, with which lines were drawn perpendicular, parallel and co-linear. The constraints were solved in real-time. When asked how this first object orientated system was invented within one year, it was said that they didn't know it was hard. On to 1969 at Rand Corporation, a system which was the forerunner of window control had no keyboard to benefit an economist who didn't like to type. This was a hypertext system using icons borrowed from PARC. Text was entered in script, and was the first modeless system; GRAIL - Graphics Interface Language.

Transition to showing slides was almost the undoing of the talk; No, they don't start at #1! What can I say? If you must have a disaster you might as well have communications! The audio-visual complexity currently at USUHS is a recipe for disaster. Harmann (in Germany, 1960) showed 10,000 slides to 20 people at 10 seconds apart; of this myriad of images all 20 demonstrated >90% recall even after three months. Apparently we have three major mentalities; muscular, visually image-based, and symbolic. Pointing at things is muscular. These are our icons. The hard thing is making visually concrete things symbolic. A 12-year old girl wrote a Smalltalk-72 program based on 'Sketchpad' in 1975 in 50 lines for an Altos graphics program. A 15-year old wrote an 80-line program to help him design ham radio circuit diagrams. The computer problem is that these examples are great but they do not relate to ordinary people using computers. Apple has achieved half of the equation with the user interface but the user tailoring is terrible. The Mac is beautifully dressed but the handshake is soggy.

Film of a particularly intriguing individual with a handsome wristwatch showed some neat tricks on a huge screen. This was a map simulation (at Atari) in which the operator pointed to parts of the screen in answer to the computer asking "where" to place graphic items. This clip ended with creation of a 'red cruise ship' named 'Corporate contd.

Research' and then to the command "Delete Corporate Research"; 'pac-man' chomped across the screen gobbling up the ship. Notwithstanding the resulting audience hilarity, this represents use of a 3-D pointing device that the operator was wearing. Alan predicts that this agent will represent computing of the future, that the 'computer' will be like a cellular telephone, the operator moving from node to node. The computer will be his personal agent following him from room to room ready to do his bidding.

Artificial Intelligence is fine but as an agent it should say what it can do for you and also what it cannot. It should be treated not as an oracle but, like a librarian, as a guide. We need new ways to perfect agents to give the user information on the limitations of the computer interface. Expert systems are also useful but they do not learn. They are like bees with only 24-hour memories. So, development of Artificial Intelligence systems should not be modeled on insects, but also should not be like humans who have language which makes things very complicated to understand what the brain might be doing. We should be like the neurobiologists who study a variety of animals, look at their behaviour and try to understand how they work.

The Project. The protocol calls for a Vivarium, an environment in which animals can roam around. Apple has taken on a elementary school in Los Angeles for five years as the project location. This is not a 'special' school but it certainly does special things for the children who are a representative proportion of the ethnic population of LA. They are unusual in that they have ripped-up their playground to build a farm! Alan is very enthusiastic about this school where the first graders can already write, aided by movie-frame drawings on the lefthand side of their notebooks. Visual 'feel' is a powerful aid to writing. The farm is managed by the 2nd and 3rd graders, and the 1st graders bake cookies. An example from the curriculum is an ocean, a complex ecology of many things working together. The children study them and write reports. One item would be fish and so a fishpond was built in order to study animals. Animals are important to the children because they represent real things, but in a computer simulation they are caricatures of the real thing. They can manipulate the behaviour of the animals in models and pictures but they must be taught that they are not Gods and that animals will express a life of their own. People from Disney diffuse this part of the study into fantasy. The benefit to the children is that they are presented with multiple levels of understanding. There are many ways of understanding a system. (Marvin Minsky says that we don't understand something until we understand it in more than one way).

Pterosaur is in the dinosaur history books as the largest-ever flying animal. This Pteradon had a wing span of 36 feet, like a 'young' airplane, and had a head crest for balance but lacked posterior stability. The children, as was their wont to make models, wanted to become Pteradons and wrote a charming song "I'd like to be a big Pteranosaurus".

Paul McCready (of Gossamer Condor and Gossamer Albatross fame) has approached the Smithsonian to build a life-size model of Pterosaur which would be capable of flight. Test flights with a half-scale model have already happened in the Mojave Desert, CA, and were filmed on 'IMAX'. The latest film was premiered at the meeting. Alan gave Paul

several Macintoshes which have inspired an on-board dynamics and stability control system adjusting the center of gravity 100 times per second. Wing sculling motion gives the 'beast' a certain amount of power and ground radio-control provides direction control. Seeing the film was absolutely fantastic. There will be some big event on these lines at the Air & Space museum on June 10th, maybe a flight across the Potomac? So, Paul McCready is engaged in the very same business as the LA children.

Alan showed us this diversion to give us an idea of the romance of studying animals, and simulating them. "It is that romance shared by children and adults alike which powers this project and gives it the life to allow us to do some invention." "The preferred user interface may have windows but primarily deals with process-modeling." MIT students have been working on simulations with an Evans and Sutherland CT5 but are going to acquire a several million dollar CT6 capable of 60 graphics frames per second. Several film clips showed examples of techniques, especially the pastels of the Dance of the Sugar Plum Fairies, air-brushed by hand, at 24 frames per second. This hand-work will probably never be repeated. The pastel-look is desirable in animations because impressionistic trees and foliage appear inoffensive and not patently false. A D.O.D. sponsored film of a Harrier exercise shows realistic tree branches waving in the power-thrust wind. A beautiful Digital Products 3-D film on an enormous 1000x3000 screen showed an amazing fantasy trip into the atmosphere of Jupiter.

"This [lecture] is a sketch of what this project is about. It is not about fish or fantastic animals. It is a context for thinking about things in Artificial Intelligence and computer graphics that we haven't had the motivation to think about before. These animals have to survive in a complex environment just like our 'agents' ten years from now will have to survive in the network world of the future. Thank you very much." ☺

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For Use by WAP Members Only

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

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WASHINGTON APPLE PI BULLETIN BOARD SYSTEMS

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 SYSOP Emeritus
 Special Consultant
 Hard Disk Consultant
 Programming Consultants

Leon H. Raesly, L.C.S.W.
 Tom Warrick
 Barry Fox
 Dave Harvey
 Rick Mlodoch
 Eric Rall
 Karen Rall
 Mike Ungerman
 Jack Mortimer
 Rich Wasserstrom
 Tom Vier
 Emil Levine
 Bonnie Walker
 Jeff Berger

SYSTEM 3 (986-4715)
 Desktop Pub. Board SYSOP Mark Walter
 Press Releases Board
 Tech Notes Board
 EDSIG Board SYSOP Peter Combes
 Apple-Link Board SYSOP Bernie Urban

Library File Programmer
 BBS Files List SYSOP
 Group Purchase Files SYSOP
 Special Corvus Consultant
 Indexing Committee - Chairman
 Member
 Member

SYSTEM 4 (871-7978) SYSOP Lee Raesly
 The Classified SYSTEM - Hardware, Software,
 Misc., Employment, Pi Officers/Volun. Boards

SYSTEM 5 (890-8984) SYSOP Alice Allen
 The Journal & Indexes SYSTEM - currently on hold

SYSTEM 1 (986-8085) SYSOP
 Hardware, Software, General &
 Lafayette Park Boards SYSOP
 CP/M Board SYSOP
 dBASE II Board SYSOP
 Apple /// Board SYSOP
 Mac Prog. Board SYSOP

Joe Chelena
 Joe Chelena
 Nick Veloz
 Nick Veloz
 Carl Bowman
 Tom Parrish

SYSTEM 6 (703-450-6822)
 SYSOP John Gersic
 The "Great Falls" Download Test Board
 Assistant SYSOP Bruce Johnson

SYSTEM 2 (986-8086) SYSOP
 MAC Hardware, Software &
 Gossip/Misc. Boards SYSOP
 Telecommunications &
 Telecom SIG Board SYSOP
 Games/GameSIG Brd. SYSOP
 BASIC Prog. Board SYSOP
 AppleWorks Board SYSOP
 Commnts/Sugs. Board SYSOP

Larry Half
 Larry Half
 George Kinal
 Ron Wartow
 Mike Ungerman
 Ken DeVito
 Lee Raesly

SYSTEM 7 (301-662-3131)
 SYSOP Scott Galbraith
 (The Frederick Apple Core Slice SYSTEM
 The Cracker Barrel BBS)
 Macintosh Board SYSOP Kurt Holter

BBS Committee - Chairman Lee Raesly
 Members - Douglas Canton Jr., Joe Chelena,
 Joan Dunham, Barry Fox, Larry Half, Dave Harvey,
 Dave Helfrick, David Kemp, Emil Levine,
 Mike Ungerman, Tom Warrick, & YOU, if you attend! ☺

Washington Apple Pi Meeting Schedule Beginning in March

	9:00	9:30	11:00-11:15	12:45	2:00
Auditorium	Business Meeting	Apple II Program	Break	Macintosh Program	
Cafeteria		Macintosh Q&A Session and announcements	Break	Apple II Q&A Session and announcements	Special Interest Groups

Journal distribution and disk sales begin at 8:45 and go for as long as demand (and the supply of volunteers to handle the demand) permits.

TELECOM SIG NEWS

by Dave Harvey

The Telecom SIG met after the WAP meeting on February 22 and was conducted by George Kinal. The meeting started off with a question about ASCII Express, Professional, which concerned a Menu 4 item on the "Here Is" character. This item has to do with situations when dealing with systems like TELEX. For most users this item can be ignored.

The new Hayes Smartmodem 2400 was discussed. There are no dip switches on this modem, and for the most part the modem is intelligent enough to figure out what should be done. What is unusual about this modem is that it has non-volatile memory and registers can be set. Then, when the unit is turned off, the memory is not lost. It uses no batteries for this capability. It can store telephone numbers, in addition to settings for the registers.

There was discussion about failure modes for the X-Modem protocol and how this protocol handles bad blocks that are received. There seem to be bugs in the procedures of some Macintosh communications software for handling situations where large portions of the blocks transmitted improperly. The software hangs up and will not retransmit.

The highlight of the meeting was the demonstration of The GENie information utility. This is a new service offered by the General Electric Company. It is just starting out now, so much of its potential is still to be realized. The system is designed very much like the Compuserve system, and someone who is familiar with that system would have no trouble using GENie. The Special Interest Groups (called Forums on Compuserve) are very much like Compuserve. This is to be expected, since the person who designed the Forums on Compuserve is now working on the GENie system. The cost is very low compared to some of the other systems. It is just \$5 an hour non-prime time at both 300 and 1200 baud. There is also no monthly minimum for the service. George passed out descriptive literature on the service for those who were interested in exploring it further. ☺

LISA SIG NEWS

by John Preston

Attention Early Bird Lisa and Mac XL Users: There will be a brief meeting in the USUHS cafeteria for interested persons around 8:30AM, Saturday April 26, before the main April WAP meeting. It is intended that this gathering will end about 9:00AM, before the main Mac Q&A session. It is hoped that this will be a forum to exchange tips and to answer questions that pertain specifically to the XL/LISA users. Call me at (301) 229-9154 for further information. ☺

APPLE TEAS

by Amy T. Billingsley

What's an Apple Tea? An opportunity for Apple users to get together in a small group setting to learn about a specific phase of Apple computing, or just to share information and ask questions.

How can you have one in your area? Plan to host one at your home or another suitable location. Think of a topic of general interest, settle on a date, and call me at 622-2203. How could something so helpful be so simple! Start working on yours today.

The following two teas are scheduled for April and May:

Washington Apple Pi

Northern Virginia Apple Tea

Wednesday, April 30, 7 - 9 PM

on APPLEWORKS - THE WORKS

Database, Word Processing and Spreadsheets

at the home of George & Delores Sall

7850 Southdown Road

Alexandria, VA 22308

Refreshments

Please RSVP to George Sall, 768-0212. Bring computer if convenient - the more hands on, the better. Get directions from George when you call. (It's on the river between Alexandria and Mt. Vernon - close to American Horticultural Society.)

Washington Apple Pi

Silver Spring, MD Apple Tea

Thursday, May 8, 7:30 PM

on GRAPHICS with Janice Hillman

at the home of Ed and Varda Fink

13325 Old Forge Road *

Silver Spring, MD 20904

RSVP to the above address or call the Finks at (301) 384-3545. Bring computer if convenient.

* Directions: Take Route 495 to New Hampshire Ave N. exit. Drive 4 miles to Randolph Road. Turn left. Drive to 1st traffic light, Locksley Lane. Turn right. Drive to 2nd street on your left, Old Forge Road. 13325 is on the right almost at the end of the street, 2 houses from Hawkesbury and the elementary school. ☺

FORTH SIG NEWS

by Kevin Nealon

The Forth SIG meets on the 3rd Saturday of the month at the WAP office. Starting April 19th, it will meet at 12:00 Noon instead of 10:00AM. Also, at the April meeting elections will be held for a new SIG Chairman, since yours truly has let his duties lapse for other interests. ☺

APPLE /// ARTICLES IN THE WAP JOURNAL

by David Ottalini, /// SIG Co-Chairman

It may be hard to believe, but there have been quite a few articles published in the WAP Journal over the past few years concerning the Apple ///. In my continuing quest to find every /// article I could lay my hands on, I went back and took a look at all the past WAP Journals from DAY 1 and was surprised at what I found.

This month, I get to share that information with you. The WAP Office has copies of all back Journal issues, so anytime you are interested in finding a particular issue, spend a little time in the library. I might add that the WAP library is probably one of your best sources of information on Apple Computers around. I really don't know of any other group in this area (and that could probably be expanded to most of the nation) that has the fantastic resources that our own library has. Now if there was only a little more space.....

In any case, you will notice that I have included a number

of articles that may not be considered to be totally Apple-/// specific. However, there were compelling reasons to list articles dealing with various languages for the // and /// (like Modula-2 and Fortran), Lap-Top Computers (which can be hooked up to the /// as well as the other Apples), etc. So the bottom line here was that I tried to compile a list of all articles that, in this author's mind, related to the Apple ///. (And yes...there is even one on the Mac...only because /// SIG member Bart Cable wrote it...saying that despite its capabilities...he'd still keep his ///, thank you).

This compilation covers up through the March, 1986 issue of the WAP Journal, by the way, so you have a bibliography here that is as up-to-date as I could make it for you. You should also note that I have not included a "month" category. The Journal follows a January-December publishing schedule so, January = Issue 1, etc. Enjoy!

<u>SUBJECT</u>	<u>TITLE</u>	<u>AUTHOR</u>	<u>VOL</u>	<u>#</u>	<u>YEAR</u>	<u>PG(S)</u>
/// Magazines	Apple /// Newsletters and Magazines	Ottalini	7	10	1985	12-13
AIM	Apple /// for Me Update	Ottalini	7	10	1985	13
AIM	Apple /// Is For Me	Ottalini	7	8	1985	38
Apple ///	Flavors: Little Tidbits:Apple ///	Chambers	3	2	1981	17
Apple ///	Here, So Slowly, Comes the ///	Cheren	3	3	1981	8
Apple ///	The Not Too Slow Apple /// Is Great!	Dow	3	4	1981	8-9
Apple ///	Apple News Special Report: Apple Expo	Violante	3	4	1981	13-15
Apple ///	Update On the 'Big Apple' ///	Dow	4	2	1982	13
Apple ///	Apple Tech Notes	Schenker	4	12	1982	24
Apple Computer	Apple Reacts		7	11	1985	28
Bibliography	Open Apple Gazette Bibliography	Ottalini	7	12	1985	11-12
Bibliography	An Apple /// Bibliography - PT.2	Ottalini	7	9	1985	26-27
Bibliography	Apple /// Articles: A Compilation	Ottalini	7	8	1985	37-38
Books	Apple /// Bookshelf	Ottalini	7	7	1985	16-17
Compuserve	Calling Compuserve with the Apple ///	Cable	6	9	1984	29
Compuserve	The Compuserve Connection	Cable	6	11	1984	46
Computer Sales	Thinking of Selling Your Computer...	O'Connor	5	8	1983	44
Demo Program	Taking Apart the Apple /// Demo Program	Ottalini	7	11	1985	12+
Lap Computers	Lap Computers as Apple Accessories :2	Kinal	7	12	1985	34-35
Lap Computers	Lap Computers as Apple Accessories :1	Kinal	7	11	1985	24
MAC	Steve Wozniak Brings MAC to DC	Cable	6	4	1984	26
Modula 2 : 1	Introduction to Modula 2	Platt	6	1	1984	42+
Modula 2 : 2	Introduction to Modula 2	Platt	6	2	1984	26-27
Modula 2 : 3	Introduction to Modula 2	Platt	6	3	1984	24-25
Modula 2 : 4	Introduction to Modula 2	Platt	6	4	1984	34-36
Modula 2 : 5	Introduction to Modula 2 : Input/Output	Platt	6	5	1984	30
News	Apple /// News	Ottalini	7	12	1985	10
Pascal	Writing Business Letters with Pascal	Klonsner	3	9	1981	40-42
Pascal	The Apple Pascal Express Root	Stokes	5	8	1983	8-10
Programming	Some Suggested Programming Standards	Askew	4	6	1982	36-42
Review	Titan ///+][EM Board	De Jong	7	6	1985	29
SIG News	Apple /// SIG News	Ryan	7	12	1985	9
SIG News	Apple /// SIG News	Konvalin	5	5	1983	30
SIG News	Apple /// SIG News	Hershey	5	7	1983	39
SIG News	Apple /// SIG News	Ryan	7	10	1985	10+
SIG News	Apple /// SIG News	Askew	4	6	1982	13
SIG News	Apple /// SIG News	Hershey	5	7	1983	39
SIG News	Apple /// SIG News	Ryan	7	1	1985	9
SIG News	Apple /// SIG News	Ryan	7	2	1985	24

contd.

<u>SUBJECT</u>	<u>TITLE</u>	<u>AUTHOR</u>	<u>VOL</u>	<u>#</u>	<u>YEAR</u>	<u>PG(S)</u>
SIG News	Apple /// SIG News	Ryan	7	4	1985	5
SIG News	Apple /// SIG News	Ryan	7	5	1985	43
SIG News	Apple /// SIG News	Ryan	7	6	1985	28
SIG News	Apple /// SIG News	Ryan	7	7	1985	15
Software	Buying /// Software	Ottalini	7	6	1985	30
Users Group	A Users Group	Burger	7	9	1985	60-61
VisiCalc	VisiCalc Formulas in Screen Format	Raesly	5	11	1983	58-59

1986 WAP Journal Articles:

Apple ///	The Best of the Apple ///: Part 2	Ottalini	8	3	1986	14-15
Apple ///	Best /// Pics in '86 Pt. 1	Ottalini	8	2	1986	14-15
Basic	The REM-arkable REM	Hayman	8	3	1986	28-31
Forth	"Print Using" for Forth	Page	8	2	1986	32-33
Forth	Square-Root Routine for Forth	Page	8	3	1986	33
Lap Computers	Lap Computers as Apple Accessories	Kinal	8	3	1986	25+
Lap Computers	Laptop Computers :3	Kinal	8	1	1986	20-23
Pascal/Modula-2	Pascal and Modula-2 Implementations	Platt	8	2	1986	36-37
Review	Basic-Pascal Translation: A Review	Rusk	8	3	1986	34
Review	Views And Reviews	Hobbs	8	1	1986	32+
Yearend Review	A Look Backward...and a Look Forward	Ottalini	8	1	1986	28-29

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APPLE /// DRIVERS

by David Ottalini

Thanks to our good friends at ATUNC, the Apple Three Users of Northern California, a complete list of the sizes of various Apple /// Drivers is being developed. This information can be of critical importance, since drivers take up plenty of memory.

The key to using drivers in a particular program is to simply never install any more than you absolutely need. If you don't need an .RS232 driver, for example, use the System Utilities Program and its System Configuration Program to delete it. The SCP will tell you to begin with what is in your driver file, allow you to edit them, etc.

If your driver file gets too big, you may have to make a separate boot diskette containing SOS.Kernal, SOS.Interp and SOS.Driver, with the rest of the program on a second diskette. Again, your System Utilities Program will let you do that, or you can also use the Filer in Pascal.

The following list of Driver file sizes is the latest compiled by ATUNC. If you have any additions, etc. let me know and we'll add them to our list and pass them along to the folks on the West Coast as well.

<u>DRIVER NAME</u>	<u>FOR/FROM</u>	<u>SIZE</u>
.CONSOLE	Apple	7K
.CONSOLE	Powerkeys	10K
.CONSOLE	Powerkeys+CP	12K
.RAM	Titan ///+//e	13K
.PPRINT	D.A.Data Systems	2-30K
.SPOOLER	Quark	6K
.SPOOLSTATUS	Quark	6K
.GRAFIX	Apple	5K
.PRINTER	Apple-Serial	2K

.PRINTER	Apple-Parallel	2K
.PRINTER	Grappler-Par	4K
.RS232	Apple	3K
.FMTDX	Apple-Formatter	1K
.CATALYST	Quark	10K
.QUARKCOM + UNUSED1-6	Quark	1K
.PROFILE	Apple Hard disk	1K
.ONTIME	On Three	2K
.ATTACH		1K
.AUDIO	Apple	1K
.PKASO/U	Complete	5K
.PKASO/U	Mini	1K
.TMPDX.CODE	Microsci 143	5K
.TMPFMT.CODE	Microsci Formatter	5K

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Q & A

by Bruce F. Field



Q. I have heard there is a program in the public domain which speeds garbage collection in Applesoft. To date I have been frustrated in obtaining the specific reference for this code. Can you help?

A. The program you are looking for was written by Randy Wiggington and was originally published in Call-A.P.P.L.E., January 1981, pp. 40-45. It was re-published in Call-A.P.P.L.E. In Depth, Volume 1, "All About Applesoft", pp. 25-33. A couple of corrections have recently been discovered by our readers and reported in this column. First, the SBC STREND at line 55 in the "All About Applesoft" (AAA) version should be SBC STREND+1; the original version is correct. Secondly, as published the routine works, but actually goes through the garbage collection process twice each time garbage collection is required. The solution is to remove the JSR NZTAB at line 60 AAA version, line 59 original version, and insert a JMP NZTAB immediately before the line labelled FNDVAR2, line 65 AAA version, line 64 original version.

The code for all the routines in "All About Applesoft" is available on diskette from A.P.P.L.E., product code SIN1, for \$16.50. The "All About Applesoft" publication is available for \$7.00. Both prices are for A.P.P.L.E. members, non-members add 10%.

Mike Salzman wrote with an interesting observation on this same topic: "I have been using FAST GARBAGE COLLECTION for some time now. I wanted to hear how often garbage collection was taking place, so I added the JSR \$FF3A after line 59 when I changed STREND to STREND+1. I would get a beep if I called fast garbage from the keyboard, but not from within my program. The problem was the bell call \$FF3A. If your current output device does not have a bell, you will not hear the call. The bell call at \$FBDD is not dependent on the output device and would beep under program control. For awhile I thought Rod Serling had come to visit me."

Good point Mike, the problem is the the subroutine in the monitor at \$FF3A just sends the ASCII bell character (\$07) to the output device. The software for the screen traps this character and calls the routine at \$FBDD that actually beeps the speaker. Some printers and other devices just don't bother with the bell.

Q. I have an IBM PC at work and an Apple at home. I'd like to find a way of transferring data from my PC so I can work at home on it with the Apple. I know that one way is to use a modem but our security regulations do not allow us to connect modems to our machines.

A. It just so happens that there is a product called Turnover that consists of a half-size card and software for the PC that allows the PC to read and write 5 1/4" disks in Apple format. It is produced by Vertex Systems, Inc., Suite 3, 6022 W. Pico Blvd., Los Angeles, CA 90035,

tel. (213) 938-0857. You need two floppy drives, or a floppy and hard disk on the PC. The Turnover board plugs into the PC, the standard PC floppy disk drives are plugged into the Turnover board, and a small jumper from the Turnover board plugs into the original disk controller board in the PC. When disabled the board is transparent and the PC functions as a normal PC. When the Turnover software is used you can transfer files written in Apple DOS 3.3, ProDOS, Softcard CP/M, Apple // Pascal, and Apple /// SOS, to an MS-DOS formatted disk. Similarly you can initialize a disk in Apple format and write selected PC files to it in DOS 3.3, ProDOS, CP/M, or /// SOS format.

A utility program is also included to modify the MS-DOS files to strip the high bit, add or remove line feeds and carriage returns, or replace strings. This is claimed to permit Apple VisiCalc files to be used with Lotus 1-2-3. There is also a utility to convert Apple binary files to MS-DOS binary files by stripping off the address and length header of the Apple binary file.

Of course this may be only part of the problem. If you are interested in transferring ASCII text files, then Turnover should work fine. If you need to transfer specially formatted files, i.e. database or spreadsheet files, additional manipulation of the files may be necessary and require that you or a knowledgeable person write a special program to do the conversion. This may be more trouble than it's worth; dump the PC at work and get another Apple.

Q. I need help in setting the serial ports on my Apple //c to use with an odd-ball printer. Booting the System Utilities disk does this until the next cold start, but it takes forever and means interrupting the work I'm doing. I have tried setting the port from BASIC by issuing a Ctrl-D and PR#1 followed by Ctrl-I and the appropriate codes for the port. I've tried this several ways, on startup before loading ProDOS, from a BASIC program, and as direct commands with BASIC in RAM. Each time it works once, but after I return to the monitor, it seems to forget the serial settings, as if I had done a cold start. Do you have any suggestions?

A. Once you set the ports the settings should remain undisturbed until you do a cold start or a program modifies them. Possibly one of the programs you are using is changing the settings. One way to simplify the setup procedure is to create a text file that contains the necessary codes. You can use any word processor that creates standard text files. Type in the commands exactly as you would if you were typing them directly from the keyboard in BASIC. Save the file with some easily recognizable name such as "serial.setup". Whenever you want to setup the port type "EXEC serial.setup" from the Applesoft prompt. This will replay the commands in the text file and set up the port. You can also use the file
contd.

from a BASIC program using the Ctrl-D character, i.e. 100 PRINT CHR\$(4)"EXEC serial.setup".

Q. When I use my Okidata printer in correspondence quality mode the top of the lower case a is curled down. Is this a printer problem?

A. Yes, in a way. In correspondence mode the Okidata makes two passes for each letter with a small line feed in-between the passes. Sometimes the line feed does not move the paper correctly. Check that there is very little play in the platen. If you're using pin-feed paper make sure the friction feed rollers are disengaged. Excessive friction in pulling the paper into the printer can also cause a problem. It might help to move your stack of paper so that it doesn't get caught on anything on its way to the printer. There is always a little backlash in the gears so that when you turn the platen knob to adjust the paper, the next line feed is likely to be incorrect. To eliminate this, do a line feed before printing anything. The Imagewriter also has this problem.

Q. When I print out two columns using AppleWorks, the margins come out ragged even when I put a carriage return at the end of each line.

A. Check that the width of an "m" character is the same as for an "i" character. Your printer may be set for proportional size characters. AppleWorks assumes all the characters are the same width.

Q. I have Call Waiting service on my telephone but whenever I am using my modem with a BBS and a call comes in it disconnects me. Is there anything I can do about this?

A. When the other call comes in it temporarily disconnects the line and the modem hangs up because the carrier from the other modem has disappeared. With some modems (Hayes, Hayes compatibles, and possibly some others) you can set the amount of time the modem waits till it hangs up after loosing the carrier. Of course it has to be set long enough on your modem and on the BBS modem.

Q. I have the newer version of AppleWorks and as you can see from the top line I am having problems. I just need to get rid of the "ON" that gets printed on the top of the first page. For hardware I have an enhanced //e, Wesper Micro "Wizard-SOB" serial buffer card, and a Diablo 620 printer. None of the manuals give a clue as to proper control codes. Do you by chance have an answer?

A. I think I've answered a question like this before, but since it seems like a common problem once more won't hurt. As long as you are using version 1.2 or later it shouldn't be difficult to fix it. AppleWorks sends an initialization string to the printer interface card when it first begins printing. The default value for this string is Ctrl-I 80N and this is supposed to be trapped by the interface card and set it to print 80 columns on the printer with the video display turned off. Unfortunately not all interface cards recognize this command. Despair not, it is relatively easy to change it in versions 1.2 and later. From the main menu select (5) Other Activities, then (7) Specify

information about your printer(s), choose Change printer specifications for your printer, under Change a Printer choose (5) Interface cards. Follow the instructions to change the control characters, Ctrl-I 80N. When asked to type the exact control characters required, type ^ (caret) to end the string with nothing in it. This will probably work with your interface card. If you still have problems you might try setting the string to Ctrl-I 0N, as this has been reported necessary for some interface cards.

Q. My Duodisk drive occasionally gives me I/O Errors and then I find that the disk I'm using has bad blocks. Usually the bad blocks are on track 0. Before I take a trip to the dealer is there anything I can do?

A. I suggest that you turn off the power to your Apple and disconnect and reconnect all the cables to your disk drive. Also remove and re-insert the disk controller card. The connectors develop an insulating oxide layer that can cause intermittent failure. You could also clean the edge connector on the bottom of the disk controller card using a soft pencil eraser; be sure you wipe away all the erasures with some isopropyl (rubbing) alcohol.

If you have problems reading a disk, especially disks written awhile ago, or disks written on another machine, the problem may be the drive speed and can be measured using any of a number of public domain disk drive speed programs. Track 0 is only written at initialization time. Since you are finding bad blocks on track 0, presumably with the drive that isn't suspect, it sounds like you have an intermittent failure that causes the bad drive to write to the disk when it should only be reading, or writing to the wrong track. That's why I suggested the contact problem. Alignment of the read/write head in the drive should only affect tracks that are currently being written, and should not trash other tracks. Adjustment of the head should be done by a dealer anyway.

Q. I'm thinking of adding a large Ram card, but all that I'm reading about them has me confused. I understand that not all programs work on them and thus I'm trying to figure out if it's worth buying one of these cards. What kind of programs make use of these Ram cards?

A. You are right that not all programs work with all Ram cards. Adding a Ram card to your Apple does not automatically increase the amount of memory available for all your programs. Each program must be written specially to use the extra memory. And, Applesoft won't use it at all unless you buy a special patch program for it. Unfortunately (except for the extended 80-column cards for the //e) different manufacturers use different methods for accessing the cards, so even if a program works with a card from one manufacturer it may not work with a different brand. One solution is to use a "pre-boot" disk that Ram card manufacturers supply to modify popular software to work with their cards. For example Applied Engineering supplies software to modify AppleWorks so that it can use their Ram cards up to 3 megabytes.

My recommendation is NOT to buy a Ram card until you know what software you wish to use with it.

contd. on pg 41

DISABLEDSIG NEWS

by Jay Thal

KEYBOARD MODIFICATIONS

During the last month I've received several inquiries regarding how to modify the //e's keyboard for persons with disabilities. While these modifications have been published previously, almost two years ago, the need exists to repeat them.

Locking Keys. Several commands require the simultaneous stroking of two keys. And, for most of us it is relatively easy to hold down the Ctrl or ESC keys while touching another. But, for those who find that impossible, accessing the computer can prove frustrating. The simple "fix" is to take your Apple into your dealer and have the switches under the keycaps replaced by the locking type switch that underlies the CAPS LOCK. Replacement switches cost \$4 (plus labor). If you're handy with a low heat soldering iron, you can do this easily yourself, but I've found that recent purchasers of Apples are more reluctant to enter the machine themselves.

Disabling the //e's Auto-Repeat. Persons who lack the fine motor controls which allow quick removal of the fingers from a key can find an unwanted string of characters flashing across their screen. Here's how to rectify the situation:

Turn off your //e, and remove the top. On the right front quadrant you'll find the Encoder IC; it's marked KR 3600-017. GENTLY remove this chip from its socket. Pin 1 of the chip is identified by a dot on the case. Count back to Pin 5 and GENTLY bend this pin out 90 degrees. So that the repeat function is not permanently disabled, one of two methods can be used:

1) Attach a short wire (4 inches) to a mini test clip (Radio Shack 270-372) and strip 4mm of insulation from the other end of the wire. Insert the bare wire end into the 5th socket and reinsert the Encoder chip CAREFULLY into its socket. When you want to activate the repeat function you merely have to attach the test clip to PIN 5 which is sticking out. This, of course, requires that you open the Apple's case each

time you want to make the change. The alternative method, though initially more difficult, is...

2) Solder two long (about 12 inches) wires to a SPST toggle switch and mount the switch in one of the unused ports on the back panel. Each of the wires should have 4mm of insulation stripped from the other end. One of the wires should be CAREFULLY soldered to PIN 5, which should be sticking out at 90 degrees. The other bare wire end should be placed into the 5th socket and the Encoder reinserted CAREFULLY.

KEYTALK: A Software Review

KEYTALK is billed as a beginning literacy activity, and is designed for developmental ages 3 to 8 years. It is distributed by Programs for Early Acquisition of Language (PEAL Software), 2210 Wilshire Blvd., Suite 806, Santa Monica, CA 90403-5784. Telephone (213)451-0997. Cost - \$69.95.

KEYTALK developed out of research by Dr. Laura Meyers, a linguist, whom we've had the pleasure of having at past meetings and writing about. Dr. Meyers has worked with disabled infants and children who would have been rejected long ago by practitioners of traditional therapeutic approaches. Because she came from a background in linguistics, rather than remedial medicine, she didn't know that the things she was about to do were impossible.

Meyer's view is that the most powerful programs are the simplest. Not designed to show off the whiz-bang capabilities of the computer, the programs draw the child in to give him or her command. Focus is on the the cognitive task and not on the commands to make the computer run.

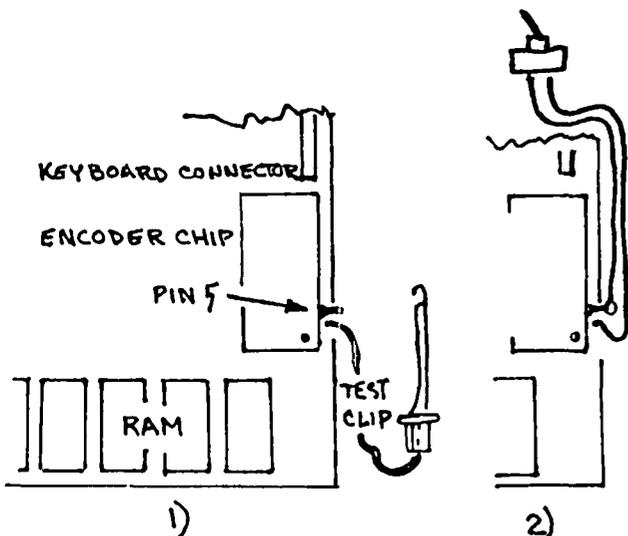
Other than learning the need to use the space bar between words, the return key at the end of the line, and what punctuation marks will do (and these can be picked up during the exploration) the child is in control from the beginning. The six commands: Talk; Print; Find; Save; New; and Erase are mnemonically accessed and with minimal supervision can be readily learned.

The Talk command suggests the program's primary feature - it talks. Of course it needs some aid--that of an Echo II or Echo+ speech synthesizer. The Echo is made by Street Electronics which also makes the Cricket for the //c, but you'll have to check with PEAL about compatability for that configuration. It definitely works with the][+ and //e.

I have a disabled child who has speech and language difficulties. His first approach to KEYTALK, and with minimal intervention on my part, paralleled Meyers' notes in which she stated that her goal was to enable children to actively participate in learning by making that learning personally meaningful to him. Let me explain how that worked.

My son knows names, telephone numbers, and even the spelling of many words (learned by rote) that are meaningful to him. But, it is a long, arduous process for him to learn new words in the sense that he integrates the individual letters, letter strings, their sound and their meaning/association. What he first did was type in names and telephone numbers which he knew. After each keystroke the letter or number is

contd. on pg 21



"BIG LETTERS" : A Program for People With Vision Disabilities

by Boris Levine

Those of you who stayed till the end of the meeting under auspices of the DisabledSIG (September 1985) got to see a fast ten-minutes-worth of two programs I had written to help some disabled children. And when Adrien Youell asked me to write up something on these programs I, with your applause thundering in my ears, agreed. (Took a while, though). Now read on for a discussion of one of them.

WHY "BIG LETTERS"?

The program "BIG LETTERS" displays letters that are about twice the size of the normal Apple characters. It was written originally for a kindergarten-aged child with a disability tied in some way to seeing-problems; it was directed toward helping her type any letters she chose, to recognize the letters she 'wrote', and then tie them into words.

DISCUSSION

Let's take a look at what makes this kind of program different and, in its way, helpful. And, as a guide let's use a set of principles listed in my article in the September 1985 WAP Journal:

- Support the teacher
- Treat the computer as a tool
- Use computer technology that exists
- Use existing program
- Use computers to increase the independence of the user
- Make use of whatever capabilities the person may have
- Keep it simple

The program started when the teacher described a kindergarten student: "We don't know whether she's mildly retarded, afflicted with some unique vision problems, or both". There were computers at the school, but she had not reacted to the displays. Would larger letters be of any help? Perhaps. Let's try.

Where to get large letters? As they say in industry ... "Make or Buy". To be brief, I settled on an existing program, Apple Mechanic (here abbreviated A/M). By so doing, I avoided 're-inventing the wheel' and much lost time in debugging a new alphabet. True, it came with some problems (discussed below) but nothing like those I avoided.

What can she do? "She can use a typewriter keyboard, slowly. She can see the letters but she's not well coordinated. She is very calm and patient." This much allowed the use of the Apple keyboard, with no mechanical modifications. Use GET, rather than INPUT, because it does not need the extra Carriage Return.

Minimize 'crashes'. A/M does include an ONERR GOTO routine but that takes the user out of the program, and that's not what's wanted. So, to start, there is a short subroutine which confirms that the user wants to be in this program. (This reduces the frustration of being locked into the wrong program.) There are others which shunt the user back to the

program after pressing a wrong key.

Put the instructions right on the screen; this simplifies matters for the teacher and eliminates the separate instruction pamphlet. More, when the subroutine changes, the instructions change. (This is easier than it sounds, because we have only lines 21-24 to clear). Most useful when going to and from CORRECTIONS.

Provide for automatic end-of-line? For letters only it really doesn't matter except that the letters should move down automatically (i.e., without Carriage Return). But for a child making the jump from letters to words and simple sentences this is important. It was also one of the exasperating problems and is also discussed below.

Increase independence. Put as many options under the user's control. Thus, the child can with no help from the teacher, enter letters and make words, go to the next line, make corrections, exit from the program and, optionally, even clear the screen and start over.

Make the corrections process simple. That is, if a wrong letter or letters are entered, make the computer do the complex parts of the task.

The program is by no means in final form; it has been changed several times and, as we learn more, will be improved further.

PROGRAM DETAILS

To start, let's note a few things:

As a friendly voice from the audience commented, the large letters are courtesy of "APPLE MECHANIC". And in response to Beagle Bros.' polite but firm statement in their literature, their copyright is acknowledged in the listing.

The program is actually quite short: it comprises an introduction and entry procedure (600-1199), a corrections subroutine and a series of operating instructions which make it pretty much self-contained - see Listing. Plus, of course, the extract from A/M (50-500); this is not so short, and in the inimitable Kersey style, is very compactly written. It uses the Hires screen for the large letters and leaves four lines at the bottom for conventional text. (NOTE: It is not included in the print-out but is available on the disk.)

The operating instructions are displayed in the usual Apple size and in the four lines at the bottom of the screen. They begin with the option to continue or quit (this minimizes the frustration of being locked into the 'wrong' program). They then display instructions for entering the letters, plus options to make corrections and, at any time, to leave the program.

The corrections subroutine (1200 to 1280) makes corrections one letter at a time and returns to the entry procedure. The 'how' is discussed later.

Several likely errors are 'trapped'. One is that all major steps, like "Quit", call for confirmation before they are carried out.

contd.

One of the items discussed was how to provide the instructions: should they be displayed on the screen or provided separately in a written guide. It was settled that they be displayed because they would act as reminders for the teacher. The child would at first ignore them and, later, use them to work independently.

The program begins at line 600 with GET A\$. Both controls and text are entered here. The next several lines permit A\$ to 'drop through' several options, including QUIT.

The 'drop through' continues past line 710 which clears the screen and reserves the bottom of the screen for messages. Line 730 selects alphabet 2 (small standard) and locates the protocol text at line 22. (Alphabet 3 is not used.) The next several lines compare A\$ with instructions for quitting, carriage return, clearing the page entirely and ... later ...specific instructions on correction and return. FINALLY ... at line 790... A\$ is entered into A/M, via GOSUB to line 100 where the large block letter font is designated.

The A/M portion is between lines 50 and 500 (not shown in the listing below). It is compact and designed for easy incorporation into other programs. Looking at it as a utility, it permits the selection of up to three alphabets at line 50-53. I chose block letters, small, standard and Apple. Text is entered, one letter at a time, via a GOSUB in line 100. There is a self-protecting ON ERR GOTO routine at line 55 which jumps out of the program on error.

SOME MORE TECHNICAL MATTERS

The large typeface is attractive and of course readymade, but it presented several problems:

The letters are 'proportionally spaced'. This gives the text a handsome look but gave me much trouble in two aspects: corrections and end-of-line wraparound. Not to burden you with my troubles, my solution was to give up on the 'proportional' and assign to each character the same spacing.

Corrections were still complicated. It would have been nice to be able to back up to the beginning of the line and rewrite the whole line (the technique which is built into A/M) but both teacher and child protested. With fixed spacing, the subroutine which was eventually worked out begins with the last character, automatically backspaces and deletes each character to be changed by overprinting in the background color (usually black) and then returns to the main program where the desired characters can now be entered.

Wraparound at the end of the line was handled by counting characters. With room for 17 characters on a line, I arbitrarily started looking for the first space after character 12 (could have been 10 or 11 just as easily), but 5 letters back from the margin is a reasonable spacing to minimize break-up of words.

Another detail is to avoid BLOADING the shapefile every time the program is booted. When it might be booted from several programs, I PEEK at the first few characters in the shape table location and, if they match, skip the BLOAD line (line 45).

Some other matters I would like to improve or simplify are CORRECTIONS, the handling of wrong letters, and perhaps the addition of a screen dump program.

AND LAST

Note particularly that, with the large letters, the user

(doesn't have to be a child) can enter text, correct text and even get rid of the current text and start anew...all without outside help.

The entire program, A/M and all, is on disk. If you have an interest in the program, give me a call.

LISTING

```

8 REM    MAY 13,1985
9 REM
10 REM   "BIG LETTERS"
11 REM   BY
12 REM   BORIS LEVINE
13 REM   BETHESDA, MARYLAND
14 REM   (301) 229-5730
15 REM
16 REM   LINES 50-500 FROM APPLE MECHANIC
17 REM   COPYRIGHTED BY BEAGLE BROS
18 REM
19 REM
20 REM   *****
25 REM
30 DIM B$(30): REM STRING IN 830
35 REM LINE 45 TESTS FOR 'CURSORS' IN PLACE
   BY PEEK(16384)
40 REM   LOADS CURSORS ONLY IF NOT
   ALREADY THERE
45 IF PEEK (16384) = 12 THEN FLAG = 1: GOTO 51
.
.
.
501 REM
599 REM
600 REM   INSTRUCTIONS OR QUIT
610 POKE TXT,0: REM   RETAIN TEXT LINES
615 HOME
620 VTAB (22): PRINT "TO QUIT, PRESS /"
630 VTAB (23): PRINT "TO CONTINUE, PRESS
   ANY OTHER KEY"
640 GET A$: IF A$ < > "/" GOTO 700
650 VTAB (24): HTAB (1): PRINT "IF YOU DO
   WANT TO QUIT, PRESS / AGAIN "
660 GET A$: PRINT A$: IF A$ < > CHR$ (47)
   GOTO 700
670 PRINT "/": PRINT "SO LONG"
680 FOR X = 1 TO 1000: NEXT X: TEXT
690 PRINT CHR$ (0): PRINT CHR$ (4);"RUN HELLO"
699 REM
700 REM   INPUT TEXT
710 HOME : POKE TXT,0
730 FT = 2: VTAB (22): PRINT "TYPE YOUR TEXT,
   ONE LETTER AT A TIME"
735 VTAB (23): PRINT "TO QUIT, PRESS / "
737 VTAB (24): PRINT "TO CORRECT, PRESS #. TO
   CLEAR, PRESS %"
738 GOTO 800
740 REM FROM 860
750 IF A$ = CHR$ (13) GOTO 1100: REM   CARRIAGE
   RETURN
760 IF A$ = CHR$ (47) GOTO 620: REM '/' TO QUIT

```

contd.

```

770 IF A$ = CHR$(35) GOTO 1200: REM '#' TO
CORRECT
775 IF A$ = CHR$(42) GOTO 1300: REM '*' TO
RETURN AFTER CORRECTION
777 IF A$ = CHR$(37) THEN PRINT : HGR : HT = 1:
VT = 1: GOTO 700
780 IF ASC(A$) < 32 GOTO 1000: REM REMOVED
>90 TO USE LOWERCASE
785 IF A$ = CHR$(32) THEN HT = HT + 1
790 FT = 1: GOSUB 100: REM APPLE MECHANIC
LOOP
795 GOTO 820: REM RETURN FROM 780
800 REM INPUT AS ARRAY
810 I = 0
820 I = I + 1
825 IF I = > 18 GOTO 890
830 GET B$(I)
835 IF I > 12 AND B$(I) = " " THEN GOTO 890
840 REM
850 A$ = B$(I): HT = I * 2
860 GOTO 740: REM RETURN TO INPUT
890 VT = VT + 3: REM DOWN 3 LINES
895 HT = 1: GOTO 810: REM START NEW LINE
1000 REM
1010 VTAB(21): PRINT " YOU PRESSED A KEY
THAT DOESN'T PRINT"
1020 FOR X = 1 TO 500: NEXT X
1025 VTAB(21): HTAB(1): CALL - 958
1030 GOTO 730
1099 REM
1100 REM CARRIAGE RETURN TO NEXT LINE
1110 VT = VT + 3: REM DOWN THREE LINES
1120 HT = 1: REM BACK TO LEFT MARGIN
1130 GOTO 780
1199 REM
1200 REM CORRECTIONS
1210 REM :RETURN FROM 1295
1220 VTAB(22): HTAB(1): CALL - 958
1230 VTAB(22): FLASH : PRINT "PRINT LAST
LETTER TO DELETE": NORMAL
1240 PRINT "WHEN FINISHED, PRESS * TO
CONTINUE "
1260 HC = 0: REM COLOR BLACK
1270 GET A$
1280 IF A$ = "*" GOTO 1300: REM EXIT
CORRECTIONS
1283 I = I - 1
1285 FT = 1: HT = 2 * I: GOSUB 100
1290 REM RETURN FROM 1285
1295 GOTO 1210: REM CONTINUE CORRECTIONS
1300 REM FROM 1280. EXIT FROM CORRECTIONS
1310 VTAB(22): HTAB(1): CALL - 958
1320 FT = 2: VTAB(22): PRINT "TYPE YOUR TEXT,
ONE LETTER AT A TIME"
1330 VTAB(23): PRINT "TO QUIT,PRESS / "
1350 VTAB(24): PRINT "TO CORRECT, PRESS
#.TO CLEAR, PRESS %
1370 HC = 3: GOTO 830

```

DisabledSIG contd. from pg 18

pronounced. When the spacebar is touched the preceding string is uttered, and when a period is typed the entire sentence is spoken.

What happened then is most important. Once he exhausted the words and numbers he knew, he reached for printed material that was available and typed that in. Regardless of whether or not the print had visual meaning to him it had aural meaning. Words which he understood suddenly had meaning in their written form. Stories that were otherwise read to him suddenly became something for him to type in. The words had meaning and he was exercising control.

As suggested earlier, Meyers favors exploration and minimal supervision. Even otherwise meaningless character strings provide learning as well as a laugh or two. Like explorations in LOGO, if what you got is not what you intended something is still learned. As a parent, rather than a therapist or teacher, I cannot describe the reasoning behind Meyers' approach, but it seems to work and it certainly is apPEALing (pardon the pun).

The program's packaging is unique, and designed for heavy usage in a classroom setting. A colorful, stiffened, vinyl 12 x 15 inch page is punched for a three-ringed binder. It contains pockets for the program disk, and the program's "Helpcard".

The Helpcard looks like the type of menu you find in a Denny's restaurant. It is vinyl covered and folds open to show six 9x12 inch pages. Two of those pages describe, clearly and graphically, how to run and command KEYTALK. The front page explains KEYTALK's research basis. And, the middle three pages give overall suggestions and a total of twelve activities of varying complexity. Each activity contains suggestions of accompanying materials and prompts which can let the parent or teacher individualize and support the activity. All of this is impervious to the worst assaults of peanut butter and jelly.

I should hasten to point out that though this program was designed around and for children with disabilities, its approach seems equally useful for all children as they begin to develop literacy. As my son and I further explore the program's capabilities, I'll try to keep you informed. Next month I'll also report on two other programs designed for children as young as 18 months. ☺



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GAMESIG NEWS

by Barry Bedrick

First, a reminder: the April meeting is on April 3, 7:30 PM at the office. March's meeting covered a lot of ground. Much new software was available for demonstration, review, and discussion. Among these were the following:

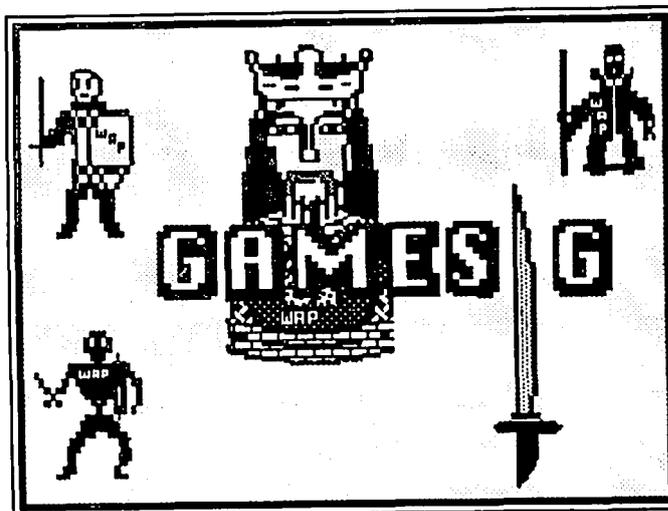
ORBITER (Spectrum Holobyte) for 512K Mac, preferably with external drive - a space shuttle simulation. Beta-test version demonstrated, with permission, by Rick Stickle.

ELITE (Firebird) for Apple // series with 64K - an import (Great Britain's Adventure Game of the Year for 1985, it says here) with space travel and trading among 2000 planets. Demonstrated by Ron Wartow, who was prevailed upon to leave out a few of the planets. (By the way, we appreciate Firebird's sending demo and review copies of this program by UPS, to be available at this meeting.)

RINGS OF ZILFIN (Strategic Simulations) for Apple // series - fantasy role playing with clever animation and puzzles. Demonstrated by Dave Granite.

PHANTASIE II (Strategic Simulations) for Apple // - fantasy role playing.

BRATACCAS (Mindscape) for 512K Mac - entirely mouse run strategy-fantasy adventure.



BLACK CAULDRON (Sierra On-Line and Walt Disney) for 128K //e or //c - a 3-D animated adventure by the programmers of King's Quest.

Copies of Chipwits (Brainpower) for the Apple // and the Mac, and Holy Grail (Hayden) were given to members who could guess Ron Wartow's shoe size and other esoterica.

We are printing in the Journal a letter from Mindscape, responding to the review in the February issue of "The Halley Project". Among other things, Mindscape thinks that someone less knowledgeable about astronomy than our reviewer would like the game more. ☺

SIERRA CHAMPIONSHIP BOXING: A Review

by Richard Bollar

Sierra Championship Boxing is another foray into the realm of computerized sports simulation. Traveling in the footsteps of the classic Olympic Decathlon and Micro-League Baseball, Sierra has designed an easily playable and enjoyable game.

The game very carefully maintains the exciting air of a Boxing match, from "The Tale of the Tape," a description of the boxers' characteristics, to the ring itself where the boxers pile blows on each other. The animation is excellent, screen refresh rates are fast even by Macintosh standards, and the image masking is well executed.

Though the game is quite exciting, it would quickly become boring if you didn't have control over the boxers' play. Championship Boxing allows control over the boxers in three ways. For the stout of finger, there is "Arcade Mode." (Apologies to Fowler.) Arcade mode lets you control each move that your boxer makes, from uppercuts to cowering. It is the only real way to have complete control over the player. Admittedly, I am a klutz when it comes to arcade games, and my heavyweight boxer was willing to lose to any lightweight. This brings to mind an old maxim: "Those who can, do. Those who can't, teach." Sierra has accommodated "The rest of us" with a coaching mode. You can

tell you fighter to go for the kill, or to hang loose and wait for the opponent to tire. Playing this mode I had better luck - 25% wins against the computer-controlled opponents. Okay, so I'm not a good coach. That leaves the final hope for revenge: The Training Room. The Training Room is my favorite part of the game. You can almost smell the sweat. (Oh, never mind. That's my laundry basket sitting next to the Mac.) Here you can add to Sierra's already impressive stable of fighters, past and present, by answering a series of questions on your new fighter's career. I created a "super fighter." Rum Wertaw was a superfighter. With totally outrageous characteristics, he knocked out Rocky Marciano with one punch. I also added a few local fighters who aren't on the list, and enjoyed them getting creamed. One match between Hulk Hogan (a creation of mine constructed from Wrestling Today articles) and Cassius Clay had interesting results....

If you like sports simulation games, you'll find this game right up your alley. Some others will enjoy creating their own boxers. Highly recommended, but not for the squeamish or morally disinclined, not anyone who would read anything I've written, I'm sure. ☺

A VIEW TO A KILL: A Review

by Chris Hancock

"A View to a Kill" is an interactive fiction adventure game from Mindscape. It is based on the screenplay from the James Bond film of the same name.

Now, being from the old country I have a soft spot for the James Bond genre. I therefore looked forward to giving this game the once over. The documentation is nicely done and the packaging is attractive so my appetite was further whetted.

My first session with the game was not highly successful! Certainly this was largely due to my ineptitude in not finding a way to dispose of a sneering Russian Officer. As M always gets his agents home I found myself back in London many, many times in complete disgrace! That I could take. What I really found the most frustrating part was the length of time it took to retrieve the situation by recalling a saved game.

The game is very disk intensive. It accesses the disk after virtually every command during the game. The initial boot up is quite lengthy but that is true of many games - Under Fire from Avalon Hill for example. However to retrieve a saved position requires replacement of the game disk by the data disk (only one disk drive can be used) and then waiting quite a time for that to be read. Then, replace the game disk. Now, it appears that the game disk boots up again so that takes quite a time. The whole process takes all of three minutes. You can imagine the process I went through with this pesky Russian Officer - insert the data disk and wait ... switch to the game disk and wait... type in a command - result, he shoots James in the leg - repeat the process and so on.

Well, finally I received a hint (actually exact instructions)

as to what to do with the Russian. I might add that it should have been obvious all the time. So I was able to progress and hopefully find better things to talk about.

The game begins on a Siberian hillside with Bond being chased by a Russian search party. As time goes on, the storyline takes you to London, Paris and San Francisco with action taking place at each place along the way. As one would expect in a James Bond adventure, there are women along the way but, in general, the game does not allow interaction (or whatever) with them. What a disappointment!

All in all, the descriptions given of each location are reasonably detailed and so add color to the game, and the parser is reasonable without being sparkling.

Along the way there are a number of obstacles to progress. So to avoid a repetition of my Russian Officer fiasco the maxim of try everything might be more prudently changed to think before you leap!

It is not a big game, but does have some nice features. Clearly, I would have enjoyed it more had the operating system been cleaner. The restriction to a single disk drive is antiquated and the game plays at least as slow as early games such as Cranston Manor, which also include some graphics. I do not think there is much excuse for that in 1986. I would certainly recommend that Mindscape give more thought to updating their operating system. It certainly detracts from an otherwise pleasant change of scene.

System Requirements: Apple // Family with 64K, single disk drive. ☺

WIZARDRY FOR BEGINNERS: A Review

by Steven Payne

The makers of WIZARDRY (Sir-Tech Software, \$59.95) could hardly complain of being neglected by Washington Apple Pi. Their product was named "All-Time Favorite" in a recently published GAMESIG poll, and the December 1985 and January 1986 issues of the journal contain articles by Ron Wartow describing the Mac version in great detail, and recounting his trials and triumphs as one of its "Beta testers." Still, Sir-Tech was kind enough to send a review copy for the Mac, and Ron thought it might be worth hearing the views of a newcomer like myself, who had not previously been exposed to WIZARDRY's delights.

I have to confess that I ordinarily prefer the puzzle-oriented adventures to "hack-and-slash" fantasy/role playing; I've never even tried my hand at "Dungeons and Dragons." Perhaps it's my age, but I tend to lose interest when characters get killed off simply because my reflexes are slow or the computer arbitrarily decides that my luck had run out. But WIZARDRY can make converts of even the most skeptical.

As most people know by now, the game involves exploring a dungeon of 10 levels (each a potential 20 by 20 rooms

large), finding and defeating the evil wizard Werdna, and returning from the maze with his amulet. Mapping alone is one of the most important elements involved, since there are many tricks designed to make it difficult; also, by defeating monsters, your characters gradually grow in strength, I.Q., piety, vitality, agility, luck and (in some cases) spell-casting ability. I particularly appreciated that players are given *time* to plan their strategy before being propelled into battles. But that scarcely begins to describe the complexity and fascination of the game. With eight different classes of characters available (each with distinctive strengths and weaknesses), some fifty potential spells, dozens of unique monsters and items to encounter and retrieve, WIZARDRY presents a constantly shifting challenge. Even after you've won, you'll still want to return to the dungeon to see what else is there. If "addictiveness" is an important sign of a great game, then WIZARDRY passes with flying colors. All too often I sat down to play "just for a few minutes" after dinner, only to look up later and notice the clock creeping toward midnight.

As for the Mac version, there is not much to add to Ron's contd.

previous description, except to say that it plays like a dream. Nearly everything can be done with the mouse and space bar; the program will even run through the list of available spells for you to save time and trouble typing. The only "bug" I found actually worked in my favor; the program had a generous habit of "equipping" me several times over with items already in my possession, so that I could end up wielding three maces or wearing three suits of armor at once. Impossible, of course, but who am I to complain? That's the magic of computers!

In short, although it needs no further endorsement at this stage in its history, I recommend WIZARDRY, especially in its Mac incarnation, even to those who don't often enjoy fantasy/role-playing games. If you are considering it, now is an ideal time to buy the Macintosh version, while many places are offering it on sale. The game richly deserves its reputation as a "classic". ☺

UNDER FIRE: A Review by David Blazina

Ralph Bosson, who previously programmed the award winning T.A.C., has released yet another miracle in computer wargaming. UNDER FIRE (Avalon Hill) is an entertaining game that is easy to play, but hard to master.

The rulebook explains movement, combat, line of sight and other critical components of a wargame in a clear and concise manner. The rulebook is divided into two sections. The first section describes the scenarios, has color maps for each of the nine scenarios, describes the weapons of each country, describes in full detail the movement and combat, and has an extensive appendix. The second section includes instructions on the construction of maps, printing of maps, hints, a dictionary, and an interview with the author.

The setting is in World War II. Like T.A.C., you can fight your allies or nexus. When you design your own teams, you can choose your own country and weapons, and also choose the computer's country and arsenal. This is poorly designed, since you can arm yourself with the best armor and infantry, while giving the computer a small group of poorly armed trucks! The pre-made scenarios, however, are a radically different story. The designer has thought out each weapon on each team carefully, deleting any tank or infantry that unbalances the scenario. Some scenarios are bloodbaths (such as "Road to Ruin") that are made with the expert gamer in mind. Most of the other scenarios are moderately difficult.

One problem is the slow flow of gameplay. It once took the computer five minutes to decide not to shoot!

Overall, this is an excellent game, brightening new horizons for the future of wargaming. It is not an easy game, and requires a lot of patience. I recommend this wargame highly. ☺

MINDSCAPE REPLIES

The following letter, dated March 4, 1986, was sent by Karen J. Novak, Manager of Communications, Mindscape, to Ron Wartow.

"We were very sorry to see Thomas Johnston's review of THE HALLEY PROJECT: A MISSION IN OUR SOLAR SYSTEM in the February issue of the Washington Apple Pi Journal.

"Mr. Johnston's vast knowledge of the solar system may have impeded his ability to appreciate the program from a novice astronomer's perspective. The idea is to give users a point of view picture of outer space and to create an environment in which they can explore.

"The educational value of the program is minimal only to someone who is already very familiar with the Solar System. For those who know little about it, the program provides a strong learning experience. It is impossible to complete the flying missions without knowing about the sizes and temperatures of the planets and moons. It is also impossible to navigate successfully without knowing the positions of the planets in relation to each other and without learning the twelve constellations of the zodiac.

"Mr. Johnston may not like the flashing of the screen that occurs while the user is in Hyperspace, but we wanted to make it dramatic so that users would always be aware that they were traveling at a much faster rate than during normal flight. The tape was designed to create an atmosphere of secrecy about the flying missions and to stimulate the users' curiosity.

"Most planet and moon surfaces were based on the limited information that is currently available. There are no close-up photos of some of Uranus' or Neptune's moons, for example, so some of the moonscapes and planetscapes are based on educated guesses. Mr. Johnston is correct, though, in pointing out that there should be no stars visible from the surface of Venus, and in fact, there are a few stars visible from Venus in the Apple version of the program. In the Amiga version currently in development, the graphic shows heavy clouds but no stars.

"With respect to Mr. Johnston's criticisms about our star chart being copied from a distorted flat map, we have to take exception. The projection is correct. It's copied from a flat map, but it's a flat screen. The window in the game subtends 45 degrees of the sky which is small enough that distortion is slight.

"Leo and Sagittarius extend quite a few degrees above and beyond the ecliptic, so they are masked by the computer screen because it's too small to show the whole constellation. The stars are exactly correct - there are plenty of bright stars in the sky not included in the programs because they don't fit into the window. Sagittarius is the worst because it's recognizable in the sky, but it's below the window in the game.

"We believe that THE HALLEY PROJECT is among the most successful simulations of its kind, and deserves more credit than Mr. Johnston has given it. We hope that Washington Apple Pi members will spend some time with the program and while becoming acquainted with it, will become enchanted by it." ☺

Operant Systems

HARDWARE

DOT-MATRIX PRINTERS—

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LQ-1000/LQ-800 (quality of LQ-1500 for less \$) (call)	
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Toshiba 321 (216 cps draft, BEST print for the buck)...	519
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NEC PS/P6/P7 Pinwriter (24 wire high-quality matrix) (call)	
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Panasonic 1091 (120 cps, Epson-compatible "Best Buy")..	259

DAISYWHEEL & LASER PRINTERS—

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NEC El1 (16 cps, par & ser interface, NEC/Diablo eaul).....	419
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Queue LetterPro 20 (20 cps daisywheel).....	429

MODEMS—

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Smartmodem 2400 (2400/1200/300 baud, RS-232).....	599
Smartmodem 1200 (1200 baud, RS-232, auto-dial)...	389
Smartmodem 800 (300 baud, as above).....	145
Novation Apple-Cat II (w/ Comware, 1200 baud upgrade)...	209
Prometheus Promodem 1200 (1200/300 baud, RS-232).....	289
Proodem 1200A (1200/300 card w/ software).....	289
US Robotics Password (1200/300 baud, auto-dial/answer).....	229
Courier 2400 (2400/1200/300, autodial/ans).....	439
Anchor Automation Express (1200/300 loaded w/ features).....	249
Volkswodem 12 (1200/300 baud, RS-232).....	199
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Titan Accelerator J1c (3.6 Mhz 6502C coprocessor).....	229
Speed Deon (6502C high-speed coprocessor).....	195
Applied Engineering Z-Ram (256K, CP/M, Raadisk for J1c).....	325
TransWarp (3.6 Mhz 6502C, 256K RAM).....	225

MONITORS—

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Color 300 (13" composite color).....	229
NEC JB-1201/1205 (green/amber anti-glare screen, 20Mhz).....	145
JB-1260 (12" green, 15Mhz, best value for money)....	99

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Viewmaster (80 col for II+).....	119

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Dollars & Sense (accounting w/graphics).....	69 & 79
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Peachtree Back to Basics Accounting (GL/AR/AP).....	115
BPI Accounting (GL/AR/AP/PAY/INVENTORY).....each	245

COMMUNICATIONS—

Ascii Express Professional (best DOS/PRODOS program).....	80
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CompuServe Starter Kit (password & 3 free hours)....	25

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KoalaPad Graphics Tablet (with graphics software)...	85
Curtis Emerald Surge Protector (6 outlets & cord)...	45
Flight Simulator II.....	86

Microsoft Word (what MacWrite should have been)....	119
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Chart (presentation business graphics)....	85
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Multiplan.....	119
MacEnhancer (has the ports Apple forgot).....	175
Filevision (graphics database system).....	119
Odesta Helix (database for the serious user).....	249
Dollars & Sense (accounting w/graphics).....	95
Sidetch.....	49
Omega Bernoulli Drive (5/10/20 meg removable).... (call)	
MacLion (programmable database for Mac).....	239
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Hippo C.....	99
Kensington MacModem (300 baud).....	99
Kensington Surge Protector (replaces power cord)....	39

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PLEASE, APPLE, JUS' LEAVE MY // ALONE!

by Leon H. Raesly, LCSW Copyright 1986

Well, you can give it a more powerful CPU (65816?); more RAM (1 MEG, 5 MEGS?); bigger disk drives (800K?); faster clock speed (10 Mega-Hertz); but NOT the "Apple Interface"! Please Apple, jus' leave my // alone!

Now I understand that CONTROL CODES are supposed to be user unfriendly, but have you stopped to consider how User-Unfriendly the new "Apple Interface" really is? True, on my word processor, I have to depress CONTROL and a D at the same time to delete a character, (which really isn't that hard to remember) but have you looked at what you want to force me to go through?

First, I have to pick-up this little plastic, furry creature; there, it's now in my right hand. Next to try to find some desk space to move it (Hmmm, if I move this pile? Yes. There, now I have a few inches!) Next look at the screen, locate some weird shaped cursor (called a pointer), then move the plastic, furry creature until the BLAST! The tail of the plastic, furry creature has spilled my coffee!

All over my desk! Well, After I have dried what I can, and wiped off the rest (I have to throw two disks away, though. Sugar in the coffee tends to make them sticky!) Maybe I should look on the bright side - at least I now have plenty of room on my desk to move that plastic, furry creature! Please, Apple, jus' leave my // alone!

Ah, yes, I was deleting a character. Now, where is the cursor (sorry, pointer)? There, now move it up to EDIT dialogue box. Dialogue. Webster tells me that a dialogue is "... a conversation between two or more fictional persons in a novel ..." Well, I'd like to let you know that I may be a character, but I am clearly real, not a character in a novel! And maybe the Apple interface is a character in a novel, but I READ things, not have fictionalized conversations with a computer screen! PLEASE Apple, jus' leave my // alone!!

I click a button on the plastic furry creature (actually, I push the button, and IT clicks) and drag the mouse down (Boy, they got that one right, it sure is a drag!). There now to look for Delete a character.

Delete a file	
Delete a disk	
Delete a mouse	

Hmmm? Not there, well, let me see? How about Page layout? Nope, not there either! Now where did they put Delete a character? Let's see, how about On Screen appearance? Yes, there it is! Now move the pointer down, oh, the other down! Yes, that's it! Move to the proper box, click it again (you remember that is really pushing the button, right?) Yes, Delete a character is highlighted (to you uninitiated in "Apple Interface", that means inverse!) Now, what was the character I wanted to delete from the screen? PLEASE, Apple, jus' LEAVE my // alone!!

Now, move the pointer (translate cursor) to the character, place it over the letter I wish to delete, push the button (Click) (- the one on the plastic, furry creature) and voila, that character is gone! Wait, no it's NOT! What's this?

"Double clicking the mouse will permanently delete this character. Do you wish to do this?" Dummy, of course I do, you stupid #*^%\$# machine! Why do you think I went to so much trouble? Oh, all right, double push the button (click-click), and NOW it's gone! Wait! Stop! This is too much!

"Are you REALLY sure you want to do this?" #^\$%#&*... PLEASE, Apple, jus' LEAVE my // ALONE!!!!

Well, the new Apple interface will be uniform on all Apple machines. So that's supposed to be a big advantage. Hmmmm. I can use WordStar on my CP/M Apple //c, and learn the little diamond of movement:

Up 1 line
CNTRL E
CNRTL S CNTRL D
Left 1 char. Right 1 char.
CNTRL X
Down 1 line

You know, Apple, I really can learn these codes - I am a big boy now. And it is easier than always hunting for the right scripture box (since I am not fictional, I will not call it a dialogue!) for the command. But talk of universality, I can go to WS on an IBM PC (or a Morrow CP/M, a TRS 80, KayPro) and always there will be the same commands. And in our modern, business oriented society, I must use several different brands of machines each week. Many people do. PLEASE, APPLE, jus' LEAVE my // ALONE!!!!!!

And the "Desktop metaphor!" Well, "Metaphor: a figure of speech in which a term or phrase is applied to something to which it is not literally accurate in order to imply a resemblance." Well, at least you finally got your English correct, but have you seen my DESK? Why anyone would want to clutter up a microcomputer screen like that is beyond me! PLEASE, APPLE, JUS' LEAVE my // ALONE!!!!!!

And what happened to CATALOG? I can CATALOG a disk, and, true, I have to remember the word CATALOG. But that's not too bad. What do you mean I have to LOAD ANOTHER PROGRAM called FILER! Search for a what? And do what? Another plastic, furry creature! PLEASE, APPLE, JUS' LEAVE MY // ALONE!!!!!!

So, if you want a tip, Apple, do what some other companies have done. Give me a RAM card with CP/M for my c, or maybe a 5 MEG Slinky, things like these. Hmmmm? What's that? Oh, you have learned the the new "Apple Interface" really can't run on a 128K machine like the latest, you need 512. O.K., I've got that. What, you mean with applications you really need a full MEG. Well, I've got that on my e. Actually, 3MEG + 1 MEG, and very useful, too. What's that? You mean there is so much overhead from the scripture boxes, mouse characters, and need for things like FILERS, that this will take extra Motherboard memory, not able to be used by anything else, AND PUSH THE PRICE

contd. on pg 31

LAP COMPUTER AS AN EXTERNAL KEYBOARD FOR THE APPLE // UNDER CP/M

(Lap Computers as Apple Accessories: Part 5)

by George Kinal

The patches described here are for Microsoft CP/M version 2.23 (so called 60K CP/M). Similar principles apply to other versions of CP/M, as well as to DOS and ProDOS. The idea is to redirect I/O from the Apple's built in keyboard to a serial interface, in this case slot #2. With most serial interfaces, you can get some of the effect of this by simply entering IN#2 from BASIC.

The patches are presented here for CP/M, however, because I think by far the most useful application is for Apple][/][+ owners who wish to use WordStar without the restrictions of the Apple's keyboard. A second patch to CP/M is also presented which redirects output from the screen (actually, from slot #3) to the serial output. With both patches, then, the Apple can be operated remotely like a traditional CP/M computer! This can even be done via modem.

The external keyboard may well be your lap computer, connected to the serial interface in the manner described in previous articles in this series. It could also be a standard dumb CRT terminal, or a printing terminal like the AJ-831. The external keyboard patch also makes file uploading easier from the lap computer to the Apple. Normally, keystrokes have to be entered on both computers to effect a transfer. But once you turn over control to the external keyboard (the lap computer), commands to the Apple are entered from that keyboard. So you can enter this command, for example:

```
PIP d:Filename=TTY:
```

From this point on, the Apple will capture everything sent to it until an end of file marker (Ctrl-Z) occurs. In a remote (modem connected) setup, that is a way of uploading to an unattended machine.

PART 1: To use an external keyboard via slot #2 serial interface:

```
RUN this MBASIC program:
10 POKE 62338, 111
20 POKE 62339, 254
30 END
```

The Apple's keyboard at this point will be "dead"; only the external keyboard will work (place lap computer into TEL-COM with 8N1 and the baud rate that the serial card is set up for).

PART 2: (If desired) To send display output to external system via slot 2... [Note: if you have performed Part 1, the following must be typed from the external keyboard, of course]:

```
DDT -SF386 <cr>
F386 B5 69 <cr>
```

At this point, neither display will be active, so you must type in the blind:

```
FE <cr>
CTRL-C
```

Output should now be via the external device.

PART III: To make these patches permanent on a system disk, RUN CONFIGIO and Write the IOCB to disk.

Keep in mind that for external keyboard use, you only need to do Part 1. Also, there really is no absolute need to use a BASIC program to perform these POKEs. A compiled Turbo PASCAL program also ought to work. Anyway, after the POKEs, simply warm boot the WordStar, dBase, or any other disk that you actually want to use in the system. A disk can also be set up that will automatically boot up for external keyboard (do Parts 1 and 3 only).

While we're on WordStar, it's worth mentioning to those of you who haven't learned the hard way that WordStar uses the eighth bit of each byte for its own internal special uses (e.g., to mark the end of the word). There are available utility programs that strip away this bit. But if you are transferring from WordStar TO your lap computer, just employ the 711 parity option. Actually, in an emergency, that can be one way of filtering WordStar files: pass them through a lap computer with 711 parity. Later on in this series, I plan to report on my investigations concerning a closely related problem that drives many users crazy: missing line feeds, extra carriage returns, etc., etc. that always seem to creep in whenever text exchanges between different systems are attempted. ☺

Best of Apple BBS contd. from pg 46

but in the case of a business that wanted unlocked software to change form format for example, they should be willing to pay a premium for the privilege.

SAM SWERSKY ON 02/07 TO MIKE UNGERMAN/ALL I dunno, Mike. I have the same ambitions that you do. And, I take neither side with a vengeance. But, you have to face facts: copy protection is an additional software expense... expense in time, money, or both. The result is normally poorer performance for the product-- and especially if the program handles a lot of data or accesses the drives. Games, can get by under these circumstances... SOMETIMES (ie. think of what a decent adventure you could have if there was a million bytes of useable memory to store data, pictures, and whatever... all without EVER having to go to disk!). All that work on copy protection and it has arguable benefits. You mention Print Shop, for example. Print Shop, I am sure, has many unauthorized copies....yet it sells well for the Apple, for the IBM, etc etc... BECAUSE IT'S A NEAT IDEA, WELL DONE! The software business is a risky proposition from the start; a good product is the best protection against disaster. Well, help me down from the soap box, will you, Mike?

DAVID P. KEMP ON 02/11 TO MIKE UNGERMAN

The best scheme for protection involves a manual issued with the original purchase. A nice manual and the promise of updates can't be copied. Of course if the software is overpriced, one could live with a pirated copy and a copied manual, but for \$29.95, why bother. ☺

"SWYFTCARD"™ FOR THE APPLE //e: A Review

by Adrien Youell

This is definitely a *different* card, a totally new concept in word processing with the ability to do and include arithmetic calculations within text. The SwyftCard when placed in Slot 3 autoboots all its functions within 5 seconds at power-on. It is disabled by booting with a program disk. The Card can send and receive text by modem communication, acting as terminal emulation software, and BASIC programming is equally available. All this from a shirt pocket size card is yours for \$89.95, exclusively from Information Appliance Inc. (1-800-982-5600). There are *only* ten control and command keys, and they are labeled with decals! It is simply amazing to switch on and be typing within 5 seconds, before one has sat down, save to a blank (out of the box) disk in 5 seconds and print with a flick of the wrist. Done. A+ Magazine advertisement states: "SwyftCard finds and displays any piece of information ...in less than 300 milliseconds". So why isn't this page miraculously self-illuminating? Maybe the SwyftCard is a minor miracle.

Contrary to usual review practice I will start with my product rating to try to get things into perspective. The scoring method (with acknowledgement to InfoWorld) provides useful headings for criticism. I will briefly describe the basics of operation and discuss my interpretation of the features. A highly favorable (read *glowing*) review appeared in 'A+' in November 1985, page 86, which was realistically questioned in a letter to the magazine (February 1986, page 14). The SwyftCard has been advertised in 'A+' every month since October, apparently enthusiastically endorsed by WOZ. It is not completely clear to whom in the user community this product is aimed, but it purports to be "a better solution to your day-in, day-out word processing and data management needs". We'll see.

Product Rating. I award the SwyftCard 2 Cards out of 5, 5 being the highest! So why do I rate this revolution in technology only 2 out of 5? Have I sent it for decent burial? Am I going to sell it at the next garage sale? Patience! I have been using SwyftCard version 1.21 1985 for several months for all my correspondence in order to give you my *sweaty palms* experience for this review. I have examined and used all the functions and Dave Harvey has kindly evaluated communications in depth. Dave reports his experiences elsewhere. This article is written on a Mac to facilitate the Editor in preparing it for publication, as Mac medium is preferred where possible. SwyftCard Text can be converted to a ProDOS file for manipulation by ProDOS-based word processors such as Apple Writer and AppleWorks but I chose not to use this method.

Basic Essentials. The SwyftCard package contains the Card, a copy-protected, double-sided 5 1/4" disk with an elegant tutorial on the A-side, ProDOS conversion programs on the flip-side, a 120-page robust, spiral-bound manual containing a separate Reference Guide, and a sticky sheet of keyboard decals. The Manual, after *cozy* in-house credits, comprises 5 chapters of extensive, lucid explanation including

printer control codes for most brands (including Imagewriter and LaserWriter), comms advice and honest warnings of limitations. There is a sketchy appendix on ProDOS conversion and an unusually detailed Theory of Operation. This 16K system implemented in FORTH and assembler, stored on a 27128 PROM, occupies the same address space as BASIC. Redefinition of keys is covered. The glossary should be required reading for lexicographers and is relaxing if a break is desired. Hurray! There is a good index, sufficient for looking up any problem area without shuffling pages. The small Card marked "Swyft™ Software" and "Swyft ROM Card Rev C" has a few resistors and two chips, the larger of which is labelled "840-003A". The 'keyboard' end of the card is indicated and should go in Slot 3. The printer interface should be in Slot 1, a Super Serial Card in Slot 2 and the Disk Controller in Slot 6. The SwyftCard ROM is not enabled if a program disk is present in Drive 1 on cold and warm starts. Slot assignments are important. Dave Harvey discovered a bus contention with his Titan Accelerator //e card. SwyftCard only works in an Apple //e, regular or enhanced, with a Rev-B logic board.

Installation and Setup. Installation is no problem even for the timid. Plug Card into Slot 3 the only way it will sensibly fit. While you are inside the case check that other cards are in slots as required by SwyftCard, as in Basic Essentials above. Stick decals on respective keys; I cut the control decals in half and stuck all labels on the fronts of keys. CONTROL becomes "USE FRONT" (which is the most unnecessary, confusing change-for-the-sake-of-change, but do not be too worried, the other control changes make sense in the context of use). ESC changes to "PAGE", OPEN-APPLE to "LEAP BACKWARD", CLOSED-APPLE to "LEAP FORWARD", and TAB to "LEAP AGAIN", although it also retains TAB functions in text writing mode. The command keys lose all mnemonic character; e.g. the "PRINT" label goes on N (not P); the same goes for DISK saving, modem SEND, CALCulation and INSERT. There. Ten control/command keys are all you need to write your next article. How to use them and how to make them all work is part of the reason this product rates 2 Cards. Place the tutorial disk in Drive 1, the only drive you ever need, and away you go 'hand in hand'. For practical purposes Swyft-Card acts like several applications installed on an autoboot hard disk.

Printer set-up is always a most important consideration in assessing any new productivity program. The Manual suggests in your first testing of a few lines of text that you should just press Ctrl-PRINT and see what happens. I was economic with two lines and found they over-printed. Clearly, my C.Itoh ProWriter M8510A printer needs a line-feed, PR\$=CHR\$(1), which must be embedded in the disk Text, as there is no configuration file. Other printers need more control codes. I need extra code for underlining which is similar to the codes printed in the Manual on page 65, as for 'Applescribe': US\$=CHR\$(27)+CHR\$(88) for Underline Start

contd.

and `UE$=CHR$(1)+CHR$(27)+CHR$(89)` for Underline End. These codes are highlighted and embedded in BASIC by pressing `Ctrl-CALC`. When these strings are saved to a data disk they enable my printer to get a line-feed and underline words starting and ending with underline tokens; “_word_” is the Card’s method to achieve “word”. I do not need to reset printer dip switches. In 80-column mode with Pica print set by switches I do “get what I see”. More thought is required for bold face and italics.

Documentation. Exemplary. The tutorial disk and manual are a joy to read for sheer lucidity, introduction and explanation, taking one patiently through the learning curve, with tasteful humor and numerous warnings. Limitations of the system are clearly outlined in the advertisement and the Manual. The weakest area is ProDOS file conversion. Though Jef Raskin acknowledges this he suggests one can use this feature to *compress* files, which are probably only of archival interest! As SwyftCard is its own operating system the user is placed way out on a limb as regards text compatibility with word processors if files cannot be shared (easily). ‘Communications’ is considered in depth but the procedures are distinctly abstruse.

How It Works. SwyftCard has clever ways of scrolling the cursor about Text. (The capitalized T is used in the Manual to signify all disk-based Text.) The LEAP keys utilize letters, periods, spaces, words or parts of, returns, and page breaks as markers to which to Leap. All control operations are effected by highlighting desired portions of text in inverse video by LEAPing from one end of the Text to the other and pressing both LEAP keys simultaneously, or automatically by PRINT, DISK, SEND and CALC commands. (`Ctrl-CALC` is the key combination invoking BASIC commands.) One presses, say, ‘Open Apple’ (Leap Back) and ‘Return’ to get back to the previous paragraph end, and whilst holding down the ‘Open Apple’ (Leap Back) key and tapping the ‘Tab’ key (Leap Again) the cursor moves back up the text by preceding paragraphs. The same principle applies to other character identifiers and use of the Leap keys. Tapping either Leap key staccato-style moves the cursor by single characters. The arrow keys are disabled so you have to remember to forget they exist.

Ease of Learning and Use. OK. Even, very easy at a superficial level. One learns the techniques readily. Novices will love the no-nonsense ground rules and quickly take for granted this over-simplification in introductory word processing. Old hands will quickly grasp the principles of SwyftCard but will rapidly become frustrated by its limitations. The finer cursor movements required to get on target to Leap to errors and select text for printing make heavy weather of routine word processing. Arithmetic calculation in text works and is a bonus point; the formula can be left in situ or deleted. Highlighting text to select a section for printing sounds easy enough but can be a consummate bore with inevitable errors when more than a page is selected; the PRINT command cannot be aborted.

Jef Raskin is the sort of designer who is reported to hate the Macintosh interface (Washington Post, December 30th, Business Section page 11). I like the mouse-driven I-beam and scroll bar of MacWrite, which get me round a document faster than spelling out a word in one’s mind then transferring

that thought to keystrokes to LEAP BACK to a misspelling; and remember you then have to get back to end of text to continue. I think one subconsciously detects mistakes on-screen rather than clearly seeing them intellectually; that is, “get the cursor there quickly then let’s think about the correction”. //e arrow keys (in Apple Writer) plus `Ctrl-B` or `-E` are also very satisfactory ways of getting about a document. Keep that word ‘document’ in memory for the discussion under Limitations. The Card’s watchword is *simplicity* but Apple systems are not the most difficult to understand and learn. A good grounding in an accepted operating system has relevance to many of a computer’s applications and helped me unravel some of SwyftCard’s mysteries.

I think Telecommunications deserves a specialist heading as it is a less rarified aspect of computing than hitherto. In this regard SwyftCard has great merit in limited respects. Dave Harvey devoted his professional attention to SwyftCard Comms and was not happy. I found that logging-on to a BBS works but is tedious. Communicating with another SwyftCard-equipped Apple works like a telegraphic conversation. Typing and quickly highlighting text gets one into a nervous twitch. Telecomms is very memory intensive with all the menus and messages coming from the host, contributing to earlier than expected out-of-memory leeps. 300 baud is set by ‘`SE%=5641`’ or 1200 baud by ‘`SE%=6153`’, highlighted and embedded in BASIC by the CALC command. Carriage Returns are pre-set by ‘`LE%=29`’. Special bit and parity settings are achieved by comprehensively esoteric calculations. These manipulations are not intuitive and require study, time, trial and error. I set Serial Card dip switches as suggested in the Manual but did not need “SmarTeam” modem switch changes. The biggest intuitive problem is to highlight text to Send and then press `Ctrl-SEND`. After chasing text across my screen trying to keep up with my correspondent, I thought I should have used telegraphese to send ‘over’ at the end of each emanation. I hesitate to suggest the most efficient use of SwyftCard as a Telecomms function but modem-sending of a pre-composed letter would seem to justify the telephone expense. The way Dave and I communicated through our SwyftCards was a definite plus for AT&T.

Performance and Reliability. I was quite thrilled to see remarks in the tutorial reminding me that I am in charge and not the computer. “If the computer gets rambunctious and throws you off the track, turn it off, catch your breath and turn it on again”, sounds reassuring. I had to turn the computer off several times when block moves (INSERT) for instance, and printing fouled up. I do not like prematurely turning off the computer, but thank goodness I am using a Kensington System Saver (see below). I think there are firmware bugs in the Card. As long as material is saved I found that many problems are cured by restarting. I consider this a definite performance defect. My printer produces strange spaces but these were cured also by switching off and on, and reprinting. A single line feed is sent by `PR$=CHR$(1)`, without a ‘+’, as indicated in the manual, page 62. I find string searches by the CALC command and INSERT block moves very capricious in action; sometimes they work, sometimes they don’t.

Data being all in RAM explains the rapidity with which searches can be achieved by LEAP commands. If you do not
contd.

own a zebra you will find 'zebra' within milliseconds. If you have once typed it when writing about rare things, you can search by holding down a LEAP key whilst typing 'zebra'. For more than one 'zebra' one has to tap the LEAP AGAIN key the required number of times to find the appropriate 'zebra'. I do not call this "instant retrieval". It is many seconds not n milliseconds.

Commendable features of SwyftCard are that in autoboot mode it is ready for typing within 5 seconds with a warm CRT, and on power-up a data disk in the drive is loaded in 6 seconds. Saving a small file and initializing a blank disk takes 5 seconds. These timings are mine. The cursor flashes rapidly when DISK save has been implemented. Re-booting a data disk finds the cursor at the point where one previously retired. The cursor has a helpful doubled image, a highlight bar trails after the flashing cursor during typing and collapses to a single character highlight when deleting or LEAPing. Booting with a program disk or an Operating System displaces SwyftCard from the bus so normal operation of the computer proceeds unaffected by leaving the Card in place. During typing, text scrolls up the screen with numbered page breaks appearing at default values of 66 lines. As your accountant will not be amused to receive page numbers 15 and 16 of your 3-page letter, repagination is essential. Repagination is effected through the BASIC PA% command. As text just streams up the screen I found it useful to divide letters by forcing page breaks with the ESC (Page) key. 200 page breaks are available per disk.

The Card warranty for 90 days covers replacement of defective "tangible media"; there is a 30-day money-back policy. I called Information Appliance Inc. and Patti was very helpful; Jef was busy but called back soon. Jef Raskin has a way of convincing one that all our problems are little ones. He actually gives very good advice, but I preferred my own solutions!

Error Handling and Limitations. There is no error handling apart from irritating, uninformative beeps and the ubiquitous 'Syntax Error'. The manual has check lists to troubleshoot beeps but I found the instructions hard to follow. This is where entry level users may become frustrated and where a modicum of operating systems knowledge saves the day. Simplicity *a la* Raskin has left much to be desired. In these days of menus, windows, real-time error messages and on-screen help, more could have been done to ease the user through difficulties.

All Text in no matter how many separate letters or memos saved to a data disk will utilize only 40K usable disk capacity, between 15 and 20 pages of single-spaced typing. Upon loading a data disk by placing it in the drive and switching on power, or by a 'warm boot', all the data (and apparently program code) is loaded into RAM (but only 64K, as SwyftCard does not access extra memory in an Extended 80-column card). This explains the 40K limitation of disk capacity but does not excuse the loss of the other 100K of a Disk][drive, essential to user efficiency and obtainable with other program systems. Telecomms really gobbles up memory space at an alarmingly rapid rate and out-of-memory beeps occur startlingly early in a Comms session. This experience alone largely negates this Card's use as a serious telecommunications tool. The Card is incompatible with

Hayes' Micromodem II and Titan Accelerator //e cards.

I found that a warm boot from SwyftCard to Apple Writer does not cancel printer control codes previously embedded; a cold start to a new program is preferable. I should like to mention to Apple // users that I use a "Kensington System Saver" surge protector which has power outlets for the computer, CRT and printer, and a main power switch. (See Kensington Ad in 'A+' March, page 30). When I say I power-down frequently I am using this switch not the Apple 'switch'.

The one-file data structure is disconcerting. There is no disk catalog, there are no filenames, so there are no electronically discrete documents. Unless a tedious paper record is maintained of each text entry saved to disk with relevant numbers at page-breaks, documents are incredibly difficult to find. I resolved some of this dilemma by typing unusual keywords at the beginning and end of a file (also recorded on paper). The most reliable stratagem is by typing 'END' at the beginning of a document then backspacing a few times and typing ahead with the 'END' leading the 'train'! In this way to get back to the end of a document one Leaps Forward to capitals 'EN' and you're there. With a scintilla of imagination one can compensate for the deficiencies of this system but it requires total concentration.

Value. If \$90 is *pocket money* to play with an unusual toy AND you do not need Slot 3, then SwyftCard is certainly interesting. Its intricacies have helped to pass several 'snow-days' and holidays! Cumulatively, I spent 3 days learning the system and working out the printer control code system (+ shoe leather walking round my study deep in thought and many pages of printer trials). This Card will be of little value in moderate to volume word processing, and absolutely useless for Business unless the 'disk shuffle' comes naturally and 40K per disk is subsidized. As disk catalogs cannot be viewed, files will be mislaid. It will be of some value to me for quick memos and short letters, now that I have the Card but only when hardcopy is kept and disk retrieval not vital. I cannot afford to continue using this system for important files. I have used more disks for data and cut more notches for flip-side use than in the previous year, which is expensive, space consumptive and pushes my files further into obscurity. My rating of *2 Cards* defined as "poor though meeting essential criteria" reflects disappointments as well as a modicum of excitement. I expected a one-file disk structure but the very serious limitations make this an expensive toy.

SwyftCard is a fast disk access system with few commands but many limitations belie the much vaunted 'simplicity'. This article is as much a 'how-to' as a review.* Whilst not wishing to be curmudgeonly of a great idea well engineered, I look forward to a discounted upgrade when the bugs are banished (Insert and Strings), files can be named, 140K disk capacity utilized, and 128K accessed in RAM.

* I acknowledge with gratitude the help of Mr. Dave Harvey with Telecomms and the computer literary advice of my colleagues Drs. Bob Becker and Brent Hjermstad. ☺

SWYFTCARD AS A TELECOMMUNICATIONS PACKAGE: A Review

by Dave Harvey

I have evaluated, from the communications point of view, the SwyftCard that has been so heavily advertised lately. In order to properly test the Card, I removed the Titan Accelerator //e card that I have in my Apple //e. Reading the documentation, I discovered that I should use an Apple Super Serial Card. I have a Prometheus 1200A card which I am told acts just like a Super Serial Card, so I thought I would try running the program with this. The tutorial is quite straight forward and gave me a good idea of how to use the program, except that the tutorial did not cover the communications part very well.

I called the NOVAPPLE BBS which operates using the UBBS bulletin board software. To dial a number you first type the dialing sequence which appears on the screen and then highlight what you have just typed. You then hit the SEND button (Ctrl-D) and what you highlight is transmitted to your modem. I had problems getting this to work because I found I had left off a return at the end of the sequence. I also had problems with the setting of the baud rate which you change by typing a formula, highlighting it and hitting the CALC key. I found an error in the manual, in that the setting specified for the Super Serial Card dip switches indicates 7 bits, no parity and one stop bit, but the manual states that the default for the program itself is 8 data bits, no parity and 1 stop bit. The Apple standard for the most part has always been 7N1, whereas for IBM it's usually 8N1. I finally managed to get on the BBS system and that's where I first encountered a major problem when using the SwyftCard.

I kept getting all sorts of beeps. I quickly looked through the manual and discovered that the problem was that when the buffer (i.e. RAM) used by the program is full it will not accept any more characters and just throws them away. The capacity of the buffer is 40K and in order to continue to receive you must either delete the buffer or save it to disk. There is no way to disable the capture mode once you are 'beeped'. Assuming you have nothing in the buffer to start with except your dialing sequence and password, when you see you are approaching the 40K limit, you must issue a Ctrl-Z,S to the host computer, tap the SAVE key, remove your disk and replace with another blank disk, erase memory and then issue a Control-Z,Q to the host computer to tell it to start sending again. If you don't go through this procedure and wait until you hear the beeps, incoming data will be lost until you delete or save what's been captured so far in the buffer. While you are doing all this, data will be lost.

I encountered another problem when I connected to the BBS. This has to do with the particular nature of BBS systems operating under the UBBS bulletin board protocol. This problem is caused by the fact that when you type characters on the keyboard, nothing is transmitted until you hit the SEND key or until you have typed 80 characters. So if you are slow in typing a sentence and take more than 2

minutes to type 80 characters, the BBS hangs up. The other problem I found is that the SwyftCard sends out a return along with the characters you have typed when you press the SEND key. This is not wanted since the UBBS program specifically does not want returns unless it's the end of a paragraph. Page 73 of the manual has advice on this feature.

The User's Manual indicates that an easy use of the communications part of the program might be communicating with another Apple that has a SwyftCard. I called Adrien Youell and we agreed that he would originate the call to me. When I heard the phone ring I sent out the command "ATA" which puts the modem in the answer mode. We connected and everything I sent out appeared on Adrien's screen. The only problem encountered was that whatever was typed and which appeared on the screen, didn't go out until I pressed SEND. Sometimes the screen got messed-up because Adrien had just sent something that appeared on my screen. Therefore I had to wait until Adrien had stopped sending before I could type a reply. I also noticed that there is no easy way to get the modem to hang-up at the end of a session. You must first type "+++" and then "ATH". This would be necessary especially for host computers such as DIALCOM which continue to furnish carrier even after you've logged off. This procedure is not documented.

I found that the Card is not compatible with the Titan Accelerator //e card. After testing the Card without the Accelerator //e installed, I then put the Accelerator //e card back but when I turned the Apple back on it refused to boot. I've grown quite used to the Accelerator //e card and would hate to give it up in order to use the SwyftCard.

In summary, I can not see this Card replacing ASCII EXPRESS PROFESSIONAL or any other communications program any time soon. The main reason is that because I access many different systems I have installed in my communications program all the sign-on sequences where my communications program automatically responds to questions about passwords and user ID's etc. This cannot be done with the SwyftCard. You must manually transmit when you get a query from the host system you are communicating with; it is not done automatically. ☺

Please Apple contd. from pg 26

HIGHER? And even if you give it a faster clock, it will actually work slower because of the overhead for the mouse text and mutiple disk access? PLEASE, APPLE, JUS' LEAVE MY &%\$#@^*& // ALONE!!!!!!!!!!!!

It has been written "... build a better mouseTRAP, and the world will beat a path to your door." The operative word there, Apple, is TRAP! And as my ol' daddy used to say, "If it ain't broke, don't fix it!" So, please, Apple, jus' leave my // alone! ☺

PINPOINT: A Review

by Henry R. Hertzfeld

Pinpoint is a desktop accessory program designed and advertised as particularly compatible with the popular AppleWorks program. It has some nice features including an appointment calendar, an envelope addresser, a calculator, a telephone dialer and a communications window. It also allows you to use your printer as a typewriter and to merge graphics into AppleWorks files.

This series of programs is designed to take full advantage of all of the new enhancements for Apple II's. It will work on the new 3.5" UniDisk drive and can also be copied and read into the expanded memory cards available for the IIe and IIc.

That's the good news. The bad news is that in designing the program for all of the new equipment the publishers have left the rest of us who have only slightly outdated computers and printers without the use of all of the options of the program. I have a 128K IIc, an extra disk drive and an Okidata 92 printer. With this combination I found Pinpoint to be disappointing and a relative nuisance to use. I had quite a bit of trouble getting the printer working correctly with Pinpoint, and was never able to get my printer to use all options available for it from Pinpoint. I had extensive correspondence with the Pinpoint Publishing Company. They tried to solve my problems, but were slow to respond and twice misread my complaint. Their responses indicated to me that Pinpoint was rushed to the market before all final testing and debugging was done. And, to solve my printer problem, they suggested that I purchase a supplemental program.

Virtually every other program I have ever used has been written to accommodate a wide variety of the most common printers and interface cards. Pinpoint was specifically designed for the Apple Imagewriter printers--if you own anything else, you will have trouble unless you buy a separate disk from Pinpoint Publishing called the Pinpoint Graphic Printing Supplement. As of last December, this disk was not yet released.

Pinpoint is a self-contained ProDOS program. All of its features can be run independently of any other program. But they have made it possible for the owner to install Pinpoint on the AppleWorks start-up disk. This permits you to use the "closed-Apple" key to access the Pinpoint menu. If you have the Pinpoint accessory disk in Drive 2 or have copied the accessory you wish to use onto the disk you are using in Drive 2, or have read everything into your expanded memory card, then you can directly access the Pinpoint programs. Of course, if you do not have that disk in Drive 2, then you must switch disks before using Pinpoint's options.

On its surface it sounds good. If, for instance, you need to make a couple of simple (add, subtract, multiply or divide) calculations while in the middle of an AppleWorks file, simply press a few keys and get the calculator on the screen. It does work. But I question whether it is worth the trouble. First you must access the Pinpoint menu. Second you must insert the applications disk in Drive 2. Third you get the calculator and make your calculations. Then you must switch

disks again to get back to your AppleWorks files and finally exit Pinpoint. It takes approximately 20 seconds to either access or exit Pinpoint. In that time you could easily have done the calculations on a hand calculator and saved a lot of trouble. Only on a new Apple system with expanded memory and direct and immediate access to RAM would this program be an advantage.

AppleWorks can be booted into the computer system without first using the system utilities start-up disk and will set up the serial ports to accommodate any printer preset on the AppleWorks program. Even though Pinpoint is installed on the AppleWorks start-up disk, it works the printer independently of the AppleWorks program. Thus, you must use the start-up utilities disk first to use Pinpoint. And, as I discovered, I was not able to use the Pinpoint options for different characters per inch and lines per inch to their fullest in the text mode (see below for a discussion of graphics), even though the Okidata was listed as a supported printer. At the very same time, I was able to get all options on my printer, when using the AppleWorks files.

In their advertisement, the Pinpoint publishers say, "Pinpoint Desktop Accessories are file compatible with AppleWorks. If you can run AppleWorks, you can run Pinpoint..." This is not totally true. I also have an Apple II+. I purchased "Plus-Works" which enables me to run AppleWorks on the II+ and take advantage of a Saturn 128K expanded memory card, giving me an AppleWorks desktop of 136K on the II+. I asked the Pinpoint company in a letter whether I could run their program on the configured II+.

Their answer: "The II+ will never run Pinpoint. Pinpoint requires the 65C02 microprocessor, enhanced CD and EF ROM's, Mousertext Icons, and Open/Closed Apples (or paddles)." Again, as in much recent software, the buyer must beware that the advertisements are not always 100% accurate!

Furthermore, from other material they sent me, Pinpoint will not work with early versions of RamWorks/Z-RAM (Applied Engineering) or with MultiRam IIe (Checkmate Technology). (Pinpoint Publishing does offer a \$20 RAM enhancement program to take care of these problems.) It will also not work with a parallel printer hooked up to a IIc through a "black box" without the user entering special POKE commands (sent to me by the company after misinterpreting my questions concerning non-Apple printers). None of these restrictions are mentioned in the manual.

Assuming that none of these problems occurred and that one owns the fanciest and newest Apple equipment, does Pinpoint fall into a "must have" category? I think not, but it is not expensive (retails for a list price of \$69.) and some of its options may suit the style and convenience of some users.

The Appointment Calendar is well designed. It shows a monthly calendar and you can enter and change appointments for any date. That date is then marked with an asterisk so that visually you can see which dates in any month have appointments. Then you can zoom into the date and make

contd.

entries. These can be printed so that you have a daily record of your schedule.

Several restrictions apply to the calendar. It is only set up to 1990. Presumably after 1990 (only 4 years away) you would have to purchase a new copy of Pinpoint. Second, each day having appointments uses about 1K of disk space. Using the 5-1/4" disk (and using it exclusively for the calendar) means that you can have about 140 days of appointments before switching disks. And, the program only permits 255 filled in days. For business purposes, you could easily exceed the limits for only one year's records and thus have to delete many early days in order to add records. Thus, you must copy the disks and/or make and keep hard copy of your schedules if you intend to use this for tax record keeping notes. Further (see above), having this on a separate disk requires additional time for switching disks each time a change is desired in your calendar.

The Telephone Dialer is convenient. Of course you must have a modem. It recognizes a ten-digit number on the screen and will automatically dial that number upon hitting the return key. Since local calls have only seven digits, in the set-up mode there is a provision for Pinpoint to ignore the first three digits of one area code (presumably the local one). But, in the Washington, D.C. area (as well as New York City and Los Angeles) more than one area code is included in the local calling area. If you set the dialer to ignore the 202 area code, for instance, all 301 and 703 calls will be incorrectly dialed.

The Calculator only performs simple four-function (add, subtract, multiply and divide) routines. It is easy to work, but is not very convenient. As mentioned above, it is slow to access. And the results cannot be stored in a memory or carried over to the text, spreadsheet or other work in progress on the screen. All in all, the calculator is a good idea but would be much better if it performed a variety of functions beyond the basic four, had results that could be printed, and could be accessed and removed quickly.

The Communications package is useful. The set-up program for it is flexible and permits a variety of modems to be used. It accommodates both 300 and 1200 baud rates. It can be used for electronic mail, information data bases, and sending and receiving files. There is also an automatic dialer with provisions for special log-in numbers, etc.

The Notepad permits short memos (up to 32 lines) to be created and stored. The notes are "windowed" on the screen. The editing instructions are very similar to those of the AppleWorks word processor. You can also directly print the note. In addition, if you are using Pinpoint in conjunction with AppleWorks, you can save the note as an AppleWorks file. The notepad is a useful tool if you are using Pinpoint alone. I do not see any real advantage to it if you are already in AppleWorks, as it is just as easy to create a new AppleWorks file with unlimited length and more editing functions. Furthermore, without a hard disk or an expanded RAM, it takes more time to create a note than a new AppleWorks file.

The QuickLabel program is quite useful. It scans the text and puts the cursor on the closest thing in the text to an address. You can then highlight just what part you want printed, move the highlighted block easily around the screen (to get in in position for printing in the right place on the envelope already in your printer), and print the address block

automatically.

The Typewriter program simply allows you to directly type to the printer. You can vary the pitch, lines per inch, and several other functions such as bold face printing and underlining. The degree of flexibility depends on your printer. It prints a line at a time, thus allowing you to make corrections to that line before it is printed.

The final program is called GraphMerge. The description in the manual indicates that this would be a useful and clever program. Unfortunately I could not test it because I do not have an Imagewriter printer. The company promises an accessory program (at additional cost) in the future to permit other printers to work with this program. In addition, it will only work with an Apple Super Serial Card interface (with the Imagewriter) or a parallel card that is 100% compatible with an Apple Parallel Interface Card. The manual specifically says, "Other printer cards will not work with GraphMerge."

The program permits you to take a high resolution picture, crop it, change its size, stretch it horizontally or vertically, place it directly into an AppleWorks document, print and save it. As this program appears to be very useful, I am awaiting word from Pinpoint's Publishers about the availability of the accessory program.

The manual for Pinpoint is well written and explains the various programs fully. According to both the manual and the advertising, the publishers plan to add to the options available in the future. They also plan to make available a "toolkit" so that the user can program his own functions into the system.

In summary, this set of programs would work very well in a thoroughly up-to-date Apple // system, preferably with only Apple equipment. If I had expanded memory cards and the ability to read both AppleWorks and Pinpoint directly into memory, the problems I encountered with the the speed of access to Pinpoint would disappear. But for most of us with only slightly old or unmodified systems, Pinpoint is less than ideal. Nevertheless, in spite of my impatience with some of the programs and my less than fully satisfactory correspondence and support from the company, parts of the system are very useful, and the updates that should be forthcoming will make it all the more useful. The price is modest and it is definitely worth considering as an adjunct to existing ProDOS programs such as AppleWorks. My only advice would be to hold off purchasing Pinpoint until the company offers the add-ons it promises--particularly the easy adaptability to a wide variety of printers for the graphics package. ☺



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A TOY EXPERT SYSTEM IN FORTH

by Chester H. Page

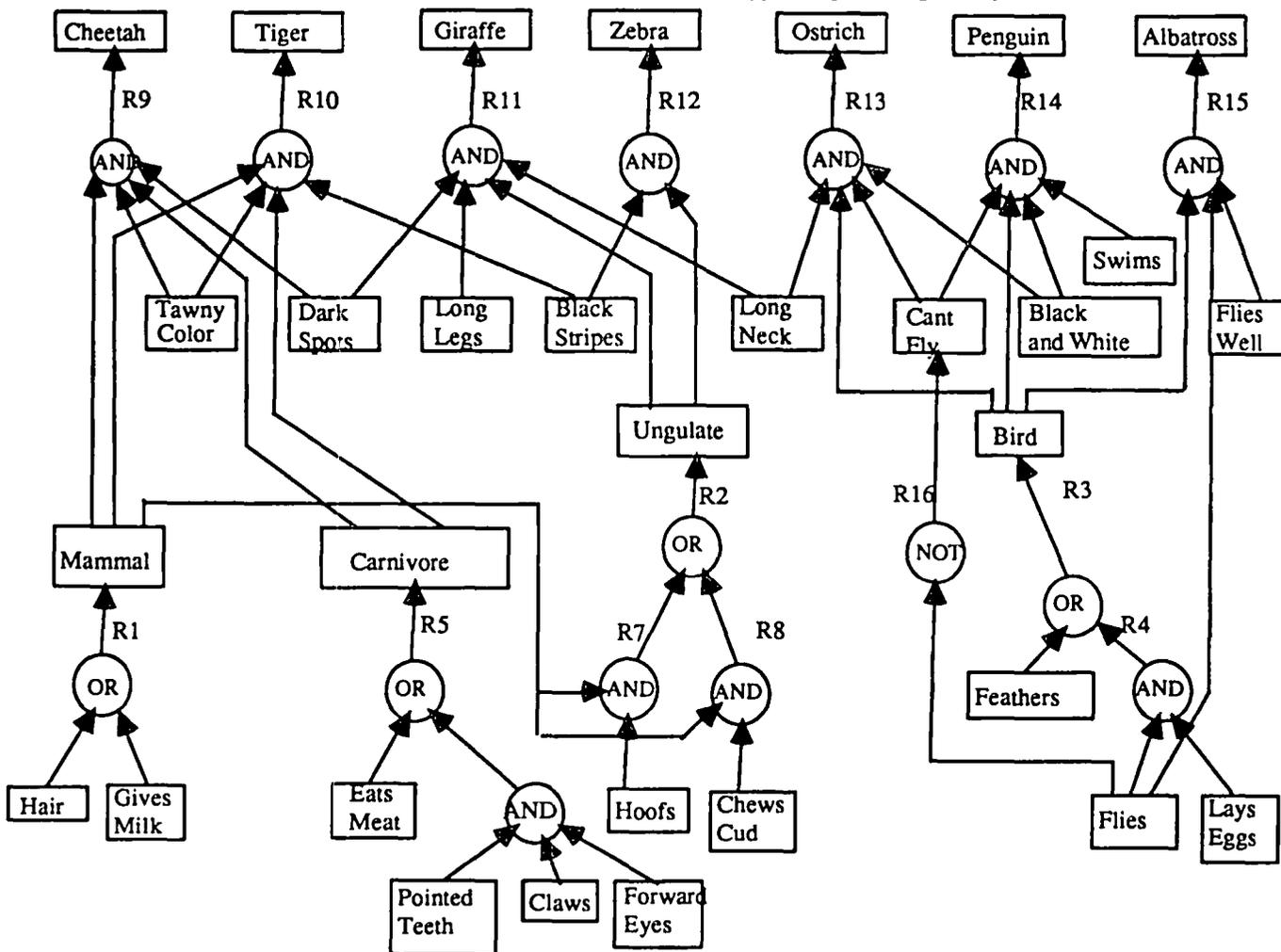
I was recently challenged to write a FORTH program for the model expert system shown in Knowledge-Based Expert Systems Come of Age, by Richard O. Duda and John G. Gaschnig, published originally in BYTE (Sept. 1981) and republished as Chapter 3 of the book Applications in Artificial Intelligence. FORTH is well adapted to this type of problem; the variables in the problem are either *deduced* (analogous of FORTH colon words) or *primitive inputs* (analogous of FORTH primitive words) supplied by the user in response to requests for Yes/No answers. Thus a FORTH word which investigates a possible conclusion from the input data automatically provides for *component words* which investigate lower-level conclusions which in turn investigate still lower-level conclusions, and so on, down to the *primitive* level of raw input data. At the end of the line, a TRUE or FALSE value is found; FORTH comes back up the line drawing conclusions on successive levels, until the original question is answered. Several tracks down through levels may be involved. The logical decision chart of the application is an exact parallel of the structure of FORTH application words.

I made some changes in the problem diagram as given. In

the original, the OR operations were located *inside* the attribute boxes; I extracted them and labelled every logical output (from OR or AND) with a rule number.

In the diagram, each *attribute* is enclosed in a rectangular box; each logical operation in a circle. Each attribute is associated with a corresponding variable whose value is: 0 when the truth/falsity of the attribute is not yet known, 1 when the attribute is known to be true (either by deduction or input), -1 when the attribute is known to be false. The name of each attribute is defined to be a FORTH word which returns the value of the variable associated with that attribute; each numbered rule is also used for a word, e.g., RULE2, which returns the value resulting from the corresponding logical operation. Again, a TRUE is represented by 1, FALSE by -1, and UNDECIDED by 0. Any return of 0, by any FORTH word, calls for a word on the next lower level.

Loading the screens and entering RUN results in the following "dialog" between the computer and operator (the Y, N, and W responses at the end of each "Is this true:" line comprise the operator's tiny share of the dialog. A second sample dialog is also given below. These two samples show the type of operation given by TOY.



contd.

Sample dialog:

Hello.

I will use my rules to try to establish one of the following 7 hypotheses:

ANIMAL IS ALBATROSS
ANIMAL IS PENGUIN
ANIMAL IS OSTRICH
ANIMAL IS ZEBRA
ANIMAL IS GIRAFFE
ANIMAL IS TIGER
ANIMAL IS CHEETAH

Please answer my questions with Y (yes), N (no), or W (why?).

Examining Rule #15

Is this true: ANIMAL FLIES Y

Examining Rule #3

Examining Rule #4

Is this true: ANIMAL LAYS EGGS Y

Rule #3 deduces that: ANIMAL IS BIRD

Is this true: ANIMAL FLIES WELL N

Rule #15 deduces that: ANIMAL IS ALBATROSS IS FALSE

Examining Rule #14

Examining Rule #16

Rule #16 deduces that: ANIMAL CANT FLY IS FALSE

Rule #14 deduces that: ANIMAL IS PENGUIN IS FALSE

Examining Rule #13

Examining Rule #16

Rule #16 deduces that: ANIMAL CANT FLY IS FALSE

Rule #13 deduces that: ANIMAL IS OSTRICH IS FALSE

Examining Rule #12

Is this true: ANIMAL HAS BLACK STRIPES W

I'm working on rule #12

I already know that:

ANIMAL FLIES IS TRUE
ANIMAL LAYS EGGS IS TRUE
ANIMAL IS BIRD IS TRUE
ANIMAL CANT FLY IS FALSE
ANIMAL FLIES WELL IS FALSE
ANIMAL IS OSTRICH IS FALSE
ANIMAL IS PENGUIN IS FALSE
ANIMAL IS ALBATROSS IS FALSE

Please answer whether ANIMAL HAS BLACK STRIPES Y

Examining Rule #2

Examining Rule #7

Examining Rule #1

Is this true: ANIMAL HAS HAIR Y

Rule #1 deduces that: ANIMAL IS MAMMAL

Is this true: ANIMAL HAS HOOFS Y

Rule #2 deduces that: ANIMAL IS UNGULATE

Rule #12 deduces that: ANIMAL IS ZEBRA

I conclude that ANIMAL IS ZEBRA

OK

Second sample dialog: (called by START to avoid repeating the introduction):

Examining Rule #15

Is this true: ANIMAL FLIES N

Rule #15 deduces that: ANIMAL IS ALBATROSS IS FALSE

Examining Rule #14

Examining Rule #3

Examining Rule #4

Is this true: ANIMAL HAS FEATHERS N

Rule #3 deduces that: ANIMAL IS BIRD IS FALSE

Rule #14 deduces that: ANIMAL IS PENGUIN IS FALSE

Examining Rule #13

Rule #13 deduces that: ANIMAL IS OSTRICH IS FALSE

Examining Rule #12

Is this true: ANIMAL HAS BLACK STRIPES N

Rule #12 deduces that: ANIMAL IS ZEBRA IS FALSE

Examining Rule #11

Examining Rule #2

Examining Rule #7

Examining Rule #1

Is this true: ANIMAL HAS HAIR Y

Rule #1 deduces that: ANIMAL IS MAMMAL

Is this true: ANIMAL HAS HOOFS N

Examining Rule #8

Is this true: ANIMAL CHEWS CUD N

Rule #2 deduces that: ANIMAL IS UNGULATE IS FALSE

Rule #11 deduces that: ANIMAL IS GIRAFFE IS FALSE

Examining Rule #10

Is this true: ANIMAL HAS TAWNY COLOR Y

Examining Rule #5

Examining Rule #6

Is this true: ANIMAL HAS POINTED TEETH N

Is this true: ANIMAL EATS MEAT N

Rule #5 deduces that: ANIMAL IS CARNIVORE IS FALSE

Rule #10 deduces that: ANIMAL IS TIGER IS FALSE

Examining Rule #9

Rule #9 deduces that: ANIMAL IS CHEETAH IS FALSE

Data supplied do not match any animal in my list

OK

A valuable feature of FORTH is the ease of modifying programs. The original problem made CANT FLY a primitive input. After writing the program, I realized that CANT FLY is the opposite of FLIES, so does not need a separate primitive input. Screen 43 was modified to 43A to provide for having a Rule #16, and Screen 49 was modified to 49A by deleting line 3, CANT.FLY and adding line 13

: CANT.FLY 16 #RULE FLIES NEGATE USE ;

which corresponds to Rule #16 in the diagram. The only "non-obvious" component word is USE; this tells FORTH to store the value of the variable corresponding to CANT.FLY, and to check for higher-level decisions to be made now that a value is available. A second modification was made to the original logic; for a bird to fly well, it must be able to fly! Thus if it has already been determined that the animal doesn't fly, there is no point to asking for the primitive FLIES WELL. I therefore added a connection from FLIES to the AND operation of Rule #15 (ALBATROSS). This was easily done by inserting line 2 of Screen 56 (and adding the third ENDIF at the end).

Discussion of the screens

Screen 40: ARRAY defines a TABLE of variables numbered 1 thru 31, to correspond to the 31 attributes.

Screens 40/42 set up the various phrases that will be contd.

needed for printing. The variable component numbers in TABLE correspond, e.g., 1 TABLE @ returns the value corresponding to HAIR.

Screen 43 converts rule numbers to the numbers of the variables fed by those rules - needed by DECISION (Screen 43A adds rule 16)

Screen 44: KNOW scans the TABLE for TRUE and FALSE attributes.

Screens 45/47 DECISION, REQUEST, and INPUT are the logical operations of this program; stack effects are given as line comments.

Screens 48/49 are the list of primitive input calls.

Screen 49A is the modification of Screen 49 to incorporate rule #16.

Screens 50/57 comprise the description of the diagram of the problem. Note the formats for OR and AND; if all choices are exhausted without a decision, the contrary follows.

SCR # 40

```
0 \ EXPERT SYSTEM TOY                15FEB86CHP)
1 : ARRAY( n--)<BUILDS 2 * ALLOT DOES> SWAP 1 - 2 * + ;
2 31 ARRAY TABLE
3 : PHRASE ( n-- )
4  DUP 1 = IF ." HAS HAIR " ELSE
5  DUP 2 = IF ." GIVES MILK " ELSE
6  DUP 3 = IF ." EATS MEAT " ELSE
7  DUP 4 = IF ." HAS POINTED TEETH " ELSE
8  DUP 5 = IF ." HAS CLAWS " ELSE
9  DUP 6 = IF ." HAS FORWARD EYES " ELSE
10 DUP 7 = IF ." HAS HOOFS " ELSE
11 DUP 8 = IF ." CHEWS CUD " ELSE
12 DUP 9 = IF ." HAS FEATHERS " ELSE
13 DUP 10 = IF ." FLIES " ELSE
14 DUP 11 = IF ." LAYS EGGS " ELSE
15 -->
```

SCR # 41

```
0 \ PHRASES, continued                15FEB86CHP)
1  DUP 12 = IF ." HAS TAWNY COLOR " ELSE
2  DUP 13 = IF ." HAS DARK SPOTS " ELSE
3  DUP 14 = IF ." HAS LONG LEGS " ELSE
4  DUP 15 = IF ." HAS BLACK STRIPES " ELSE
5  DUP 16 = IF ." CANT FLY " ELSE
6  DUP 17 = IF ." HAS LONG NECK " ELSE
7  DUP 18 = IF ." IS BLACK AND WHITE " ELSE
8  DUP 19 = IF ." SWIMS " ELSE
9  DUP 20 = IF ." FLIES WELL " ELSE
10 DUP 21 = IF ." IS MAMMAL " ELSE
11 DUP 22 = IF ." IS CARNIVORE " ELSE
12 DUP 23 = IF ." IS UNGULATE " ELSE
13 DUP 24 = IF ." IS BIRD " ELSE
14 DUP 25 = IF ." IS CHEETAH " ELSE
15 -->
```

SCR # 42

```
0 \ PHRASES, concluded                15FEB86CHP)
1  DUP 26 = IF ." IS TIGER " ELSE
2  DUP 27 = IF ." IS GIRAFFE " ELSE
3  DUP 28 = IF ." IS ZEBRA " ELSE
4  DUP 29 = IF ." IS OSTRICH " ELSE
5  DUP 30 = IF ." IS PENGUIN " ELSE
6  DUP 31 = IF ." IS ALBATROSS "
7 ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF
8 ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF
```

```
9 ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF
10 ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF ENDIF
11 DROP ;
12 \ Corresponding variables in TABLE have same number
13 \ as phrase
14 : RESET 32 1 DO 0 I TABLE ! LOOP ;
15 -->
```

SCR # 43

```
0 \ Rule#-to-appropriate-variable-number    15FEB86CHP)
1 : R->V ( r--v )
2  DUP 1 = IF DROP 21 ELSE
3  DUP 2 = IF DROP 23 ELSE
4  DUP 5 = IF DROP 22 ELSE
5  DUP 3 = IF DROP 24 ELSE
6  16 +
7  ENDIF ENDIF ENDIF ENDIF ;
8
9 : REJECT ." Data supplied do not match any animal in my list"
10 CR ;
11 \ Stack notation: r = rule number, v = variable number,
12 \ n = variable value, A = variable address
13 -->
```

SCR # 43A

```
0 \ Rule#-to-appropriate-variable-number    16FEB86CHP)
1 : R->V ( r--v )
2  DUP 1 = IF DROP 21 ELSE
3  DUP 2 = IF DROP 23 ELSE
4  DUP 5 = IF DROP 22 ELSE
5  DUP 3 = IF DROP 24 ELSE
6  DUP 16 = IF DROP 16 ELSE
7  16 +
8  ENDIF ENDIF ENDIF ENDIF ENDIF ;
9
10 : REJECT ."Data supplied do not match any animal in my list"
11 CR ;
12
13 \ Stack notation: r = rule number, v = variable number,
14 \ n = variable value, A = variable address
15 -->
```

SCR # 44

```
0 \ Statements                        15FEB86CHP)
1 : TRUE 1 = ;
2 : FALSE -1 = ;
3 : FETCH TABLE @ ;
4 : CONCLUSION ( r-- )
5 R->V
6 ." I conclude that ANIMAL " PHRASE CR ;
7
8 : KNOW ." I already know that: " CR
9 32 1 DO I FETCH TRUE IF ." ANIMAL " I PHRASE ." IS TRUE"
10 CR ENDIF LOOP 32 1 DO I FETCH FALSE IF
    ." ANIMAL " I PHRASE
11 ." IS FALSE" CR ENDIF LOOP ;
12
13 : WHY ( v r--v r ) ." I'm working on rule #" DUP . CR KNOW
14 OVER ." Please answer whether ANIMAL " PHRASE ;
15 -->
```

SCR # 45

```
0 \ More statements                    15FEB86CHP)
1 : #RULE ( r--r ) DUP                                contd.
```

```

2 ." Examining Rule #" . CR ;
3
4 : STORE ( r n—r n v)
5 OVER R->V
6 OVER OVER      \ r n v n v
7 TABLE ! ;      \ r n v
8
9 : DECISION ( r n v—n)
10 ROT              \ n v r
11 ." Rule #" ." deduces that: ANIMAL " \ n v
12 PHRASE           \ n
13 DUP FALSE IF ." IS FALSE" ENDIF CR ; \ n
14
15 ->

```

SCR # 46

```

0 \ Request for input data      15FEB86CHP)
1 : ASK ." Is this true: ANIMAL " ;
2
3 : REQUEST ( A v r—A n)
4 BEGIN KEY DUP EMIT CR
5 DUP 89 = IF DROP DROP DROP 1 DUP ELSE \ yes
6 DUP 78 = IF DROP DROP DROP -1 DUP ELSE \ no
7 87 = IF WHY 0 ELSE ." ERROR, TRY AGAIN " 0
8 ENDIF ENDIF ENDIF UNTIL ;
9
10 : INPUT ( r v—r n)
11 OVER SWAP DUP              \ r r v v
12 TABLE DUP @              \ r r v A n
13 -DUP 0=
14 IF                        \ r r v A
15 ->

```

SCR # 47

```

0 \ Request for input, continued 15FEB86CHP)
1 ASK ROT ROT DUP           \ r A r v v
2 PHRASE SWAP              \ r A v r
3 REQUEST                  \ r A n
4 DUP ROT !                \ r n
5 ELSE SWAP DROP SWAP DROP SWAP DROP \ r n
6 ENDIF ;
7
8 ->

```

SCR # 48

```

0 \ LIST OF INPUTS          15FEB86CHP)
1 \ FORMAT: <NAME> v INPUT ;
2 : HAIR 1 INPUT ;
3 : GIVES.MILK 2 INPUT ;
4 : EATS.MEAT 3 INPUT ;
5 : POINTED.TEETH 4 INPUT ;
6 : CLAWS 5 INPUT ;
7 : FORWARD.EYES 6 INPUT ;
8 : HOOFS 7 INPUT ;
9 : CHEWS.CUD 8 INPUT ;
10 : FEATHERS 9 INPUT ;
11 : FLIES 10 INPUT ;
12 : LAYS.EGGS 11 INPUT ;
13 : TAWNY.COLOR 12 INPUT ;
14 : DARK.SPOTS 13 INPUT ;
15 ->

```

SCR # 49

```

0 \ List of inputs, continued 15FEB86CHP)
1 : LONG.LEGS 14 INPUT ;

```

```

2 : BLACK.STRIPES 15 INPUT ;
3 : CANT.FLY 16 INPUT ;
4 : LONG.NECK 17 INPUT ;
5 : BLACK.AND.WHITE 18 INPUT ;
6 : SWIMS 19 INPUT ;
7 : FLIES.WELL 20 INPUT ;
8
9
10
11 : USE STORE DECISION ;
12
13
14 ->
15

```

SCR # 49A

```

0 \ List of inputs, continued 16FEB86CHP)
1 : LONG.LEGS 14 INPUT ;
2 : BLACK.STRIPES 15 INPUT ;
3
4 : LONG.NECK 17 INPUT ;
5 : BLACK.AND.WHITE 18 INPUT ;
6 : SWIMS 19 INPUT ;
7 : FLIES.WELL 20 INPUT ;
8
9
10
11 : USE STORE DECISION ;
12
13 : CANT.FLY 16 #RULE FLIES NEGATE USE ;
14
15 ->

```

SCR # 50

```

0 \ RULE and ATTRIBUTE calls 15FEB86CHP)
1 : RULE1 1 #RULE
2 HAIR TRUE IF 1 ELSE \ Note format of OR-rule
3 GIVES.MILK TRUE IF 1 ELSE
4 -1 ENDIF ENDIF USE ;
5 : MAMMAL 21 FETCH -DUP 0= IF RULE1 ENDIF ;
6 : RULE7 7 #RULE DROP
7 MAMMAL FALSE IF -1 ELSE \ Note format of AND-rule
8 HOOFS FALSE IF -1 ELSE
9 1 ENDIF ENDIF ;
10
11 : RULE8 8 #RULE DROP
12 MAMMAL FALSE IF -1 ELSE
13 CHEWS.CUD FALSE IF -1 ELSE
14 1 ENDIF ENDIF ;
15 ->

```

SCR # 51

```

0 \ RULE calls, cont. 15FEB86CHP)
1 : RULE2 2 #RULE
2 RULE7 TRUE IF 1 ELSE
3 RULE8 TRUE IF 1 ELSE
4 -1 ENDIF ENDIF USE ;
5
6 : RULE4 4 #RULE DROP
7 FLIES FALSE IF -1 ELSE
8 LAYS.EGGS FALSE IF -1 ELSE
9 1 ENDIF ENDIF ;
10
11 : RULE3 3 #RULE
12 RULE4 TRUE IF 1 ELSE

```

contd.

```
13 FEATHERS TRUE IF 1 ELSE
14 -1 ENDIF ENDIF USE ;
15 -->
```

SCR # 52

```
0 \ RULE calls, cont.          15FEB86CHP)
1 : RULE6 6 #RULE DROP
2 POINTED.TEETH FALSE IF -1 ELSE
3 CLAWS FALSE IF -1 ELSE
4 FORWARD.EYES FALSE IF -1 ELSE
5 1 ENDIF ENDIF ENDIF ;
6
7 : RULE5 5 #RULE
8 RULE6 TRUE IF 1 ELSE
9 EATS.MEAT TRUE IF 1 ELSE
10 -1 ENDIF ENDIF USE ;
11
12 : CARNIVORE 22 FETCH -DUP 0= IF RULE5 ENDIF ;
13
14 : UNGULATE 23 FETCH -DUP 0= IF RULE2 ENDIF ;
15 -->
```

SCR # 53

```
0 \ RULE calls, cont.          15FEB86CHP)
1 : BIRD 24 FETCH -DUP 0= IF RULE3 ENDIF ;
2
3 : RULE9 9 #RULE
4 MAMMAL FALSE IF -1 ELSE
5 CARNIVORE FALSE IF -1 ELSE
6 DARK.SPOTS FALSE IF -1 ELSE
7 TAWNY.COLOR FALSE IF -1 ELSE
8 1 ENDIF ENDIF ENDIF ENDIF USE ;
9
10 : RULE10 10 #RULE
11 MAMMAL FALSE IF -1 ELSE
12 TAWNY.COLOR FALSE IF -1 ELSE
13 CARNIVORE FALSE IF -1 ELSE
14 BLACK.STRIPES FALSE IF -1 ELSE
15 1 ENDIF ENDIF ENDIF ENDIF USE ; -->
```

SCR # 54

```
0 \ RULE calls, cont.          15FEB86CHP)
1 : RULE11 11 #RULE
2 UNGULATE FALSE IF -1 ELSE
3 LONG.NECK FALSE IF -1 ELSE
4 DARK.SPOTS FALSE IF -1 ELSE
5 LONG.LEGS FALSE IF -1 ELSE
6 1 ENDIF ENDIF ENDIF ENDIF USE ;
7
8 : RULE12 12 #RULE
9 BLACK.STRIPES FALSE IF -1 ELSE
10 UNGULATE FALSE IF -1 ELSE
11 1 ENDIF ENDIF USE ;
12 -->
13
14
15
```

SCR # 55

```
0 \ RULE calls, cont.          15FEB86CHP)
1 : RULE13 13 #RULE
2 BIRD FALSE IF -1 ELSE
3 BLACK.AND.WHITE FALSE IF -1 ELSE
4 CANT.FLY FALSE IF -1 ELSE
5 LONG.NECK FALSE IF -1 ELSE
```

```
6 1 ENDIF ENDIF ENDIF ENDIF USE ;
7
8 : RULE14 14 #RULE
9 BIRD FALSE IF -1 ELSE
10 CANT.FLY FALSE IF -1 ELSE
11 BLACK.AND.WHITE FALSE IF -1 ELSE
12 SWIMS FALSE IF -1 ELSE
13 1 ENDIF ENDIF ENDIF ENDIF USE ;
14 -->
15
```

SCR # 56

```
0 \ RULE calls, cont.          16FEB86CHP)
1 : RULE15 15 #RULE
2 FLIES FALSE IF -1 ELSE
3 BIRD FALSE IF -1 ELSE
4 FLIES.WELL FALSE IF -1 ELSE
5 1 ENDIF ENDIF ENDIF USE ;
6
7 : CHEETAH 25 FETCH -DUP 0= IF RULE9 ENDIF
8 TRUE IF 9 CONCLUSION ELSE REJECT ENDIF ;
9 : TIGER 26 FETCH -DUP 0= IF RULE10 ENDIF
10 TRUE IF 10 CONCLUSION ELSE CHEETAH ENDIF ;
11 : GIRAFFE 27 FETCH -DUP 0= IF RULE11 ENDIF
12 TRUE IF 11 CONCLUSION ELSE TIGER ENDIF ;
13 : ZEBRA 28 FETCH -DUP 0= IF RULE12 ENDIF
14 TRUE IF 12 CONCLUSION ELSE GIRAFFE ENDIF ;
15 -->
```

SCR # 57

```
0 \ RULES, concl. - INITIALIZATION 15FEB86CHP)
1 : OSTRICH 29 FETCH -DUP 0= IF RULE13 ENDIF
2 TRUE IF 13 CONCLUSION ELSE ZEBRA ENDIF ;
3 : PENGUIN 30 FETCH -DUP 0= IF RULE14 ENDIF
4 TRUE IF 14 CONCLUSION ELSE OSTRICH ENDIF ;
5 : ALBATROSS 31 FETCH -DUP 0= IF RULE15 ENDIF
6 TRUE IF 15 CONCLUSION ELSE PENGUIN ENDIF ;
7
8 : INTRO ." Hello." CR
9 ." I will use my rules to try to establish one of the following
10 7 hypotheses:" CR
11 5 SPACES ." ANIMAL " 31 PHRASE CR
12 5 SPACES ." ANIMAL " 30 PHRASE CR
13 5 SPACES ." ANIMAL " 29 PHRASE CR
14 5 SPACES ." ANIMAL " 28 PHRASE CR
15 -->
```

SCR # 58

```
0 \ RUN and START - final screen 15FEB86CHP)
1 5 SPACES ." ANIMAL " 27 PHRASE CR
2 5 SPACES ." ANIMAL " 26 PHRASE CR
3 5 SPACES ." ANIMAL " 25 PHRASE CR CR CR
4 ." Please answer my questions with Y (yes), N (no),
   or W (why)."
5 CR CR CR CR ;
6
7 : START RESET ALBATROSS ;
8
9 : RUN INTRO START ;
10
```

APPLE // PASCAL 1.3 UPGRADE OFFER

by Michael Hartman

Last December, Apple Computer released the latest version of its Pascal system for the Apple // family of computers. Apple Pascal 1.3 has a number of new features and enhancements to the operating environment and the language. The two most significant features of the new release are support for the UniDisk 3.5 800K drive (and all devices which follow the ProDOS block device protocol) and an excellent 950-page manual covering the operating system and language. Enhancements to the language itself include an OTHERWISE clause for the CASE statement and the BYTESTREAM and WORDSTREAM data types, which allow array parameters of indefinite length. Again, both 64K and 128K systems are included in the product, and almost all code written under Pascal 1.2 will run under 1.3 without recompilation.

An upgrade program similar to that which accompanied the release of Pascal 1.2 is in effect for current Apple // Pascal owners. Because of the extensive changes to the product, the upgrade actually consists of the entire Pascal 1.3 product. This includes the manual, four 5-1/4" diskettes, and one 3-1/2" diskette (the two formats have identical contents). To order the upgrade, mail your original Apple I: Pascal diskette and a check or money order for \$125 to the following address:

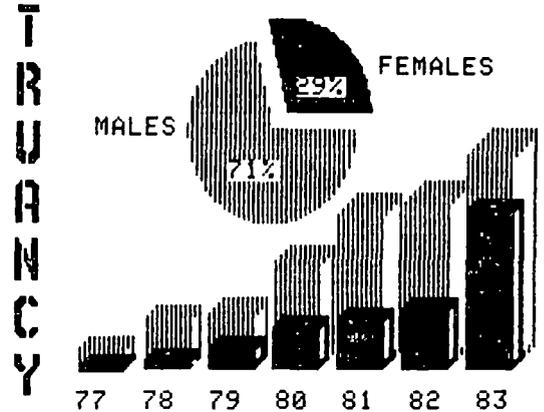
Apple Computer, Inc.
Pascal 1.3 Upgrade
P.O. Box 306
Half Moon Bay, CA 94019

Allow 4-6 weeks for delivery. And I am happy to report that the upgrades are being shipped on time (the 1.2 upgrade program was marred by delays of several months). The upgrade offer expires on May 16, 1986, so act now. Purchasers of Apple Pascal 1.2 within 90 days of the official 1.3 release date might be entitled to a free upgrade; see your Apple dealer about this. (For those of you interested in buying Pascal for the first time, the 1.3 release is the unmarked, big gray-and-yellow Workbench binder on your dealers' shelves. Someone at Apple forgot the labels.)

One piece of bad news for those with peripherals requiring SYSTEM.ATTACH is that the 1.3 version of this is not generally available yet. This is a repeat of the 1.2 release problem: ATTACH itself is ready, but the update of the ProDOS Support Tools software is holding up release of the entire 1.3 Pascal Device Support Tools package. If you own a hard disk or other device requiring ATTACH, I recommend that you include a letter to Apple with your upgrade order requesting inclusion of the SYSTEM.ATTACH file (only) in the standard Apple // Pascal product. This is currently being discussed at Apple, and input from customers might make it happen.

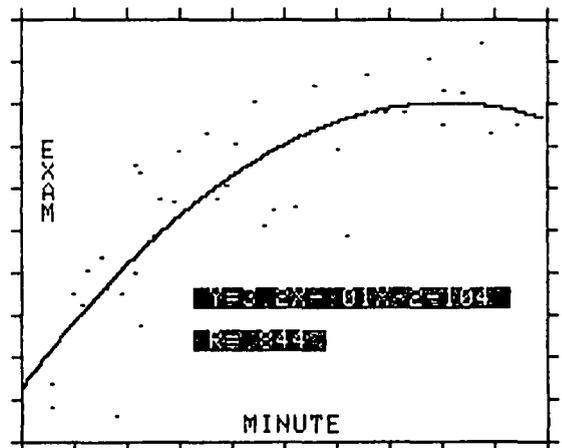
I have had the 1.3 release for over a month now, and am very happy with it. I recommend the upgrade to everyone—there are many significant improvements that I have not mentioned. Next month, I expect to have an article here on these features and on the variety of Pascal support software now available from Apple.

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The View From Durham

by Chris Klugewicz

P. O. Box 22171
Duke Station
Durham, NC 27706

Good grief! Duke's production of "You're a Good Man, Charlie Brown"--for which I designed the lighting--just closed (tonight, in fact), and I'm beyond exhausted. Please pardon any lack of coherence in this column, and I beg forgiveness of my editor for sending it in so late. (Ed. Note: This article arrived too late for the March Journal for which it was intended.)

Consumer Advisory (formerly "Mail order blues"): I've already received a couple of letters in response to February's query about mail order service, and I strongly suspect there will be more very soon. First, from Robert L. Vandegrift: On November 8, Robert telephone ordered "Typing Made Easy" for his Mac from Northeastern Software in Stratford, Connecticut. As of January 28, he had not received the software, despite the fact that his credit card had been billed. He has called Northeastern weekly, but no action has been taken, as far as he can tell. I feel that it is highly dubious business practice to charge someone for something that they have never been sent. Letter number two is from Duncan Langford in Kent, England (WAP goes international!): Duncan has had some terrible experiences with several American mail order houses. First, he ordered three items from MacCorner (which advertises in the Journal) last June; though he was told they were in stock and that they would be shipped "tomorrow," he never received them. Phone calls and letters produced only excuses. (At least they never charged his credit card.) Next, he had a problem with Software Dimensions. Duncan ordered about \$150 worth of games, for which he was immediately billed. You guessed it--after eight phone calls (remember, these are *transatlantic* calls, during business hours!) and letters, the order finally arrived in mid-January. Next came Business Computers of Peterborough (home of *BYTE* magazine). At the beginning of November, he ordered Think Tank 128. To make a long story shorter, he hasn't yet received it, though his card has been charged. Business Computers recently suggested that he write a letter to the president of the company (which he has done). There really isn't a lot I can say about all this, except *caveat emptor*. I wish both Duncan and Robert luck in obtaining what is owed them, and I hope this column helps.

In other news... Well, we finally have a Mac suitable for "serious" use. Personally, I like the Mac Plus. It has enough memory, it's fast, it has a numeric keypad and cursor keys (YAY!), and it has a SCSI (which I'm informed is pronounced "scuzzy"--how nice) interface. Apple even offers an almost reasonable upgrade policy: \$300 for the disk/ROM upgrade and \$800 for the motherboard/back panel upgrade. (Of course, \$800 is a little steep, but it should come down sooner or later.) The only drawback, of course, is that you have to have a Fat Mac to do any of this to your machine. Else you have to pay extra. Ah, the hazards of having held out for a cheap, Apple-approved upgrade...

Hard drives. One of the benefits that will come out of the Mac Plus' SCSI port is cheap hard disk drives. Right now, you can buy a 10 MB hard drive for the IBM PC family for less than the price of a Mac external disk drive. Meanwhile, we Mac owners pay upwards of \$1100 for even the cheapest 10 MB hard drive. Well, IBM drive makers have only to make simple modifications to their drives (which some of them have already begun) in order to make them Mac-compatible. *Voilà!* Cheap Mac drives! (I hope present Mac drive makers realize that the market is about to drop out from under them!)

Basically random comment. For "You're a Good Man, Charlie Brown," I used a Kliegl Bros. Performer II computerized light board to control the lighting. Now, I've been told that this piece of equipment costs over a hundred thousand dollars (whether that's true or not, I can't say for certain; I wouldn't be surprised if it were, however). It looks like one of those old Southwest Technical Products Corporation computers--big, bulky, and very ugly--but it has a numeric keypad, some special keys, and ten manual backup faders on the front instead of a typewriter keyboard. The software (which is actually in ROM) functions perfectly, but the hardware is slightly unreliable. The point of all this is that for about a fiftieth of the cost of one of these Performers, one could probably assemble a much more reliable and user-friendly (not to mention much better graphics) control system using a Mac or an Apple //. There's an opportunity here for some enterprising developer...

Completely random comment. Have you ever noticed the terminology of computers? For instance: the machine itself is "hardware," the programs you put into it are "software," but programs that are built into the machine are "firmware." Then you have "bugs," which foul up your software and "glitches," which affect hardware. And so on. The most amusing thing to me, though, is that all of these terms are used with straight faces by executives, government employees, and even lawyers (I know one lawyer who constantly talks about bugs in his gaming software).

More on my malfunctioning modem. I haven't really had a chance to do anything about my modem (a Prometheus Promodem 1200), which you'll recall broke down over Christmas vacation after less than five months of use. For those of you with whom I correspond *via* CompuServe EasyPlex, that's the reason you haven't heard from me lately. You'll have to wait until next time to hear how things get resolved.

Jonathan and other rumors. A lot of people seem to think that the Mac Plus is the long-awaited Jonathan that Apple has had under development for the past year. Not so! Jonathan is a completely *open* (like a //e or an IBM PC: it's got slots!) Macintosh. Rumor has it that this computer will be available
contd.

in early summer (yeah, sure) and that it will look very much unlike the present Mac. People have asked about an upgrade policy to the Jonathan, but personally, I don't expect that to be possible. It will probably be cheaper to wait a while, then buy a brand new one.

To boldly go where no designer has gone before... I'm getting very much involved in theatre again (as you may have been able to tell from my comments this month and last), especially the technical side. Specifically, I'm interested in scenography (set and lighting design). Right now, set and lighting design involves lots of laborious drafting--for those of us who aren't so good with our T-squares and triangles, anyhow. The wave of the future, of course, is computer-aided design (CAD), which would eliminate much of the mechanical aspects of design and free the scenographer to fully express his art. I want to see if I can implement some sort of CAD system for theatre with what I've got available to me (and maybe a couple of inexpensive peripherals). Any suggestions? More on this as I begin fooling around.

Pardonez-moi, s'il vous plaît! Sorry this has been so short, but this month wasn't the world's most relaxing for me. Next month, I promise an in-depth look at Apple's latest moves (complete with my usual commentary), a survey of the rumor mill, and a glance into the ol' crystal ball. Keep sending in your comments about mail order places so I can pass them on. Also, drop me a line or two if there's anything (at all) that you want to talk about. I haven't been too good about it lately, but I'm going to start writing back to all of you who've sent me mail! See y'all next month. ☺

Q & A contd. from pg 17

Spreadsheets are the most popular reason for adding memory; data bases probably come next. Once you have decided what program you are going to use, select a Ram card that works with that program.

Q. I use my computer mainly to keep track of my finances and telecommunications. I also have a number of games. Do you think an Aple Unidisk 3.5 would be better for me than say a 10 MByte Sider?

A. I really think that must be your decision. However, I can give you my philosophy on the subject. The Sider is of course a hard disk, and most hard disks on the Apple don't really have any convenient method for making backup copies. It just takes so many floppies and so much time that people don't bother. The one exception to this is the new B-Sider unit that provides tape backup for the Sider and Sider II. Anyone that stores unrecoverable data on a hard disk without backup is looking for trouble. The only useful purpose I see for a hard disk without backup capability is to transfer programs to it from floppy disks so they are readily accessible. When (not if, but when) the hard disk fails, the programs can be reloaded from floppy. If on the other hand you mostly use one or two programs that require large amounts of data the 3.5 Unidisk may be a better deal. Be sure you get two, though, so you can make backups.

I get any number of calls from people asking if its easy to recover data from a damaged diskette. I reply, "Sure, just get out your backup copy." ☺

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by =Alexander-

IS IBM-TYPE A BETTER DEAL?

JOE ENGLAND ON 02/01 TO ALL

Has anyone else noticed the large number of very inexpensive IBMPC and XT clones that have been hitting the market lately? This has me seriously thinking of committing the treasonous act of going IBM (clone). I used to be able to say, "I can do anything on my Apple that can be done on an IBM at a fraction of the cost." Now the reverse is true. Compare the price of a (for instance) Zenith Z-148 with 360K floppy, 10 meg hard disk, serial and parallel ports, 256K memory, monochrome monitor, keyboard, etc. at \$1795, with a comparably equipped Apple //e (with Sider, Ramworks, serial and parallel, etc.). The Zenith is cheaper. Don't like Zenith? Take your pick of several others at about the same price or less. Some have been getting good recommendations from people whose opinions I have no reason to disrespect. This is all very seductive, and I believe it may mean serious problems for Apple if they don't take some corrective action. What action? I don't know, I'm no Sculley (and I say that with a certain gladness). Don't misread my intent; I've always been happy with my][+ and Apple products in general because they were a good value. I believe this may not be true any longer. Please, someone convince me that I'm wrong about this.

DAVID P. KEMP ON 02/02 TO ALL

I wouldn't go so far as to even consider using a machine by that other company, but Apple may be shooting itself in the foot (or head) by its policies. Apple products have always been overpriced, and their actions throughout history have been aimed at stifling competition. Some years back they took action against their own dealers who were selling at a discount, and they have been very active in court against Apple clone makers. I'm not a Mac user, but I don't remember ever seeing a Mac clone even advertised. Maybe Jobs and now Sculley know best, but I think the lack of third party clones is a negative for the company. The reason I haven't bought a Mac is that it is so overpriced; the reason I haven't bought an Amiga is because it may not survive.

EDMON J. DONNELLAN ON 02/02 TO JOE ENGLAND

I also think Apple is shooting itself in the foot. Notwithstanding the IBM and cousin machines which, like it or not, now hold 70% of the PC market, Apple will soon be at a very severe disadvantage in even the less expensive home market. The Amiga is getting rave reviews and Atari has just released a 68000-1 megabyte machine for under \$1000. The // line has been doing well because of a large base of loyal users and the availability of good application software. It is becoming more painfully obvious, however, that the // has become an overpriced, obsolete machine, and Apple is postponing the obvious upgrades for reasons most likely having to do with marketing--taking one more year of high profits and minimizing potential competition with the Mac. Look through the last issue or two of BYTE and be saddened by what is happening, which is NOT being made available for the Apple //. I also wish someone would reassure me, but I guess when you go from a garage to a large corporation you change.

MIKE UNGERMAN ON 02/02 TO JOE ENGLAND

For the first time computer user, I have always felt that Apple products were far superior to IBM. The user friendliness of popping in a disk and going is not matched by IBM, where you have to do extensive configuration on most programs (like DB II, or R-BASE, or 1-2-3 etc). I spent almost 4 hours figuring out Word Star II and getting it up and running on an IBM portable in our office - and I like to feel that I have some computer knowledge. I have never had similar problems with an Apple.

TOM O'HAGAN ON 02/03 TO MIKE UNGERMAN

Try installing Pinpoint/Appleworks/Ramworks. Five hours and it's up and working but I have configuration problems to resolve.

IBM/APPLE CLONE

JOE ENGLAND ON 02/12 TO DEBBY STAR

The sum total of my knowledge of the IBM/Apple clone is what I read in the advertisement. Does it run ALL Apple and IBM Software? In my opinion, not even real Apples and IBM's do that.

JOE ENGLAND ON 02/12 TO BRETT PARKS

Actually, an IBM (or slot compatible clone) with one of those Apple emulation cards, I forget the name, will actually read an Apple formatted disk right from its own slimy little disk drive. Won't read copy protected stuff, though. Also, only works with Apple programs that run in 48K.

DEBBY STAR ON 02/17 TO JOE ENGLAND

Just to let you know, I called VF Associates. Tom, the owner told me that ALL IBM and Apple software can be run on their new machine. Not only that, but for \$30 extra, it will run with a speed of 8 MHz. I'm considering purchasing one; however am somewhat reluctant to accept all of the claims. Am interested in knowing if anyone has heard anything about this machine. (Incidentally, the warranty is for 1 year).

DEBBY STAR ON 02/17 TO MIKE UNGERMAN/ALL

Thanks for the msg. As I said in a previous message, Tom of VF Assoc., said he had a transfer program that would allow files to be transferred automatically from Apple to MSDOS (sans null modem). If their Quadram board is better than the old one (Tom SAID it would run ALL Apple software), then it's a fantastic deal! He also mentioned that adding a hard drive (\$499), will work only for the MSDOS programs and not the Apple. The modem will run from either Apple or IBM. This week VF will have one up and running, I was told.

MIKE UNGERMAN ON 02/17 TO LEE RAESLY/ALL

Lee, not to be contrary, but the Quadram Apple board *did* work. We installed one in an IBM clone at work. However "work" can mean a lot of things. It would read Apple disks, run Applesoft programs that were not protected and do some machine language routines (the monitor was also available). It was limited in what we wanted it for - running VisiCalc and DB Master.

contd.

MARK WHEATLEY ON 02/17 TO ALL

To all w/ questions about the VF Associates "VF-PC" clone: I am now using one, having put it together in an evening. Other than a few missing parts and having to pick up a 20Mb hard disk a few days later, all has been fine. I got the Turbo motherboard which runs at 4.77 or 8 MHz. A fair amount of software does NOT work on 8 MHz (e.g. PC-Talk, COPYIIPC, Wang WP). Am now using the Multi-I/O card and Novation modem at 2400. Have not found any IBM software that will not run at "normal" clock speed. Next step is to try the Quadram clone!

JOE ENGLAND ON 02/17 TO DEBBY STAR/ALL

I guess the only way to tell for sure is to actually see the thing do the particular things you want it to do in person. As to whether you should believe dealer claims, my opinion is that you should neither believe nor disbelieve them until you have experimented with the product. VF does seem to be pretty good about allowing this. I personally have no knowledge of the product other than what I read in the ad, but I have bought from VF before, (Promodem, ALL disk purchases, EPS keyboard, CCS card, etc.) and I find them to be just fine.

LEE RAESLY ON 02/17 MIKE UNGERMAN/ALL

Well, Mike, not to be picky, but then for your purposes, it did not work?

DEBBY STAR ON 02/18 TO MIKE UNGERMAN/ALL

I spoke with VF associates about the Apple card. It's not a Quadram board, nor a clone of that board. It's called a Track card, and is supposed to run all protected and unprotected software that's published for the][+.

LIFE

JIM RHODES ON 02/08 TO ALL

A friend of the Rose Buda said: "You can live well if you are rich and you can live well if you are poor but it's a lot cheaper if you are poor."

LEE RAESLY ON 02/09 TO JIM RHODES

As my father used to say, "I've been rich, and I've been poor. Rich is better!"

TOM WARRICK ON 02/09 TO LEE RAESLY/ALL

I didn't know your father was Sophie Tucker!

EDMON J. DONNELLAN ON 02/10 TO JIM RHODES

To the Rose Buda's friend: I would prefer to be rich and live poorly than to be poor and live poorly, for a wise man can see farther from the top of a hill than can a fool from the bottom of a well.

THERON FULLER ON 02/10 TO JIM RHODES

Somebody or other observed: "While money can't buy happiness, it sure does make misery a lot more fun."

EDMON J. DONNELLAN ON 02/11 TO JIM RHODES

Perhaps a solution to this difficult problem is to live in serenity, without desire, with a very wealthy, ailing uncle.

JIM RHODES ON 02/11 TO THERON FULLER

Maybe most of the fun is in getting there. Therefore, poverty is a good thing because it gives you the opportunity to get richer.

DONALD KAHLER ON 02/11 TO JIM RHODES

Confucius says, "He who sitteth on a tack is better off!"

THERON FULLER ON 02/11 TO JIM RHODES

No, riches are better. It leaves you the option of giving it all away and having all the fun of getting there again, to try and get richer than you are, or to maximize "happiness" with the status quo. Poverty gives you only two options: contentment with the status quo, and the "fun of getting there."

THERON FULLER ON 02/11 TO JIM RHODES

Actually, a ham sandwich is better than eternal happiness. Nothing is better than eternal happiness. And a ham sandwich is certainly better than nothing.

JOE CHELENA ON 02/11 TO JIM RHODES

If you were to profit from death would you not rather be poor? Money can not take the place of someone you have lost.

EUCLID COUKOUMA ON 02/12 TO ALL

Solving problems is a great pleasure. Therefore, one who has many problems is very rich since he has so many opportunities to experience great pleasure!

LOU PASTURA ON 02/12 TO JIM RHODES

Whether you're rich or poor, it's nice to have money.

THERON FULLER ON 02/12 TO ALL

Life is the cereal that Mikey likes.

CHARLES DON HALL ON 02/12 TO ALL

... you can try and get into Heaven, which I picture as a gigantic balcony with an unobstructed view of Hell.

PAUL H. SCHLOSSER ON 02/12 TO ALL

WHEW ! And I thought this computer stuff was confusing.....

A MAC IS...

ERIC RALL ON 02/15 TO REGINA LITMAN/ ALL

What is a Mac?

RICH MLODOCH ON 02/16 TO ERIC RALL

The mac is a machine you can use to draw a circle on the screen and then paint it in with a pattern of bricks. Nifty huh? But of course if you want the bricks to be red like many real brick are you have to get a paint and brush and hand paint it on the screen. Crayons are also an acceptable color adding tool.

JOE ENGLAND ON 02/25

I've noticed that, since the Macintosh came out, a faint but pervasive aura of chauvinism has developed among both Mac and // users, sometimes even rising to the level of antagonism. Why this should be is beyond my (feeble) powers of understanding, but I think that, in all fairness, we should stand back and take a good look at the relative merits of both microcomputers. I think it would be fair to say that while the Apple // is functional, well supported by both the hardware and software after-markets, and pleasing to look at, the Macintosh is about the right size and shape to be useful for chocking your car wheels while changing tires. And, with only a hack saw and a half hour of time, a Mac could be transformed into a truly stunning ashtray or planter. Other well reasoned and impartial views are welcome.

contd. on pg 46



DPub SIG

by J Condren

The second meeting of the Desktop Publishing (DPub) SIG was held on March 8, and was so well attended that there was standing room only as the meeting began. Since WAP's meeting room is going to be too small, we have begun investigating the possibility of using some other place for future meetings. Our next meeting, on April 12, will be at a location that will be posted on the DPub BBS and the WAP answering machine prior to the meeting.

As was mentioned at the meeting, there are two major shows in the DC-Baltimore area which are of interest. The first, being held by the Logical Choice in Baltimore on March 20 and 21, will probably be passed by the time you read this; the second show is FOSE, the Federal Office Systems Exposition, at the DC Convention Center on April 8-10. Both shows promise to be great events. Apple will show off its desktop publishing capabilities by putting together the ideal Macintosh Office — complete with several Macintosh Pluses and LaserWriter Pluses, a Linotronic 100 typesetter, and an Abaton Scan 300, a full page 300 dpi digitizer, and Mac-Bridge, a card for IBM PCs and compatibles which allows them to connect directly onto AppleTalk, transfer files to Macintoshes, and print on the LaserWriter. Come to the shows to see it all work!

Because I am involved in helping Apple prepare for these shows, Apple has loaned me a LaserWriter Plus, which I brought to the meeting. Since Apple's announcements in mid-January, most people have been concentrating on the changes in the Macintosh Plus and barely commenting on the LaserWriter Plus, only saying that it has several new fonts. These fonts (Avant Garde, Bookman, Narrow Helvetica, New Century Schoolbook, Palatino, Zapf Chancery and Zapf Dingbats) bring the total of typefaces in the Laser's ROMs to 35, and some of them, especially Chancery and Palatino, look incredibly good. The fonts, however, are not the only new thing about the LaserWriter Plus. A new option, cover page, has been added to the Laser's print dialog box. You can choose to print a cover page before or after your job, or not at all. This page lists the name of the workstation, the application and file names, the date and time of the print job. In an office setting with many people sharing one centrally located LaserWriter, this will ease the confusion of figuring out which pages belong to whom. Another feature was added to the LaserWriter Plus' driver which will also help in a multi-user situation. Formerly, if the LaserWriter was out of paper, the Macintosh screen would report this by indicating that the job status as "printer out of paper". With the new driver, the Macintosh will beep until the paper tray is taken out of the LaserWriter.

At one point during our meeting, a discussion was

started concerning some bugs in MacDraw (by the way, the current version of this program is 1.9). For some unknown reason, MacDraw does not save font information in the same way that most other programs do. When text is entered, MacDraw remembers that the text is in the font which is at a certain position in its menu, rather than saving the font's id number (which is what other programs do). What this means is that, when the document is opened up on a later occasion, text will be drawn using whatever font is at that position on the menu, regardless of whether that is the same font as before.

MacDraw's second problem has to do with moving two or more objects at the same time, one of which is text. As you move the objects, you will notice that the text moves at a slower rate than the other objects, taking it out of alignment with the other objects. This bug is caused by the ruler settings in the custom rulers dialog box. The bug occurs only if the product of the major and minor divisions is not a multiple of eight. For example, if you set 1 major and 16 minor divisions, you will have no problem, since 16 is a multiple of 8. However, 1 major division and 10 minor divisions will not work correctly. To solve this problem, either change the number of divisions, or turn off the grid.

As we become more involved with desktop publishing, we will find that there are specific problems and questions which we face that the rest of the "rest of us" do not. For example, those concerning typesetting hardware and software. Therefore, starting next month I will use a portion of this column to cover questions and answers. I will either answer, in greater detail, questions posed during our meeting, or provide answers to questions that people send in. The best way to do that would be to call up WAP's System 3 board and leave a message for me in the DPub BBS (or you could leave it for the SYSOP, Mark Walter). The System 3 board is down as I write this, but should be up again before the end of March.

Oh, by the way, for those of you who have a Mac Plus connected to a LaserWriter Plus in your living room, as I do, hang it up if you're trying to use PageMaker version 1.1. First, you have to use LaserNamer to give the LaserWriter Plus the name "LaserWriter"; even after you do that, it still treats the additional font sets as bit-mapped fonts instead of vectors. While version 1.2 is supposed to correct this little problem, it sure does take all the fun out of being the first one on your block with a LaserWriter Plus.

DPub SIG's next meeting will be on April 12 from noon to 2 at a location to be determined (probably PEPCO in downtown Washington). Stay tuned to the BBSs and the WAP phone line for final location. See you then! ☺

THE //e-APPLE WRITER-LASERWRITER UTILITY: An Interim Report by Martin Kuhn

Here's more information on directly driving the LaserWriter with a //e, using the new Synergetics program and utilities (\$39.95, direct) mentioned during the February meeting and in the March Journal. Most of this is based on a reading of the long tutorial provided on Volume III of the three-disk package. The disks, glossary listings and other information are available from Don Lancaster, Synergetics, Box 809, Thatcher, Ariz. 85552; (602) 428-4073.

A copied Volume II from this set, which contains the operating part of the utility, has so far refused to run, returning (when pushed too far) an error message that reads: "Uh, that wasn't one of my disks." We hope to have a report in a future issue on actual results.

Meanwhile, the following can be said. According to Lancaster, driving the Laserwriter with the //e, using Apple Writer files, is the most powerful way to exploit the full potential of the LaserWriter with its built-in Adobe Systems PostScript interpreter. "Apple Writer," he says, "does as good (and very often a spectacularly better!) job of driving the LaserWriter than can anything running on the Macintosh." Heady words for a //e owner!

Based on the documentation, to accomplish such feats requires working in PostScript, a typesetting and graphics language similar to Forth (but only "superficially," according to Adobe). Apple Writer is Lancaster's word processing program of choice for this, using embedded commands, PostScript code, and making use of Apple Writer's glossary capability and WPL word-processing macro language.

The LaserWriter does have a mode of operation, called the Diablo 630 (daisywheel) emulation mode, that is easier for handling text files, but it is limited to printing out 12 point type. Fancier material has to use the LaserWriter's "1200" or "9600" modes, via PostScript code.

To provide the proper handshaking ("DC1/DC3") for files longer than the LaserWriter's input buffer (about 4500 bytes), the //e going to the Laserwriter must have a Super Serial Card (or a custom printer driver patch). Working in Apple Writer with embedded codes and WPL means what you see isn't anything near to what you're going to get. Lancaster recommends using the LaserWriter itself, rather than a screen, as your formatting display. It doesn't take long to run out a page to edit, make changes, and run it again to check it, he suggests.

The ability to use glossaries in Apple Writer should be a big help in keyboarding the embedded codes as well as many of the commands in PostScript. The Synergistic utilities include glossaries already made up for immediate installation, both for the Diablo mode and for PostScript.

What can be done with PostScript, by those who will learn it, can be truly amazing, as anyone will agree who has seen Adobe's LaserWriter samples (using Adobe-supplied code and as run and indeed modified by Bernie Urban) and Adobe's stunningly handsome newsletter, Colophon. The address for

requesting Colophon, or for information on the additional typefaces Adobe is readying for sale through Apple Dealers, is Adobe Systems, 1820 Embarcadero Road S-120, Palo Alto, Calif. 94303.

At the DeskPubSIG early March meeting, our fearless leader Jay Condren, in a burst of enthusiasm, described PostScript as an "easy language to learn, almost just like everyday language." Here's an easy example: This short program from Adobe's "PostScript Language Tutorial and Cookbook" draws a circle on the page and a series of overlapping ellipses, each one a little more squashed down than the one above.

```
/doACircle
{ 0 0 54 0 360 arc stroke} def

/doAnEllipse
{1.75 scale
 doACircle
 stroke} def

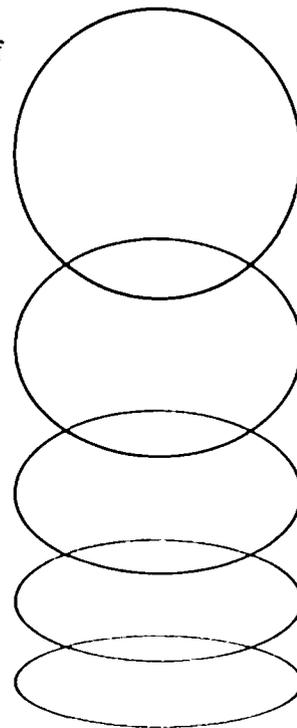
300 500 translate doACircle

4 {0-72 translate
 doAnEllipse} repeat

showpage
```

Two procedures are defined first; `doACircle`, which draws a circle 54 units (points) in radius with its center at the origin (coordinates $x=0$ $y=0$), and `doAnEllipse`, which draws an ellipse by scaling the y-dimension to three-quarters the x and then drawing a circle. The actual program starts with the line "300 500 translate". The procedures are called and executed the required number of times. "Showpage" tells the printer to print.

PostScript uses stack architecture; it's understood that the values for the "arc" command, which come first within the curly braces in the first definition, are, respectively, x position, y position, radius, starting angle of the arc (on the x axis), and the ending angle. These values, unless modified by the "scale" operator, are 1/72 inch each, very close to the points used in printing. The values go into the stack (first in, last out), and the stack can get a bit complicated sometimes. So do the programs, depending, of course, on what you want to do. Speech ordinary like seem doesn't it somehow. ☺



Ellipses

Best of Apple BBS contd. from pg 43

RONALD WARTOW ON 02/25

I could never understand the chauvinism personally, but what about people like me who have //e's (or any //) and a Mac. Are we left out of this titillating subject. What to do? What to do? Before we Apple'ers get carried away, I was told by a dealer that ATARI is about to come out with its color "Mac +" for about \$1000 with the ability to run Mac software. Second drive will cost under \$200 (double-sided of course to go along with double-sided internal drive with 1 meg. of RAM). Returning to the Mac v. // debate, the only word processor I've ever used is MacWrite, but the best gaming machine in the world is the //. How can I lose??

EDMON J. DONNELLAN ON 02/26

I don't think you are being fair. The Mac is very nice, has cute little icons and folders and stuff all over it, and has this little metal mouse you can roll around and click and double-click and everything. It's only that Apple's obsession with becoming Big Businessmen by marketing the Mac seems to have led them to purposely retard the Apple //'s natural growth, which I suppose is stupid to get personal about, but it is very annoying.

EUCLID COUKOUMA ON 02/26

The Apple][is a more flexible machine than the Mac because it is modular. That nice wedge shape makes it work even better as a wheel chock. If you need to prop up a corner of your car the various pieces give you many more options so you can select your height. But I really think you should use your IBM since it has a stronger case, especially if you remove the drives and fill it with concrete! Actually each machine has it's merits and problems. The most important factor is what you can do with it that you want or need to do. This is dependent not only on the hardware and possible add-ons but also the software. My wife bought an Apple //e because the software she runs was only available for the Apple // series. I love it but bought a Heath H-150 because my client wanted programs for the IBM PC/XT. And our next machine may be a Mac because it may soon have Turbo Pascal available for it. That would make it easier to transport programs that I have written to a second machine. It is hard to write programs that require large amounts of memory for the //'s ...

PHILIP NICOZISIS ON 02/26 TO EDMON J DONNELLAN

I really disagree with what you are saying. First, the mouse is not metal, it is plastic. Apple would have been out of business by now if would not have looked toward third generation computers. The Apple // has long since been outmoded and is merely a dinosaur kept alive by its proliferation of software, but even that has subsided.

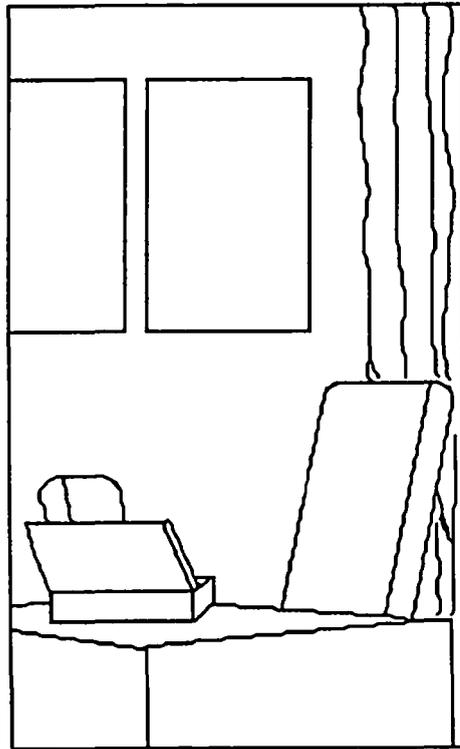
PROTECTION

MIKE UNGERMAN ON 02/06 TO TOM VIER

.... If a manufacturer chooses to have protection, he should do so in a way that allows a user to have easily obtainable backups (i.e., not to have to mail off for them) which will run easily on his system but have some incentive for preventing casual exchange (like the Broderbund/Blue examples). And finally, I agree about the hard disk, I would like to have all my software runnable from a hard disk. The Catalyst system allows this for a number of programs. I think I would be willing to pay a premium for unlocked software if I wanted to be able to modify the programs. I have seen several programs advertised at a higher price for unprotected, source code versions. For the average user this would not be necessary,

contd. on pg 27

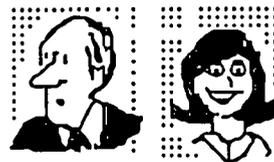
How to Assemble a Panel for your Comic Strip



1. Copy and Move a stock background into place on your page template.



2. Copy, Move, and Flip bodies (from a collection) into place.



3. Select from a large Collection of "faces", then copy and move into place.

4. Add detail and balloons



5. Type dialogue

Down at the Paper Less Office



I DON'T KNOW HOW PENNY SINGLETON GOT PROMOTED SO FAST. SOME SAY SHE IS RELATED TO THE BOSS..



THAT'S NOT TRUE! BUT SHE BEGAN TO CHANGE RIGHT AFTER SHE GOT HER MACINTOSH, AND...



WHEN WE ORGANIZED THE DATA ENTRY DEPARTMENT, SHE SAID "THAT'S JUST THE TYPING POOL UNDER A NEW NAME, AND I'M GETTING OUT!!"



Washington Apple Pi proudly presents

Desk Top Publishing



SHE STUDIED NEW SUBJECTS AND BEGAN TALKING ABOUT "THE BEARDED ONE" ON VAN DORN STREET

YOU'VE DONE MARVELS WITH THE NEWS LETTER . .

I OWE IT ALL TO APPLE PI

This page prepared by Paul E. Funk

MAC Q & A

by Jonathan E. Hardis

The mailman has been busy. Larry Moss, Product Marketing Manager for Haba/Arrays, took exception to my answer in the February Journal about the Haba 800K external disk drive. The technical differences between Haba's and Apple's offerings have been discussed in the past two columns. But he points out that the Haba drive works on all Macs without modification or the need for a special boot disk. They can also provide a patch to the HFS Boot disk (used on the 512K Mac for the Apple 800K disk drive) to allow 512K owners to use the new file system. If you have concerns or questions about Haba products, you can call Mr. Moss at (818) 901-8828.

Also in February, I wrote about how to change the date stamp that the Mac gives new files - the "creation date". I was concerned that some readers might think it fun to postdate documents, play tricks, and otherwise "fudge data". (After all, wouldn't most of us instinctively accept those dates as gospel?) Without giving the matter much thought, I prefaced the answer with "I assume the questioner has honest intentions." Well, the questioner was John Voglewede, and there is absolutely no question that he had honest intentions. His purpose was to correct obviously wrong dates on SigMac disks. And because it is not an uncommon problem, I thought that the answer might be useful for others, too. I'm sorry for the misunderstandings that this remark caused.

Finally, the mails brought a letter from a Philadelphia WAP member last November. At the time, I was unable to provide a hopeful answer, but the pieces are finally starting to come together.

Q: I am a visually handicapped WAP member and make extensive use of my Macintosh to help me accomplish many writing and reading tasks that would be very difficult were I not able to use large font sizes and a screen magnifier. However, I still have great difficulty seeing the small size print of the menus and icon name labels. It occurred to me that I might be able to change the font size used by these items by using the Resource Editor. Perhaps you could just substitute the large fonts for the small ones. Unfortunately, I have not been successful at doing this, as the Resource Editor is extremely difficult, actually impossible, to use. My hope is that some kind WAP volunteer will be able to help me out.

A: Your instinct is correct, the Resource Editor can be used to help you out. But it requires the newer versions of the Resource Editor and the Finder that were not available when you first wrote. I have no first hand experience with these things yet, and so I hope that the readers of this column who have spent some time exploring them will call me with details. Perhaps Jay Thal and the

DisabledSIG can provide further information.

It would be unwise to substitute large fonts for such smaller ones as the Chicago 12 used for menus and dialogs. Too much software would fail. But there are other ways to accomplish the same thing.

Finder 5.0 (and greater) uses a new resource to determine a lot of its behavior. It's the LAYO (layout) resource, and it determines such things as the spacing of icons on the desktop, and the font and size of the names beneath them. The new Resource Editor knows the format of LAYO, and aids you in modifying it to personalize your Finder. This solves the icon problem.

Menus are another matter. I don't know of any way to alter the size of the menu bar, but the menus themselves are much easier to change. Andy Hertzfeld suggests that someone could reprogram the MENU 0 resource (found in the System File), as it determines the characteristics of the standard menus, including the size of the font used to draw them. Of course, with larger type, you would have to allow for scrolling menus, as implemented on the Mac+ (and older Macs using System File version 3.0). (The original MDEF 0 source code was distributed in the Software Supplement. I don't have it. Would someone out there please MacNosy the new MDEF 0, compare it with the old one, and adjust the Font size to, say, 24 point? Also, would you repeat the menu title in large print after the menu is selected? Thanks!) With the new ROMs, Andy says it is easier than that. There are locations in low memory that you can change to alter the menu font and size. An application to do that, called FontSizer, is said to exist, although I haven't found it yet.

Andy also has contributed to this area by writing a small program to toggle the size of the cursor to twice its normal size. This should appear soon on a SIGMac disk.

For the future, Jan Eugenides, (617) 897-7749, has written a special word processor with the partially sighted in mind. Everything is large, and the program will speak the text using the Macintalk phonics package. Further, MacWorld magazine is preparing a special article on Mac use by the disabled, which should provide many useful ideas and leads.

Q: What is MIDI, and how to I get details on it?

A: MIDI stands for Musical Instrument Digital Interface. It's a standardized way for computers and synthesizers to communicate. Several MIDI programs for the Mac exist; see the December MacUser and October MacTutor magazines for examples. It's also an increasingly popular subject for books on the Computer shelf at many bookstores. For detailed specifications, write to the International MIDI Association, 11857 Hartsook Street, North Hollywood, CA 91607, (818) 505-8964.

contd.

Q: Where can I get a sound digitizer for the Mac?

A: If you are an electronic hobbyist, you might consider the Berkeley Macintosh Users Group (BMUG) Mac Recorder II. For \$50, they will send you everything you need to build and use one, except for the solder and iron. BMUG, 1442A Walnut Street #62, Berkeley, CA 94709. I haven't seen one yet, but it sounds like a good deal.

Q: What's new with Red Ryder?

A: Version 8.0 is out. However, only paid-up users can get it until April. Scott now runs his support BBS on the GENie network (based in Rockville), instead of from his home in St. Louis. Details should have arrived in the mail. Further, paid-up users will be given access to Red Ryder Host, Scott's new BBS program, which will not be released to the general public. Special attention was paid in the new version to file transfer. Kermit and MacBinary are now combined, and the Kermit itself is much expanded. XModem bugs were fixed, and the ACK-ahead (Fast-Track, Turbo) variant is offered as an option. For CompuServe subscribers, CIS-B protocol and Vidtex graphics are provided. It is possible that a later version of Red Ryder will be the current one by the time this column is printed, as 8.0 is said to fail on the MacBottom hard disk.

Q: Is Apple selling a SCSI HD-20?

A: No, although there are recurring rumors to the contrary. (They could, some day.) One source of confusion is the MDIdeas SCSI hard disk, which they are also calling the HD-20. Further, some people (myself included) used to abbreviate HyperDrive as HD, only adding to the muddle.

Q: Will HFS work on an XLisa?

A: No, at least not yet.

Q: How can I port dBase III files from a PC to a Mac?

A: Save the files in DIF or text format. Link the modem connectors of the two machines using a "null modem" cable, and run communications programs on each. The file can then be sent over the cable with XModem or alternate file transfer protocols. Once on the Mac, DIF files can be used by OverVUE and other database programs. Most databases should be able to read text. Finally, keep an eye out for DMac III, which is meant to be an equivalent database product.

Q: Can the Tecmar hard disk use the HFS file system?

A: Check with Tecmar for their latest recommendations. But Jim Lanford and Mike Cohen suggest the following. Start with a disposable copy of the Mac+ System Tools disk, if you have a Mac+, or the 512K Mac (January 16) System Update disk. Also start with the Tecmar 2.2 driver software, which you will merge onto the new Apple disks.

Rename the special Tecmar ImageWriter file to, say, TecmarWriter, and copy it to the Apple disk. You should select this "Printer" to use the Tecmar print

spooling. Then, using ResEdit, copy the following resources from the Tecmar System file to the Apple System file: DRVR ".Tdisk" (ID=20), all FIXX resources, ICN# 555, INIT 31, and STR 555. Boot the machine with the disk you just constructed. After you are fully satisfied that the Tecmar is well backed up, using the new Finder, you can reformat the Tecmar for HFS by choosing "Erase Disk" from the menu.

Q: What are the latest versions of the Apple system software?

A: Finder 5.2, System 3.1, ImageWriter 2.2, and LaserWriter 3.0. They are found at your Apple dealer on the LaserWriter+ update disk, dated February 12. This should only be of real concern to those with Mac+'s, or 512K Macs in need of HFS (such as for a hard disk or an 800K floppy drive). Otherwise my advice remains, if it isn't broken, don't fix it, and if you change any of them, change them all together.

Q: In the Sept 85 Dr. Dobbs Journal, there was a hardware hobbyist article on how to add a SCSI port to the Mac. Is this similar to what Apple did?

A: No. It is not the same thing as the Mac+ SCSI port. Third parties inspired by that article may also offer SCSI hardware "upgrade" products for your Mac. But unless they advertise functional equivalence and software compatibility with the Mac+ port, beware of how useful they might turn out to be. (The Warp Nine internal hard disk is an implementation of the Dr. Dobbs idea. It can not boot from the new ROMs as other SCSI disks can.)

Q: Drool! What kind of megabit chips would turn my 1 Meg Mac+ into a 4 Meg Mac++?

A: The 256Kbyte SIMs are labeled NEC MC-41256A8B-15. If you have a parts catalog, they would be the equivalent memory in the 1 Mbyte size. (See last months Q&A for more thoughts on 4 Meg Macs.)

Q: When will larger screen Macs be out?

A: Jean-Louis Gassée, Director of Product Planning at Apple, says "nothing in 1986". And although he couldn't confirm it, he left the impression that the "next Mac" will have an industry standard VME bus. (That's good news.)

Q: When will dealers get the Mac+ upgrade kits?

A: The ROM/800K internal disk option is now shipping. The 1 Meg/SCSI motherboard option will come later, due to the strong sales of the Mac+.

Q: What software fails on the Mac+?

A: Software will tend to fail for three main reasons. (1) HFS problems, which can usually be avoided by not using folders or by using 400K (single sided) disks, (2) Bugs in the new ROM, which isn't the usual reason, and (3) Programs that were not written "by the book" in the first place. I don't have confirmation of these, and I only repeat stories from the grapevine, but the following are contd.

said to fail: Red Ryder 7.0 (pay up, and get 8.0), single voice sound and some other features in MS Basic 2.1 (use multivoice sound instead), My Disk Labler (bombs with ID=02) (version 2.0 will fix, and will be out RSN), Mac Vegas, Mac Labler, & Harrier Strike Mission (don't boot), Click-on Worksheet (won't calculate), and Copy II Mac (new version is said to be coming out in April). Again, this is a randomly obtained list, neither complete nor necessarily accurate.

Q: How do I connect the Mac+ to other things?

A: Cables for the Mac+ serial ports are a bane for everyone. Updating the information from the March Q&A, you can also get the mini-DIN-8 connectors, part number MDX-8-2, for \$1.05 each from DRA Electronics, 800-423-5336. (A minimum order applies.) Also, Harbor Electronics, mentioned in March, can be reached at 800-243-4794. I've heard good things about their service.

Adaptation Electronics, 948-7440, is a local firm that intends to better the out-of-towners. They are also working on an adapter box to provide +5 and +12 volt power, no longer provided by the Mac+, to the peripherals that need it.

Apple dealers do sell cables to connect the Mac+ to other things, but some don't know it. To connect the Mac+ to a Hayes Smartmodem, or equivalent, order product number A9C0313, part number 590-0335-A. (The wiring, DIN-8 pin -> DB-25 pin, is: 1->20; 2->6,8; 3->2; 4->7; 5->3; 6 N/C; 7 N/C; 8->7; and shell->1.) To connect a Mac+ to an ImageWriter I, use the cable product A2C0311, part number 590-0331-B. (The wiring, DIN-8 to DB-25, is: 1->6,8; 2->20; 3->3; 4->7; 5->2; 6 N/C; 7 N/C; 8->7; shell->1.) To connect a Mac+ to a LaserWriter, in those cases where there are no other devices on the AppleTalk bus, you can use the 512K Mac to ImageWriter II cable as a direct connection. (Sorry, I don't have the number.) You do not need the AppleTalk isolation boxes. Better, if you can build one yourself, wire it as (DIN-8 -> DE-9): 1->7, 2->6, 3->9, 4->3, 5->5, 6->8, 7 N/C, 8->4. This is the "balanced" way to wire it.

Note: for those of you trying to figure out the Mac+ pinouts on page 64 of the March Journal, Apple reverses the usual meaning of "+" and "-" on the RS-422 signals.

Q: Is a new keyboard required as part of the Macintosh upgrade packages?

A: No.

Q: Will the new keyboard work on a 512K Mac?

A: We don't know of any reason why it shouldn't, although the Enter key acts as the keypad Enter, which is different than the keyboard Enter on the old keyboard.

Q: Help! My copy of the game Universe II doesn't work!

A: Call Tom Carbone at (203) 658-6917 and tell him your woes. It seems that a bad batch of disks may have gotten out. By the way, this game is said to take great liberties with the Mac interface standard.

Q: Can I use an ImageWriter printer on a PC?

A: Yes. Mark Herbert recommends the following cable connections (IBM Serial -> ImageWriter) 1->1; 7->7; 2->3, 3->2; 20->6,8; 6,8->4; 4->5; 5->20. (The last four runs sound funny to me, though.) Mario Vano suggests that you tell the IBM software that you're using a C. Itoh 8510 printer. Using the DOS "Mode" command, set the baud rate to 9600, and use the "P" option.

Q: When I choose "Open...", some programs have large dialog boxes that show a lot of the file name, and some are small, showing little. Why? I'd like them all to be large.

A: Those dialogs are controlled by the SFGGetFile dialog templates that are stored as resources. There is a default dialog box in the System file, DLOG -4000, and application programmers are free to create their own variants. If you want to experiment, you can use the Resource Editor to modify the shapes and sizes of these templates. I can't go into details here, but I refer you to Chapters 13 and 20 in Volume I of the published Inside Macintosh.

Q: Is it true that you can recondition ImageWriter ribbons with WD-40?

A: I've heard so, though I haven't tried it. I can imagine how paper would smell with WD-40 in the ink! The things to definitely avoid are old fraying ribbons (the fibers get into the print head), and chemicals that don't both dissolve the unused ink and lubricate the pins in the print head. WD-40 and LPS-1 should be equivalent. You can also get a ribbon reinker from Bede/Tech, and Robins Office Supply sells new ribbons that you can somehow get into the old case.

Q: Do any of the copy utilities work to get copy protected programs onto 800K disks?

A: Copy protection is really a losing battle for all concerned, and you should give extra weight when you choose products to those that aren't copy protected. That said, Hard Disk Utility will patch programs to remove their copy protection checks. Then, you can put them on any kind of disk you want. (And hopefully, on only one computer.) Of course, as programs are revised, you have to keep updating the utility.

Q: Where is Microsoft now?

A: Microsoft has moved. The new address is 16011 NE 36th Way, Redmond, WA 98052. The new telephone numbers are deceptively similar to the old ones. Product support is at (206) 882-8089, and the main number is (206) 882-8080.

Q: Would you elaborate on last month's answer about reinitializing the Apple HD-20? If the disk is corrupted, how do you get past the Finder to run the test program?

A: While I haven't tried it, I would suggest the following. With the HD-20 disconnected for a moment, build a floppy disk with the HD-20 test program set as the

contd. on pg 53

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MacNovice Column

by Ralph J. Begleiter

Making Screen Pictures



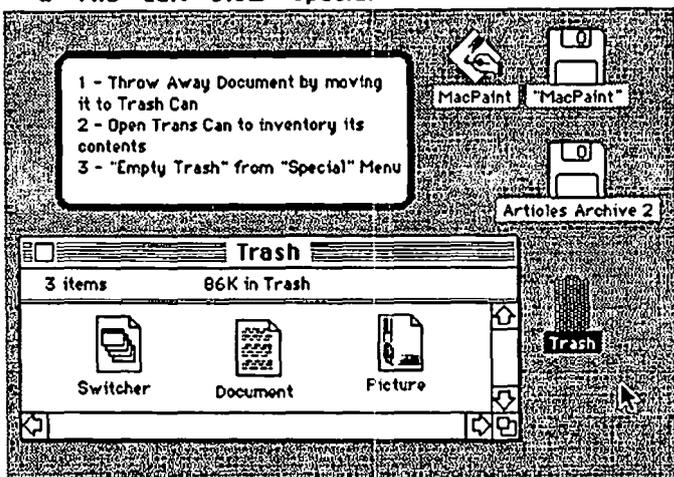
Apparently there are quite a few MacNovices who want to know how to prepare instruction sheets or Journal articles on the Mac, but who have had some trouble making "screen pictures" for their illustrations. I've had enough calls about this unusual Mac feature... even though it's really not something most MacNovices really would want to do.

One good use for this "screen snapshot" feature, for example, would be in creating a custom-made "help" tip-sheet for colleagues in your office, or even for your family, to help them learn the ropes, or to help them learn some specific routine you use often. Needless to say, "screen pictures" is a feature I use regularly to illustrate this MacNovice Column in the Journal.

What I'm talking about is something computer buffs working with older-generation computers call "screen dumps." They amount to an instruction telling your computer to replicate (on your printer or on a disk) an exact copy of everything which appears on your computer screen at any moment.

Suppose, for instance, you want to illustrate for another Mac user how to use the "trash can" on the Macintosh desk top. You could try to describe it in text. But a faster, easier, more Mac-like way of illustrating it is to do it with pictures or icons. You might include a picture like this:

File Edit View Special



Of course, since the Macintosh itself uses its own "MacPaint" tools to draw the desktop, you could open MacPaint and "draw" a desktop just like the Mac's. It wouldn't be too hard, since you've probably become familiar enough with it by now to draw it from memory.

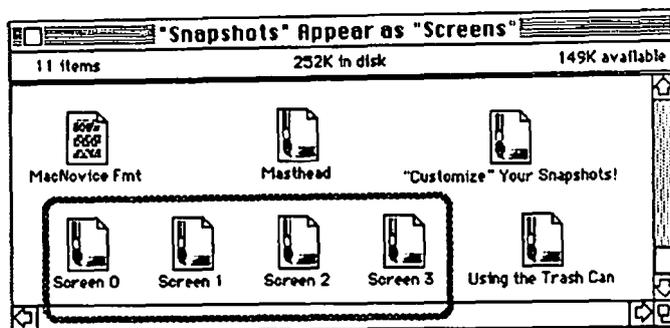
But, the Macintosh comes with a handy feature to save you all the trouble of drawing what appears on its screen. It's documented on page 72 of your Macintosh manual under the heading "To Create a MacPaint Document With the Current Contents of the Screen". (It's more easily recognizable in the Index to the manual, where it's listed under

"Snapshot, creating".

The instructions for creating a MacPaint "snapshot" of your screen, anytime, are simple:

- Hold down the COMMAND and SHIFT keys while you type the number 3.

As the Macintosh manual instructs, you can make as many as 10 "snapshots" in one Mac session. When you return to the "Finder" you'll see them as MacPaint documents (complete with the MacPaint document icon) each titled sequentially as "Screen 0," "Screen 1," "Screen 2," and so on.



When you make a "screen picture" or "snapshot," there's really no indication that you were successful...except that you might hear the disk spinning in the disk drive after you've typed COMMAND-SHIFT-3 to create the "snapshot."

If, on the other hand, you are unsuccessful at making a "snapshot," Mac will inform you by "beeping" once. There are two reasons why a "snapshot" might not be successful:

- There's already a document named "Screen 0" on the disk you're working with. If this is the case, go to the "Finder" and give the document a different name. That will free the "snapshot" feature again to create a new "Screen 0."

- The disk you're working on is so full that there's no space for another MacPaint document. I've found this to be the most common reason for "snapshot" failures. Remember that MacPaint documents are "fat". They take up a lot of space on your disks.

Which reminds me. It's not important that you know how the "screen picture" feature works. But you should know that you can only make "screen pictures" on the disk which contains the application you're working in at the moment.

You cannot tell the Mac to place the new "snapshot" on a different disk. Which means you've got at least one "application" (such as MacWrite or the Finder) on the disk. You've got a "System File" on the disk. You probably have some documents on the disk. And you may have some other miscellaneous files on the disk (such as Imagewriter, Clipboard, Scrapbook). Your disk is already pretty full before you start making "snapshots." You may only have space for a few "snapshots" before you get a "beep" indicating an unsuccessful one. Don't worry. You haven't made a mistake. You've just

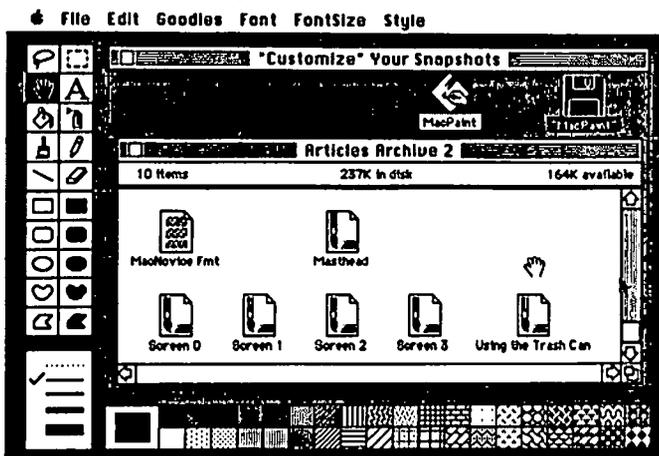
contd.

got a full disk.

The solution? Go to the Finder and throw something away if you need to, to make room for more "screen pictures". I often trash my "Imagewriter" file temporarily while creating "screen pictures" for this column. That frees about 25K from the disk. When you get a "beep" after making a couple of successful "snapshots," go to the Finder, rename them appropriately, and copy them to another disk. Delete the originals from the application disk, and you're ready to make more.

Incidentally, once you've renamed and moved your "screen pictures," the next one you make will automatically get the name "Screen 0" again, so don't be confused.

For purposes of making instruction sheets, the "snapshot" feature has a tremendous additional benefit: Once you've created a "screen picture" you can modify it any way you like by using MacPaint! That is, the "Screen 0" (etc.) documents may be "opened" from MacPaint just like any MacPaint picture. Once you've opened a "snapshot" you may use all of MacPaint's tools to change it. Fancy it. Add arrows. Add legends. Add instructions. Remove "extraneous" material which doesn't contribute to your story, etc. Customize your "screen pictures" using MacPaint:



You can open and make changes to any of your screen pictures from MacPaint. You can even cut and paste them from MacPaint into other applications, such as MacWrite (for an instruction manual) or a database (for future reference)!

One more sidebar to this "snapshot" theme. In the pre-Macintosh days, a "screen dump" was really a printout of the screen onto paper. It's possible to do that with your Mac, too. Instead of COMMAND-SHIFT-3... use CAPS LOCK-COMMAND-SHIFT-4. This will duplicate your entire Macintosh screen onto paper through your printer automatically. And, if you don't want the entire screen to be duplicated... just the "active window" (such as a disk contents window or a spreadsheet document window), simply use COMMAND-SHIFT-4. These features are documented on page 73 of your Macintosh manual.

Note that in all cases ("snapshot," "screen-dump-to-paper," and "active window" snapshot) the creation of your snapshot will begin only after you release the mouse button (if you're holding it down to display a menu on the screen).

Creating "screen pictures" is a little-noticed feature of your Macintosh which can make development of simple, user-friendly Macintosh instructions easy and fun. Try it. You'll like it! ☺

Mac Q & A contd. from pg 50

startup application. Turn the Mac off, reconnect the HD-20, spin up the HD-20, and then turn the Mac on with the floppy already inserted in the internal drive.

Q: What's the experience been with Northeastern Software?

A: Of those at the meeting stating an opinion, most had highly negative comments. MacConnection and TeleSoft have fine reputations, however. Note also, if a mail-order firm charges your credit card for goods not delivered, you have the right to tell the credit card company that you refuse the bill.

Quickies: More Mac programs will run on the XLisa than are checked in the MacConnection advertisements ... if you have a Levco Monster Mac, if you press the interrupt button during the power-on "bong", it will revert to a 512K Mac ... Rod Paine warns you against using Compucable Corporation cables. Because of a construction defect, found on both of his cables, an unprotected, exposed, loose wire connected to the Mac's +5 Volt power supply short circuited to the cable shield (ground). This is nothing a scissors and electrical tape can't fix (under the DB-25 shell), but it demonstrates poor workmanship ... The Mock package of DAs is now at version 4.2a ... a new feature is that you can enclose hex codes within « » characters (Option-\ and Option-Shift-\) ... Remove the Assimilation MIDI port attachment when it's not in use, as it is reported to freeze the mouse at times ... Smartcom II version 2.2A is now out, and fully supports HFS ... To free up wasted space on a HyperDrive, periodically copy drawers to floppies, delete, and recreate them ... Jim Bede (of Bede/Tech) strongly advises that you don't block the front air vent of the Mac, keep the keyboard away from the main unit, as that opening is very important for the cooling airflow ... PCPC, the MacBottom people, have announced a file backup program that can be used with any HFS hard disk ... Thanks again to the folks on MAUG™ for much of the information used in this column. ☺

ATTENTION STAMP COLLECTORS

According to an article in the February 10 issue of Linn's Stamp News, Clifford Morrison, a computer science student at the University of Utah, has written a stamp inventory program for the Macintosh. The program, which requires a 512 Mac and Macintosh Pascal, allows the listing of multiple files of up to 500 stamps each. The listing includes stamp information such as mint or used, gum condition, damage notes, cancellation notes, special arrangement (block, sheet, coil, etc.), perforation condition, luminescence, cost and catalog value.

Copies of the program are available from Mr. Morrison if a disk, disk mailer and return postage are sent. A donation to defray his expenses would also be appreciated. The address for the program or additional information (for which a stamped addressed envelope is requested) is: Clifford Morrison, F. Box, 3939 S. Wasatch Blvd., Salt Lake City, UT 84124.

Softviews

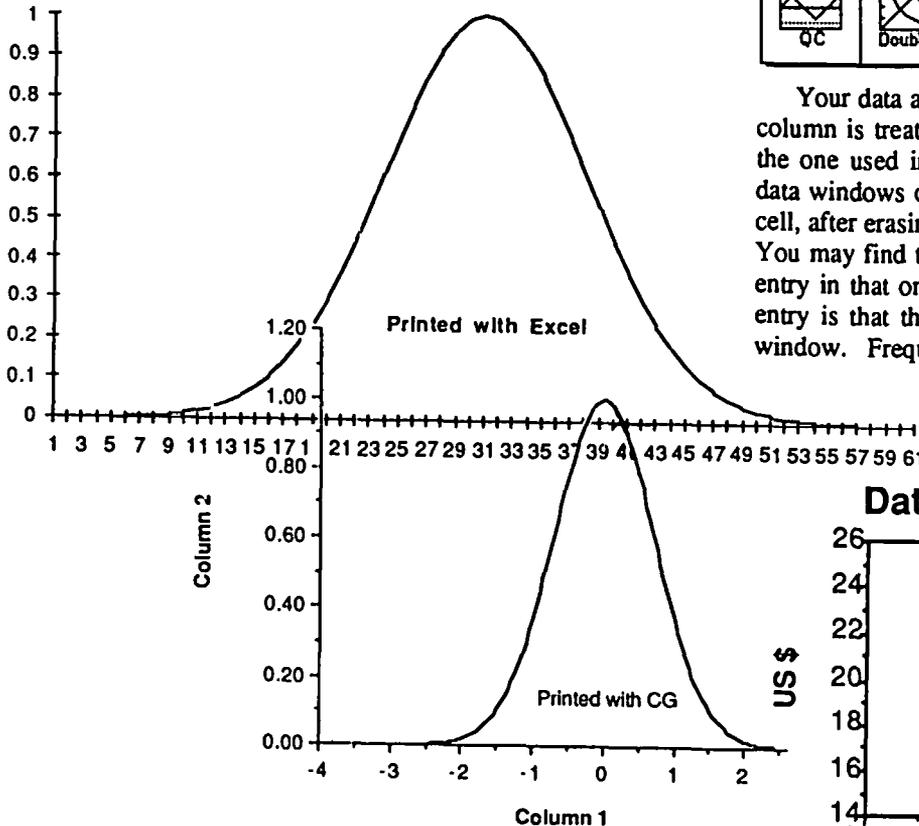
David Morganstein



This month you will find a review of Cricket Graph, a just-on-the-market graphics package, which has had the opportunity to learn from the competition, and of Omnis3 a relational, programmable data base package with extensive power.

Cricket Graph. (Jim Rafferty & Rich Norling) It could be that knowing Rich & Jim, I am biased about their design and programming skills. After all, I had the chance to work with them during the development of the Statworks package and as a beta tester of CG. However, I think the examples of their just-released graphics program will demonstrate to you that my impressions about Cricket Graph's exceptional capabilities are accurate.

The Competition: Click-on Worksheet, MS Chart, Excel and Jazz. CG can make all of the graphs provided by any of these, and several others such as polar plots, and quality control charts. Its special features include: better LaserWriter support (that is, smooth curves instead of little, connected straight lines), color on an Imagewriter II, page layout arranging, and support for most commercial plotters. The competing packages have limits to the number of horizontal points. I haven't found the limit in CG yet, if there is one. The two versions of a normal curve that you see below were printed on the LaserWriter, the first with Excel and the second with Cricket Graph. I think you can see the difference.



Graph Types. In the menu below, you see the twelve graph types supplied by CG. The scatter plot is easy to obtain, just click on the two variable names listed in the dialog box, one for the horizontal axis, one for the vertical axis. The polar and quality control charts may be unknown to some readers, but of great value to others. One thing to note appears in the lower right hand corner of the menu. CG provides you with a plain, unblemished screen called Text and several tools to create a graphic of your own! The tools include text, square and round boxes and arrows. These features can be used with any CG graph to enhance its appearance.

Graph	Curve Fit	Goo
Scatter	Line	Area
Bar	Column	Pie
Stack Bar	Stack Column	Polar
QC	DoubleY	Text

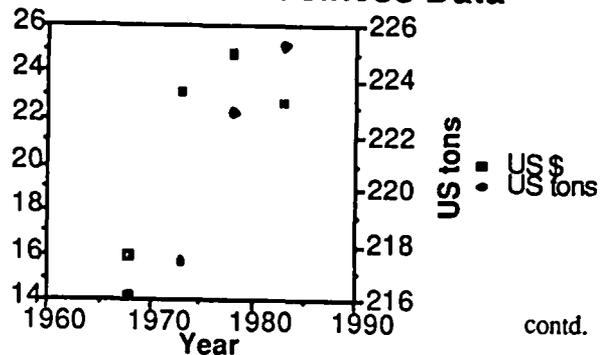
Graph Menu ←

Tools Menu →

Tools
□
○
—
↖
↙
↘

Your data are entered into a scrollable window in which a column is treated as series. The window works the same as the one used in Statworks. I prefer Microsoft's handling of data windows over the CG approach. As you backspace in a cell, after erasing the entry, you are placed in the cell above it. You may find that you, inadvertently, have begun erasing the entry in that one, as well! Another weak point of CG's data entry is that the category labels must always be in the data window. Frequently, you have a single column of numbers which form a series and you want to plot them. To do this, you must manually enter a column to be used as the category values.

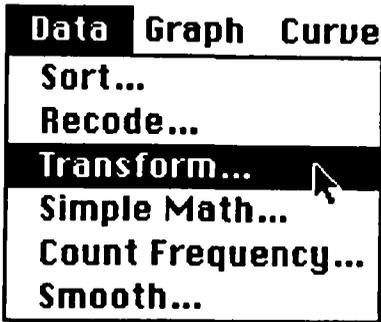
Data from "Business Data"



contd.

This may simply be the numbers from 1 to n, the number of points you have. CG displays the row number. It would be nice if their "Column 0" could be selected as the category.

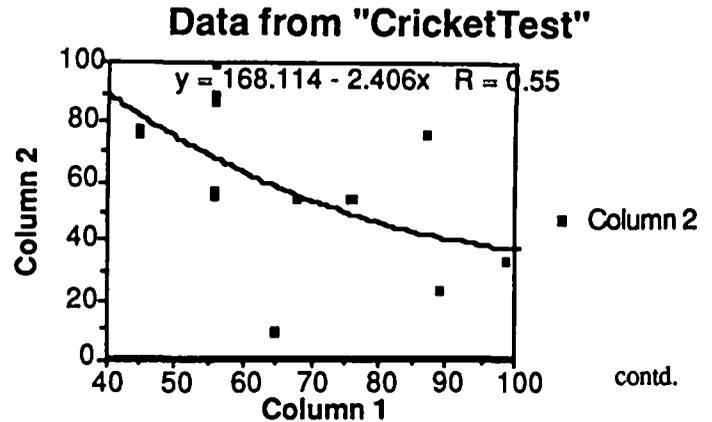
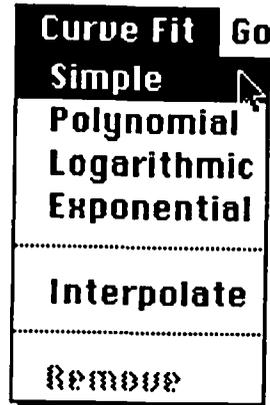
Manipulating Your Data. Often you will find the need to change your data or to plot a transformed version of it. CG allows for a number of useful options to help. Several functions are revealed in the menu below.



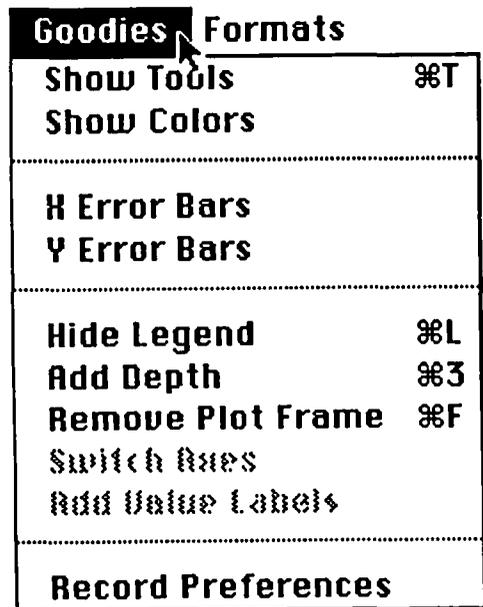
The data can be sorted, transformed or recoded using the same flexibility found in Statworks. Many useful functions are provided for transforming, including exponentiation and transcendentals as well as the usual four functions. One valuable feature allows you to take a large number of points and produce a count of records containing a smaller number of unique codes. Say for example you have 200 records each describing a different individual. If one column contains a text or numeric entry indicating their religion (below you see C, P and J for Catholic Protestant and Jewish), you can use Count Frequency to produce two new columns, containing one row for each unique code and count of records bearing that code. In the example below, column two contains the three unique codes and column 3 contains a count of records having that code. The computation is not dynamic, that is, it does not update if the original column is changed.

Untitled Data			
	1	2	3
	Column 1	Categories	Frequencies
1	C	C	14
2	C	P	11
3	P	J	7
4	J		
5	C		
6	C		
7	P		
8	P		
9	J		
10	J		
11	C		
12	C		
13	C		
14	P		
15	P		
16	P		

Another transformation offered by CG and few other graphics packages is smoothing. You can compute moving averages of varying widths to any variable. After scatter plotting two variables, you can perform a curve fit using different functional forms, show below. As you can see, the actual function as well as the smoothed line appear overlaid on the scatter plot. In addition, you can interpolate a line through the averages for each category.

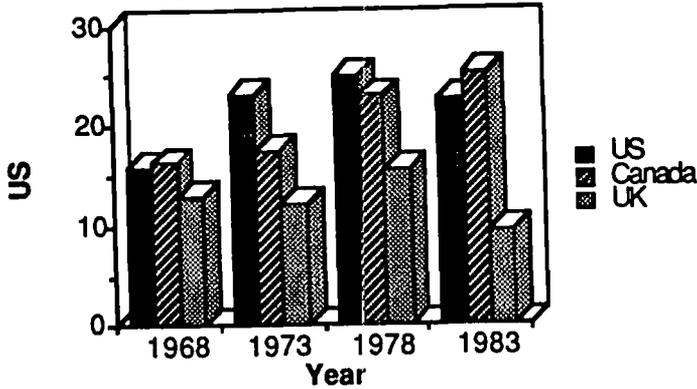


Goodies. The goodies menu provides yet more options to enhance your graphs. In as much as CG supports color, you need a window to let you set which patterns are what colors. You can display either X or Y error bars on certain graph formats. Formatting changes include: use of a legend or adding depth to the display as you saw earlier, switching the axes or removing the plot frame. A set of preferences for these various features can be saved and used to start up the next chart, saving you the time to repeatedly select the options you use frequently.



Below is an example bar chart with depth added, a simple CG option.

Data from "Business Data"



Documentation. I found the manual to be readable and easy to use. It contains both a Table of Contents and an Index. It begins with a tutorial and includes a reference section by menu. The disk contains two sample data files which help you to get started.

Summary. Cricket Graph is a very well-done package. It is not copy-protected and can be loaded onto a hard disk without difficulty. Other than my comments about the data window, I found no other weaknesses. It supports the Mac interface in every way possible. You can easily copy data from and to it via the clipboard. It works with Switcher and it produces beautiful output on the LaserWriter. Cricket Software, 3508 Market St., Suite 206, Philadelphia, PA. 19104. Phone (215) 387-7955. List Price \$195.00.

Omnis 3. A good data base package should give you: ease of file definition and modification; variety in field types; flexibility of forms creation for data entry and reporting; and rapid searching and sorting. More powerful characteristics might add: the complexity of file structures it can handle; its speed of operation; and the clarity of documentation. Additional features which Omnis 3 provides include: a password protection scheme needed for multi-user environment and programmability to develop your own applications. Overall, I rate Omnis 3 quite highly. If I had any reservations, it would be in documentation and Mac interface.

Unlike competing packages such as Overvue, Omnis 3 does not have to keep an entire data base consisting of many files and report formats in memory at one time. While this results in somewhat slower processing, it allows for data bases limited only by available disk space. Since Omnis 3 can be run on a hard-disk (using a key disk copy-protection scheme), these limits are quite large. File sizes of more than 16 Megabytes are supposed to be possible; although, my experience has been confined to files of only several hundred records.

You solve your data base problem through the use of File, Entry, Report and Search formats. In the simplest case, you must have at least one file and one entry format describing the record content and the way in which data are entered on the screen. Most likely, the data base will have at least one report format, perhaps to list all fields on all records. Search formats can be created to find sub-sets of the records meeting criteria, such as, all people with a birthday in a given month. Lets

look at each of these functions in more detail.

One of Omnis 3 most powerful aspects is its ability to modify the Mac menus and create new sequences of operations. A data base application can be hand-tailored to a particular problem and made to display your own messages in dialog boxes. In this regard, Omnis 3 is a programmable data base; although, unlike a program like MacLion, there is no language to learn. The sequence commands are selected from dialog boxes containing options.

File Definition. Omnis 3 provides a great deal of flexibility in the definition of data fields. They may be defined as: character, national, numeric, boolean, a date or a sequence number. You can request the number of decimal places to be used in the display as well as designate a variable to be indexed for use in ordering and searching.

An important characteristic required of a data base package is the ability to revise the structure of the record after data have been entered into the file. You might need to widen a field (increase a Zip Code from five to nine digits) or you may need to add new fields at a later date. Omnis 3 provides these features in an easy to apply method. You need only redefine the record by changing the screen and then run a utility called "Reorganize data". In short order, your file will be copied automatically into a new format containing the changes.

Data Entry. Once data files have been defined, data entry screens and report formats can be built. Using the Macintosh' graphics capabilities, Omnis 3 employs a mouse-driven "screen painting" approach to develop data entry and report forms. Employing as many as twelve screens per record, you design screens containing descriptive labels for the fields of your record. I find this technique direct and easy to use.

To build a multi-screen data entry form, you put the cursor where you want text to appear, click and type in a screen header or descriptions of the fields. These "labels" appear when data are entered. In addition to text, you can place boxes around fields to make the entry screen more interesting. Somewhere near a field label, you double-click to tell Omnis 3 where the field contents are to be positioned. A window opens allowing you to enter the variable's name and display appearance. This dialog is very Mac-like. Below you see both an entry definition window and a completed edit screen with data from the file.

```

Database DAVIDTE  Screen 1
-----
!My First Record Lay-out!
-----
Today's Date:1^^^^^^
Last Name :2^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
First Name:3^^^^^^^^^^^^^^^^
Street:4^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
City :5^^^^^^^^^^^^^^^^
State :6^                ZIP:7^^^^
Telephone: (8^^) 9^^^^^^
Cost:10^^^^^^ Interest Rate:11^^^
Total Interest:12^^^
  
```

Omnis 3 Field Definition Window

contd.

Database DAVIDTE Screen 1

My First Record Lay-out!

Today's Date: MAR 17 85

Last Name : Arons
First Name: Bob

Street: 1234 Anytown
City : Centerville
State : MD ZIP: 20874

Telephone: (202) 934-0986

Cost: 25000.00 Interest Rate: 9.25
Total Interest: 2312.

Next
Prev
Find
Insert
Edit
Delete
Print

Omnis 3 Completed Edit Screen for One Record

Another handy feature is called Default:check. This is used to designate two things about each field: the default value appearing in a field when a record is first displayed for entry, and a range check on the entry. The default value is used to fill the field when the data base is first defined. For example, a status code of "active" may be used to initialize a data base on employees since they are all likely to be active when they are first added to the payroll. When an employee becomes inactive, the entry will be modified accordingly. The use of a default can save a lot of time during data entry. The range check function provides an edit to insure proper data are entered. As an example, entering Default:check as 1:Withholding<10 would fill the field Withholding with a "1" in all records but prohibit the entry of a value greater than "9". The check operation can be more explicit. For example, (SEX='M')!(SEX='F') checks for the "OR" condition that the entry for the field SEX be an 'M' or an 'F'.

One aspect of entry formatting which might cause confusion relates to the length of the data field. When the file is defined, a length is supplied for every field. The entry screen construction includes a place for designating the length of a rectangle within which the field will be entered. While the default length used by the screen layout routine is equal to the field length provided earlier by the user during record definition, it is possible to make the entry rectangle longer than the field length. When someone enters, say, an address (with a maximum length of 20 characters) into an entry rectangle which is 25 characters long, they may be surprised to see their 25 character entry truncated to 20 without any warning message.

Report Formatting. Report layouts are created by the same "screen painting" action used to define the record format. The report format is broken up into several sections: a header, a detail section, one of up to nine sub-totals or a report total. In the screen below, you see a simple report containing only: a header, consisting of manually entered text; the detail consisting of three fields; and, the end of the report.

Layout for report DAVIDTE

LAST NAME	FIRST NAME	PHONE NO.	RECORD
501	502	(503)504	505

Omnis 3 Report Definition Window

Besides regurgitating data stored in the data base, Omnis 3 reports can contain information computed from fields in the data base. The possibilities are numerous. Besides the usual numeric operations, many mathematical and string functions are provided: absolute value, power, square root, integer part, string comparison, concatenation and subselection. You can use boolean tests such as Dept="Mngr" (which evaluate as one if true and zero if false) to increase the reporting power. Omnis 3 allows you to enter a "look-up" table to convert an abbreviation to a longer code in the report. For example, the code "M" could appear as "Male" and the code "F" as "Female".

A mail merge would be a very easy thing to perform with the Omnis 3 reporting capability. Your form (mailing label, invoice, etc.) is designed using the multi-screen "painting" mode employed to define record formats. Numerous field display formats, similar to those described earlier for file definition, are available. Among the most common are justification and number of decimal places. You may embed commas in numbers and have negative values printed within parentheses.

On the negative side, Omnis 3 report capability does not support mixing of the Macintosh's many fonts. A entire report can be designated for printing in only one font. I have some trouble even making Font selection work properly under Finder 5.1 on the Apple Hard disk. I can not get a single font or font size selected; check marks appear next to more than one font and size regardless of what I check.

Sorting & Searching. Beside entering data and printing it back again, Omnis 3 allows you to rearrange your data, select subsets of records and "massage" the items stored in the fields. Omnis 3 permits you to define as many as fifty (!) selection rules to extract records. The rules allow for all of the usual boolean operations (equal, greater than, "and"ing, "or"ing, etc.) as well as string manipulation of text to pick out the desired records. The sorting power is equally complete in as much as you can use up to nine items to define the sorting arrangement.

One of Omnis 3's most powerful features is the multiple update of entries within the file. With this feature, you can increase prices for selected records by a specified amount or you can transfer a final balance to an opening balance at the beginning of a fiscal period. Internal computations like these are usually found in expensive, language-oriented data base packages which require you to write a program to process designated records. In this sense, Omnis 3 is programmable without requiring you to write a program.

Relational Capabilities. Omnis 3 permits access to as many as a dozen files using a relational data base approach. Relational data bases allow you to pull information from separate files which have been connected through one or more common fields. For example, a journal of accounts contains one record per account while a transaction file with one record per transaction contains many records relating to a given account. A relational data base package keeps these two files separate, yet allows you to obtain a total figure for all transactions on a given account and store that number in the journal of accounts.

Multi-user Features. One last feature you may need in a business environment is a protection scheme. Omnis 3 contd.

allows you to define passwords for nine users: a master and eight others. While the master user can access anything, the others may be restricted from certain operations and fields. When users begin a session with Omnis, they must enter a password. Based upon the protection scheme the Master user establishes, others users will be allowed to perform some activities but can be excluded from others. Each of the other users may have their own unique access defined for Omnis options, files, menus, and layouts.

Documentation. The 300+ page manual is divided into four parts and includes an Appendix. It contains a table of contents and an index. Part 1 is an introduction with tutorial which uses a sample data base included on the disks to make simple changes and to produce a report. The sample data base is referred to throughout the manual. Part 2 is a more in-depth walk through practically every aspect of the program. The third and longest part is a complete reference section organized around the pull-down menus. The last part deals with utilities for reorganizing files and exchanging data. The manual is professionally printed on semi-glossy paper and comes in a three ring binder.

I found the manual to be weak only in the following way. Both an overview of what a data base is and an example of starting from scratch to build a series of inter-related files are lacking. The manual does a good job of discussing the procedure of defining records and reports, but fails to walk the novice user through Omnis 3's screens and how to respond when beginning on your own. All the examples relate to changing an existing data base. By way of additional documentation, a sixteen page reference card accompanies the program. Several sample data bases are provided, each demonstrating unique features of the program.

Data Interchange. A common problem for users of a new data base package is the need to import data in file formats from other programs and/or computers. Omnis 3 provides for the importing of data in any of four formats: SYLK, DIF, field delimited and one field per record. The SYLK format is used by Multiplan and other Microsoft products. The DIF format dates back to VisiCalc. The field delimited format allows for the entry of flat files with each record ended by a carriage return and each field separated by a special character such as a blank or comma. This flexibility should allow access to almost any existing data base.

Negatives. In several areas, Omnis 3 is not true to the Mac interface. The File menu contains mostly unfamiliar entries such as "Select Library" and does not include the usual Open and Close options. To access a data base, you must select a Library and subsequently a file in the Library (neither action is performed with an Open). When finished with a data base, you merely select another one or Quit. The Close option is only used to close windows, not file or data bases. Another shortcoming is its inability to handle graphic images as data fields.

Omnis 3 is copy-protected and requires the use of a key diskette (two of which are provided). Unfortunately, it does not support Switcher (at least not Switcher version 4.6 running on a Mac+ with an HD20 hard disk.)

Summary. Omnis 3 is a very complete and powerful data base package that will serve almost any need, including those of someone developing an application around it. It performs

well, is challenging to learn but fairly easy to use, and has considerable power to manipulate and display information from multi-file data bases. While its use of the Mac interface is somewhat unique, it uses pull-down menus and screen graphics to simplify the user's work. Blyth Computer Ltd., 2929 Campus Drive, Suite 425, San Mateo, CA. 94403. Phone (415) 571-0222. Price: \$495.00 ☺

Accounting on Mac contd. from pg 71

either immediate or deferred printing of checks on an individual check basis. Cash balances are not charged until the check is printed. MacOneWrite is the only one of the packages examined that permits this useful vouchering feature. MacOneWrite will draw a balance sheet and income statement, but these are of limited use since they only reflect bank activity--checks, deposits, charges, and Interest. The program provides for entering account balances outside of the bank entries. Any such entries, other than initial balances, break the link between the statements the system prepares, and the activity in the Disbursements journal. Because of this lack of integrity and the programs very limited scope, I rate it as unacceptable as an accounting system. I rate it good, if expensive, as a cash disbursements journal to be used in conjunction with an accounting system, or even excellent if a high volume of checks and/or a vouchering capability is required.

MacOneWrite lists for \$245 and is available from The Software Specialist for \$175. ☺

Mac BBS contd. from pg 75

SigMac disks and a reply to this item. The reply said that SigMac disks use MacWrite 2.2 and have to be "opened" and "converted" if one is using MacWrite 4.5. The reply further advised using MacWrite 2.2 or moving the document to another disk (with more space) and opening it with 4.5. I believe further elaboration is necessary. The MacWrite documents on the disk in question are in 4.5 format and must be opened with 4.5. Version 2.2 of MacWrite cannot open documents saved in 4.5 format (except those saved as text-only, which these documents were not). Indeed, the "not able to open document" message is one which appears when an attempt is made to open a MacWrite 4.5 document using MacWrite 2.2. When MacWrite 4.5 attempts to open a MacWrite 2.2 document, it displays a message saying that it is converting the document (and for text-only documents, it asks if carriage returns signify new paragraphs or line breaks). Please be advised, however, that some SigMac disks (especially early ones) do contain MacWrite 2.2 documents. So, if you get one of the messages, you know you have attempted to open the document with a different MacWrite version than the one with which it was created. If you are opening a 2.2 with 4.5, it is probably okay to proceed. If you are opening a 4.5 with 2.2, you will have to get a copy of MacWrite 4.5 in order to read it. ☺

MAC SOFTWARE: Latest Versions by David Morganstein

The following version numbers may help you keep up to date with your software. If you have a later version (one you have, not have "heard" about), please contact David Morganstein at (301) 972-4263 so we can keep our list current.

<u>TITLE</u>	<u>VERSION NO.</u>
CONCERTWARE +	
COPY II MAC	5.0
CRUNCH	1.0
DELUXE MUSIC CONST SET	
EXCEL	1.0
FACTFINDER	1.1
FEDIT	3.5
FINDER	5.1
FONT/DA MOVER	3.0B
FONTASTIC	2.6
FREETERM	1.8
FRONT DESK	1.0
HAYDEN SPELLER	1.2
HELIX	2.0
HOME ACCOUNTANT	1.2
JAZZ	1.0
MACDRAFT	1.1
MACDRAW	1.9
MACLABELLER	2.0
MACNOSY	2.0
MACPAINT	1.5
MAC PLOT	1.7
MACPROJECT	1.0
MACPUBLISHER	1.6
MACTERMINAL	1.2
MACWRITE	4.5
MICRO PLANNER	
MS BASIC	2.1
MS FILE	1.02
MS FORTRAN	2.1
MS WORD	1.05
MULTIPLAN	1.1
MUSIC WORKS	
OMNIS 3	3.1
OVERVUE	2.0D
QUICK & DIRTY UTILS 1	1.05
PAGEMAKER	1.1
PRETTY GOOD TERMINAL	2.0
PROFESSIONAL COMPOSER	
READY SET GO	2.0
RED RYDER	7.0
RES EDIT	1.0D5
SIDE KICK	1.1
SKIPFINDER	5.3
SMARTCOM II	2.1C
SWITCHER	4.6
SYSTEM	3.0
THINK TANK 512	1.2
TIME BASE	1.6
TML PASCAL	1.1
TMON	
TURBOCHARGER	1.11
VERSATERM	1.52

The Generic PC: Fast Relief for IBM Sticker Shock

by Bud Stölker

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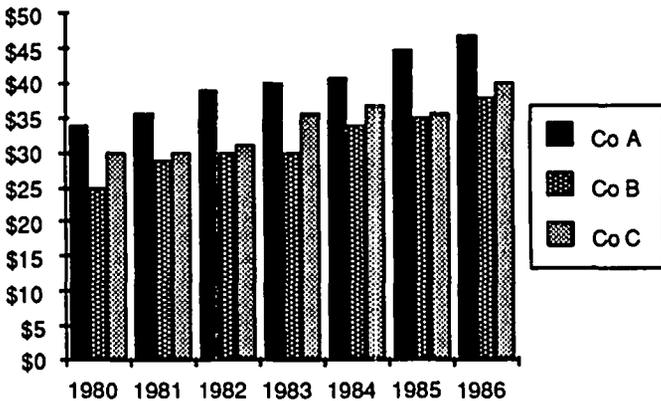
EXCEL'ing ON YOUR MAC

by David Morganstein

"Help!" said the voice on the phone. "My cities are where my years should be and my years are where my cities should be..." This cry of distress began yet another exciting adventure on the Excel hotline. Being on the hotline is a fun opportunity to meet new people (and discover "undocumented features" in my favorite spreadsheet program). In this case, the call came from my old friend Jim. Jim's problem was quickly resolved. He wanted to make a bar chart from seven years of revenue data from three companies. Two versions of the data are shown below.

CompanyData								
	A	B	C	D	E	F	G	H
10		First Attempt						
11		Co A	Co B	Co C				
12	1980	\$34	\$25	\$30				
13	1981	\$36	\$29	\$30				
14	1982	\$39	\$30	\$31				
15	1983	\$40	\$30	\$36				
16	1984	\$41	\$34	\$37				
17	1985	\$45	\$35	\$36				
18	1986	\$47	\$38	\$40				
19								
20			Second Attempt					
21		1980	1981	1982	1983	1984	1985	1986
22	Co A	\$34	\$36	\$39	\$40	\$41	\$45	\$47
23	Co B	\$25	\$29	\$30	\$30	\$34	\$35	\$38
24	Co C	\$30	\$30	\$31	\$36	\$37	\$36	\$40

First he selected and copied the rectangle from A11 to D18. Next he opened a new chart window and did a paste. This resulted in the following, nice bar chart:

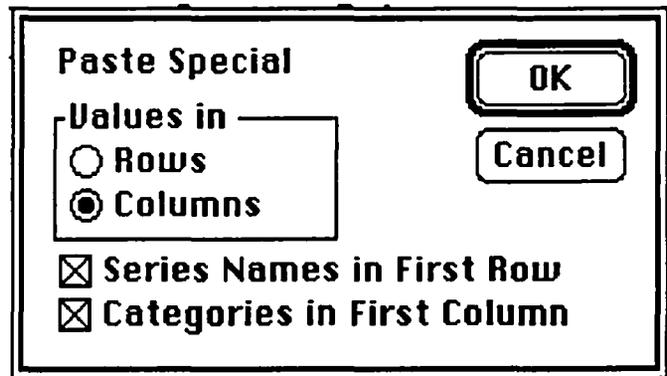


Unfortunately, the companies and years are not the way he wanted them. In a second attempt, shown in the data window above, he tried to transpose the data items, making the companies rows, and the years columns. This seems like a reasonable response don't you think? Guess what...Excel didn't care which way he did it. After copying from A21 to H24 and pasting into a new chart, the bar chart was the same. Try it yourself.

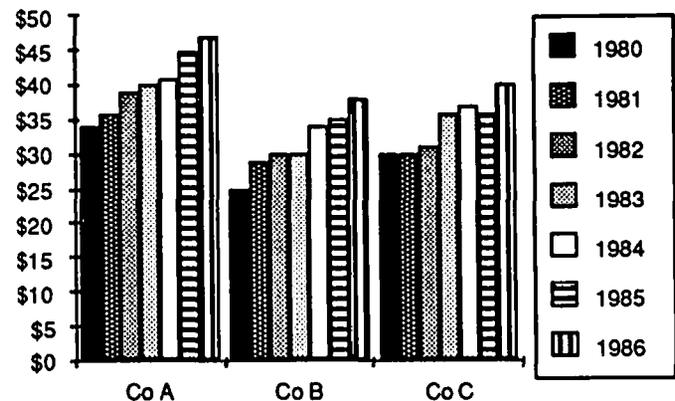
Excel is thinking of the data as series. A bar (or any other) chart consists of a series of points. These may appear as a row or as a column. Multiple series, like this problem, consists of several columns (or rows). Unfortunately, if

labels (the top row or leftmost column) are present, Excel uses them to define the series. It looks for numeric characters to determine the series (in this case the years). No matter how you position the data, the years will always be the series, unless...(you knew there had to be a way out of this didn't you?).

As last month, the key is the Paste Special command. It allows you to select the categories, the x-axis points, and the values, the y-axis points from your rows or columns. After selecting and copying the A11 to D18 rectangle, and choosing a New Chart, pick Paste Special. You will get the following dialog box:



Excel is assuming each series appears as a column consisting of seven entries. There are three columns, each a different series. By clicking on Rows, you are saying, "No, there are seven series, each containing three entries." After the Paste, we have... voila, the desired plot (with legend added for clarity)!



Abbreviated Commands. While we are on the subject of creating new charts, have you discovered the abbreviation command-n, followed by hitting the C key twice? (Or the M key twice for a Macro sheet?) Excel has numerous keystroke short cuts which keep your hands on the keyboard. Try Hands on Excel by Danny Goodman for a thorough discussion of many shortcuts.

Undocumented Features. (Not to be confused with bugs...)

contd.

• When working with the Laserwriter, the reduction factor appears to change the size of the text only, not that of the graph!

• Files created under Finder 4.1 may contain longer length names than those created under 5.0. When Excel, using Finder 5.0, tries to display the file names on a disk containing long-named files, rather than warn you of a problem, it bombs.

• While the values computed in a spreadsheet and graphed in a chart are dynamically updated in the chart when they change in the spreadsheet, labels copied from the sheet are not! They must be manually maintained in the chart even though they originally were copied from the spreadsheet and pasted in the chart. If you click on a series in a chart, you will see the definition of the series at the top of the screen (we discussed this last month). The first parameter of the series is the label. Note that it is merely text enclosed in quotes. There is no reference to the sheet from which it was copied.

Neat Macros. Bob Holtzman sent me some material on macros that he obtained from Microsoft to share with all WAP Excel users. Some of the routines are more interesting for what they teach than for what they do. This month, we'll take a look at a mailing list routine which takes a rectangular selection (in this example located in cells A1:C3) and transforms it into a mailing list, appearing vertically down the spreadsheet, here in column A. To make a copy of the selected rows appear in a column of labels, you begin by selecting the rows you desire and then running the Macro.

	A	B	C
1	Fred Jones	1234 5th St.	Washington, DC
2	Sally Smith	5678 99th St	Rockville, MD
3	Bob Brown	2233 Park Ave.	New York, NY
4			
5	Fred Jones		
6	1234 5th St.		
7	Washington, DC		
8			
9	Sally Smith		
10	5678 99th St		
11	Rockville, MD		
12			
13	Bob Brown		
14	2233 Park Ave.		
15	New York, NY		
16			

Let's go through the listing one line at a time. The last line of the Macro contains the only reference to a cell position within it, indicating that the macro must be entered beginning in cell A1. Type in the macro, select cell A2 and issue a define name command, using a descriptive name like "mailing label". Enter the three lines shown above shown in (A1:C3). You now are ready to try out the macro. In the next few paragraphs you will see the expression "data base". It is not necessary to "create" an Excel data base to use the Mailing Labels macro.

A1 MAILING LABELS

A2 =SET.NAME("row",ROWS(SELECTION()))
 A3 =SET.NAME("col",COLUMNS(SELECTION()))
 A4 =SET.NAME("counter",0)

A5 =SELECT(OFFSET(ACTIVE.CELL(),0,0):
 (OFFSET(ACTIVE.CELL(),0,col-1)))
 A6 =DEFINE.NAME("temp",SELECTION())
 A7 =SELECT(OFFSET(ACTIVE.CELL(),
 counter*col+1+row,0):OFFSET(ACTIVE.CELL(),
 counter*col+col+row,0),OFFSET(ACTIVE.CELL(),
 counter*col+1+row,0))
 A8 =FORMULA.ARRAY("=TRANSPOSE(temp)")
 A9 =COPY()
 A10 =PASTE.SPECIAL(3,1)
 A11 =SELECT(OFFSET(ACTIVE.CELL(),
 -row-counter*col,0): OFFSET(ACTIVE.CELL(),
 -row-counter*col, col-1), OFFSET(ACTIVE.CELL(),
 -row-counter*col,0))
 A12 =SET.NAME("counter",counter+1)
 A13 =IF(counter=row,RETURN(),GOTO(A6))

The first three commands SET.NAME's create three variables, "row", "col" and "counter" referred to later in the macro. "Row" contains the number of rows in your selected data base and "col" contains a count of columns. "Counter" is set to one and will be increased by one after each "mailing label" is created. In cell A5, the first row of your data is selected.

The SELECT command contains two arguments, the first indicating the upper left hand corner of the area to be selected and the second identifying the lower right hand corner. The selected corners are described using OFFSET which contains three arguments. OFFSET's first argument is an area and the next two describe a row and column displacement from the top left of the area. OFFSET results in a reference of the same size as the area listed as its first argument (here ACTIVE.CELL()). Since the first displacements are "0,0", the upper left hand corner of the area being selected is the current active cell. The displacement for the lower right hand corner are "0,col-1", indicating the same row as the ACTIVE.CELL, but "col-1" columns to the right of it. Remember that "col" contains the number of columns, here three, in the selected area of your database. The results of all this is to SELECT the first row of the database. The name "temp" is given to this selection.

The effect of cells A7 (&A11) are the toughest to appreciate but now that we see what SELECT and OFFSET do, maybe it won't be so bad! A7 selects an area located under the leftmost column of the data base. The upper left corner of the area in which the next mailing label will appear is offset from the current record (now the first row of the data base) by "counter*col+1+row". Since "counter" is currently zero and "row" in our example is three, we are talking about a position four rows below the start of the data base (0*3+1+3). As counter is increased for each mailing label (in A12), the start position of the next label will move down by the number of entries (i.e. columns) in the label. Well that certainly makes sense! The bottom right corner where the label goes is in the same column but "col" rows lower, that is, "counter*col+col+row".

Cell A8 says to "TRANSPOSE" the active selection (still the first row of the data base). Transpose means to "flip around" the meaning of the rows and columns. Something which is one row high by three columns wide, becomes three

contd. on pg 63



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 on 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 at (301) 845-2651 for details.

Upcoming Programs

April 10 - Program to be announced
 May 8 - Program to be announced

SIG MAC Upcoming Programs

April 22 - LaserWriter Printer
 May 27 - Macintosh Plus

INSIDE "MACINTOSH, LASERWRITER AND APPLETALK"

by Lynn R. Trusal and Peter Markiewicz (Frederick Apple Core)

For the sum of \$75 each, Apple Computer (467 Saratoga Ave, Suite 621, San Jose, CA, 408-988-6009) will send you either Inside Laserwriter or Inside AppleTalk. Both come in loose leaf binders with Apple logos and two 3.5 inch Macintosh diskettes. Inside Macintosh is only \$20 and is available from the same address in the form of a large telephone book. We will briefly discuss what is contained in each manual and why anyone interested in Macintosh might want to order them.

INSIDE APPLETALK

Inside AppleTalk is a 2 inch thick manual with unnumbered pages, which reflects its overall disorganization. It has no table of contents but is divided into 14 sections that include the following: introduction to AppleBus, electrical and mechanical specifications, link access protocol, protocol architecture introduction, datagram delivery protocol, routine table maintenance protocol, name binding protocol, transaction protocol, data stream protocol, programmer's guide, Appletalk installer, AppleTalk poke, and AppleTalk peek.

The included disks contain the install, peek, and poke routines.

Anyone familiar with Apple documentation would be severely disappointed in Inside AppleTalk. It is neither well organized nor professionally done. Some pages are duplicates and others are almost illegible because of the wide variety of devices used to prepare the documentation. The manual is designed to cover the electrical, mechanical, and procedural specifications for the AppleTalk Local Area Network (LAN). There are technical specifications for AppleBus (I don't believe this term is used anymore) including hardware, software, and protocols. As a user who was trying to find out more information on AppleTalk in order to set up a Macintosh LAN, I did find some of the electrical specifications very useful. There are additional LAN installation instructions in a small manual included with each AppleTalk Connector Kit but not as part of "Inside AppleTalk." The small manual supplied with each connector kit was most helpful because it covered the overall do's and don't's of hooking Macintoshes and other devices to the network. Installation of an AppleTalk LAN will be the subject of a future article.

The AppleTalk installer program allows the user to modify the AppleTalk resources in the System resource file of

contd.

any disk volume, while the AppleTalk Poke is used by AppleTalk developers to test their protocol software/hardware implementations for AppleTalk products. Finally, the AppleTalk Peek program is a network tool used to monitor packet traffic on a single AppleTalk network.

My overall impression is that unless you are technically minded or in charge of setting up a Macintosh AppleTalk Network, you would have little need for Inside AppleTalk.

INSIDE LASERWRITER

In contrast to the previous manual, Inside LaserWriter is much more up to Apple documentation standards. It is a large manual, about the size of a large phone book, consisting of 10 Appendices. These include: the postscript language manual, the postscript cookbook, the Adobe font manual, the advanced users supplement, the AppleTalk printer access protocol, programming and debugging aids, example of LaserWriter output, the Macintosh print manager, using MacTerminal to talk directly to the postscript computer in LaserWriter, and postscript file structuring conventions. The manual is designed to give the user information they will need to develop their own Macintosh applications which take advantage of the unique features of the LaserWriter printer. Apple is quick to point out that the manual is not complete and the final version will be sent when it is completed, although no date is given. This proposed final version will have 4 additional chapters dealing with development of Macintosh or PC applications so that applications will print successfully on the LaserWriter.

Also included are two 3.5 inch disks. One contains programming and debugging aids and the other screen fonts which are resident in the LaserWriter's ROM's. The manual does not give technical specifications including setup and maintenance on the mechanical parts of the LaserWriter. Once again, if you only plan on using the LaserWriter connected to one Macintosh or a LAN, you probably do not need Inside LaserWriter.

INSIDE MACINTOSH

If you want to program the Macintosh in a language other

than MS-Basic, you will need the information in this massive volume. Inside Macintosh describes the 600 or so ROM routines of the Mac Toolbox used to create graphics, controls, windows, menus, and allow programs to respond to the mouse and other "user driven" events. The ROM programs are divided into 25 groups, one per chapter, called "managers." In the "Window Manager", for example, routines that create, move, and dispose of windows are listed, along with the information they require from the programmer. To use the routines, it is necessary to have a programming language like Pascal, or 68000 machine language. The text of Inside Macintosh is very difficult to read due to poor indexing, and the fact that most ROM routines require other routines to be invoked at the same time in order to function properly. Those already familiar with a language like "C" or Pascal will still require a few months to learn effective use of the ROM. The "promotional edition" of Inside Macintosh, printed on telephone-book paper (and just as thick) costs \$20, and can be ordered from: Apple Computer, Inc., 467 Saratoga Avenue, Suite 621, San Jose, CA 95129, (408) 988-6009. An updated version of the above is being published by Addison-Wesley, in three volumes. It will be considerably more expensive than the "phone book" version.

Several other books detailing the Mac ROM are now available, and although they are expensive, they are also better organized:

Macintosh Revealed (Chernicoff), two volumes, Hayden Book Company, 1985 (Pascal orientation, but useful to everyone).

Using the Macintosh Toolbox with C (Takatsuka, Huxam, Burnard), one volume, Sybex, 1986 (Many good programming examples in C).

I also recommend subscribing to MacTutor, a monthly magazine detailing use of the Toolbox for virtually all programming languages available for the Mac. Even MS-Basic 2.0 users will find much valuable information here. Source code on disk for the programs is also available. MacTutor (\$30 per year, check only), PO Box 846, Placentia, CA 9267, (714) 993-9939. ☺

Excel'ing contd. from pg 61

rows high by one column wide. TRANSPOSE can be used to do some very powerful things, but that is for another day... This transposing doesn't actually happen on the worksheet. In A9 & A10, the transposed record is copied to the clipboard and then pasted "special" back to the three high area below the data base. PASTE.SPECIAL(3,1) says to paste only the values, with no "operation" being performed on the data. If you have done a PASTE.SPECIAL, you have seen two sets of radio buttons*. The first set allows for pasting "all, formulas, values or formats". The third selection is values, hence the "three" as the first argument of PASTE.SPECIAL. The second set of buttons lets you paste and either make no change or add, subtract, multiply or divide by a constant. The "one" as the second argument of PASTE.SPECIAL says paste as is.

We now have the first record copied below the data base. A11 undoes what A7 did, making a selection of the second row of the data base. A12 increases "counter" by one and A13 checks to see if we have reached the last row of the data base. If so, we are done, otherwise, we loop back to the line which defines "temp" as the current selection and we repeat the process. Pretty slick, don't you think? The macro capability of Excel is incredibly powerful. There is plenty to discuss in upcoming columns.

* Ed. note. Yes, you read right, David has perpetuated an expression which he originally heard being used by Rich Norling and Jim Rafferty. The radio buttons pertain to the little circles you see in choice boxes. Old word for new technology! ☺

A DEVELOPER'S VIEW OF MACFEST

by Jim Lanford

(Jim Lanford is the author of MacLabeler and architect of DigiBase, another software product for the Macintosh. Jim is president of Micro Dynamics, Ltd., a D.C.-based consulting firm specializing in Mac software and training.)

When a Macintosh Developer attends a computer show, he will have a different point of view than the average Macintosh user. Although I am sure that I missed some things, here are some of the products which excited me the most.

Most Waited for Hardware Product: Macintosh Plus

By now you have probably read about the MacPlus, and perhaps have upgraded your Mac with either the ROM's and double-sided drive, or gone all the way with the logic board swap. Here is what I found significant (I am typing this in my hotel room on my new Macintosh Plus):

- The ROM now contains many routines which used to be in the system file and loaded into RAM. This saves space on the disk and in RAM. For example, the new ROM includes AppleTalk and the floating point routines.
- Many of the ROM routines such as the resource manager have been speeded up. Most of the bugs have been fixed.
- The double-sided, 800K disk drive is faster than the original 400K drive.
- The Finder now has a four level RAM cache which is set from the control panel desk accessory. This routine will try to cache fonts, resources, the floppy disk, and then other things in RAM.
- The SCSI interface, which is very important to me, can be thought of as a high speed parallel input/output port. If the Mac had had a SCSI interface last January, I could have done the Spartan 1 ground station on a Mac! (For those of you who do not follow the Space Shuttle Program, Spartan 1 flew last July.) The software was developed on a Macintosh and ported to an industrial 68000-based computer. However, I still want slots. There is a rumor that slots will be available in a future product.
- The Macintosh Plus will boot from floppy, the HD-20, or any device on the SCSI port. There were some \$799 10-Meg hard disks hooked into the SCSI at the show. Also, since the Tecmar hard disk has a standard Xebec SASI controller in it, a friend of mine claims that the two standards are "close enough" so that with only cables, connectors and a format routine, we should be able to attach a Tecmar to the Mac Plus. Another friend at Tecmar told me that he tried this with a Western Digital controller and it did not work. So we shall see.

Fastest Hardware Product: Levco MacSuper 20 FP

This had to be the hottest hardware add-on at the show! The Levco MacSuper 20 FP has the Motorola 68020 and 68881 both running at 16 MHz clock speed, 4 Meg of RAM using a 32 bit-wide data path in a board which fits inside the Mac. For those readers who did not understand the last sentence let me translate: it is FAST! It also shows us that Mac software does run on the 68020. Future Apple products

will probably use this super fast microprocessor. In the meantime, those of us who need fast number crunching have a Mac-based solution. (A 12.5 MHz 68020/68881 based computer used at Berkeley did floating point operations as fast as a Vax 780.) When I saw the demonstration, Andy Hertzfeld, Berl Smith, and John (Captain Crunch) Draper were eyeing this product and suggesting ways to make it go even faster!

Hottest Software Product: MacLightning

As I am typing this article, a spelling checker called MacLightning is checking my spelling. It is a desk accessory that works in the background while you type in most ANY Macintosh program. If you make a mistake, you just type CMD1 and a dictionary window appears, so you can click on the right word (it tries to find the closest word to it), browse through the dictionary, or add the word you typed to the add list. If you want to make a correction, type CMD 2 and the program will paste the corrected word in for you. You can also have MacLightning check an entire document or a selected area of text.

I have found some bugs in MacLightning. For example, about once a week when using MacLightning, I have had the Mac lock up and freeze. (Ed. Note: Zap, maybe?) Because I save my work "early and often", it has not been too bad. However, you might want to wait for the next release of MacLightning if putting up with early bugs is not worth the benefit of having real-time spelling checking. Cost: \$100 (but a software house at the fair was selling it for \$66).

Product with the Most Potential: Cauzin Softstrip Reader

This is a fun and useful hardware accessory for Mac, Apple // and (gasp) IBM computers. It allows you to enter listings into your computer using a special bar-code-like "softstrip" from the printed page! I talked the Cauzin people into selling me an Apple // version Reader with a Mac cable and a beta version of the Mac software. They also gave me a stack of sample listings that included brochures and even a magazine with Mac software in softstrip format.

Cauzin knows it will take a while for this technology to catch on, and they are in it for the long haul. The Softstrip Reader retails for \$200.00, but I assume WAP could arrange a group buy. Perhaps four or five members who see each other once a week could even buy one together to share the cost and rotate using it.

Cauzin promises a program which will allow anyone to print their own strips to an Imagewriter. Then it would be great if the WAP Journal would run some listings and their index each month using softstrips. When this catches on, the disk libraries could be distributed on paper (much cheaper to duplicate than disks) for those who have the Reader and want to save the money.

contd.

Misleading Advertising: Mach1

I purchased Mach1 FORTH from Palo Alto Shipping Co. As a MacFORTH Level 3 developer, I wanted to see what all the fuss was about. First the good news: it does easily support Multi-window Multi-tasking. Mach1 is also currently faster than MacFORTH. However, MacFORTH easily does its multi-tasking in the same window as multiple background tasks. Mach1 gets its speed by using subroutine-threading, but the penalty for this is that your code is in 32K segments. Although Palo Alto Shipping Co. claims that Apple insists on this since MicroSoft does not do it in Word or Excel, it is probably just more marketing hype from the Mach1 people. Also, I have seen the next MacFORTH kernel, and it runs as fast, if not faster, than Mach1 without the 32K limitation.

The only other unique feature, and the reason I bought a copy of Mach1, is the use of standard Motorola 68000 assembler. When Apple sends me some assembler source code, I prefer not to convert it to post fix assembler. (However, many FORTH programmers I know consider a standard pre-fix assembler a limitation.) Mach1 would be worth the price if it did not keep crashing on the Macintosh Plus and Finder 5.1.

Everything else that is claimed to be unique about Mach1 is in MacFORTH and some features have been working since April 1984! The list includes normal text files (called stream input in MacFORTH), local variables, floating-point, vectored I/O, AppleTalk, MacinTalk, templates, and toolbox access. MacFORTH is a mature language and supports much more than the above list. Some MacFORTH programmers may not know how to perform some of the above functions and so may think that MacFORTH cannot do them. Examples of all of these functions are available from the MacFORTH users group, the MacFORTH CompuServe sig (GO FORTH at the ! prompt), and some are on WAP disks.

When you see a demo of Mach1, note that it is on a Mac with 1 Meg of RAM, running a RAM disk and Switcher. MacFORTH works under the same conditions, but a smart programmer does not do development work under those conditions. It is too easy to lose your work. The MacPlus, with its write-through cache, is fast and safe. MacFORTH has been out for two years and has been updated four times during that period. Most of the software development tools for it are mature and debugged. Until the Palo Alto Shipping Co. gets Mach1 running on the Macintosh Plus, I'll continue to use Apple's MDS assembler package and link the object code into my MacFORTH programs (a relatively straightforward procedure).

Brief Impressions of Other Products

We have been looking for a reasonably priced disk-based database manager to do what OverVUE 2.0 was not designed to do. Interlace by Singular Software seems to fit the bill. List price is \$150, show special \$95. Will let you know what I think after we beat it up.

I finally picked up Pinball Construction Set and Deluxe Music Construction Set after seeing them demonstrated by Electronic Arts. You have probably already read reviews, so I'll just say that they are both great. The pinball flippers had a slower response on the MacPlus until Finder 5.1 Installer was run on the disk. After that, the response was the same as on the 512K Mac. ☺

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REVIEW CORNER



by James M. Burger

Overview 2.0d

My hardest software selection decision has been the selection of a database program. BMac (Before Macintosh) I tried several databases on my][+. Either they were far too complex, requiring megahours to learn, or not powerful enough to meet my needs. I needed a database program which could act as a rolodex for client names, addresses and telephone numbers, and the file should also be usable for far more powerful applications--keeping track of dockets, mail merge, important personal dates, etc.

When I took the plunge and purchased one of the first Lisas, I had to manage with LisaList. As its name implies, the program was not a true database but a list manager. To its credit, it had the original version of the Macintosh interface. Thus, it was truly easy to learn. But, it had little power and was not relational.

The difficulty I have had with Macintosh database programs is not their lack of power. Rather, it has been their proliferation. I have not tried all the available database programs. But I have tried several, including FileVision, File-Maker, and Microsoft File. There are some more powerful ones that I have not had a chance to review (but see David Morganstein's review of Omnis 3 in this issue).

Recently, I began to use OverVUE. Deceptively simple in structure (and therefore, easy to learn), OverVUE is a very powerful relational database with macros, charting, mail merge and many other useful features. Moreover, release 2.0d is not copy protected, therefore easy to install on the disk and does not require use of a "key disk." It also works with HFS.

Ease of Learning. OverVUE opens up to a spreadsheet-like data entry and presentation format. See Illustration 1. I find the spreadsheet-like format the best method of data presentation. This is a personal choice. But, OverVUE also toggles to an individual record (file card-like) format. Merely, click in the lower right-hand corner where the "Zoom Box" replaces the window sizing handle. This is a deviation from the "Standard Mac Interface". While this one is acceptable, there were some others I found annoying. For example, a screen size index card is displayed where the fields of the individual record appear, instead of the spreadsheet format (see Illustration 2).

NAME	WORK TEL. NO.	HOME TEL. NO.	ADDRESS
LEINER, IRA	(301) 555-3919	(301) 555-3919	8110 BUCKINGHAM PARKWAY DRIVE
MCINTYRE, ALBERT	(305) 555-0220	(305) 555-6500	ASSOC. GEN. COUNCIL, 441 72
MELLER, JERRY	(314) 555-8541		NORTHERN AIR LINES
MILLS, AL	(808) 555-6729	(808) 555-8943	SEE HAWAII AIRLINES 800 38
MESLER, JOHN	(202) 555-0406		FRA, NOISE
MESTIN FITNESS CENTER	(202) 555-4104		BETSY, MR. SCHNEIDER 46
WHITE, MARY	(607) 555-0608		
MILDORF, PRESTON	(414) 555-3123		AIR WISCONSIN
MILKSON, LEON	(312) 555-4407		UNITED AIRLINES, MANAGER 1
MILNER, JOHN B.	(517) 555-7800	(615) 555-1040	(FRA)
MISHNER, JERRY	(202) 555-0212	(703) 555-7769	(WIFE - JANE) (SEC. NINA)
MIZOH, JERRY	(215) 555-8290		SEE ALTAIR
WOODWARD, JEANNE	(312) 555-5338		SEE UNITED AIR LINES
WORLD AIRWAYS	(000) 555-7155		
WRIGHT, DICK	(800) 555-0048		
WYBARA, SHIRLEY	(202) 555-9011		403 SOUTH HENRIAD STREET
YORK, BRUCE A.	(202) 555-4280		AIR LINE PILOTS ASSOCIATION

Illustration 1 - Spreadsheet Format

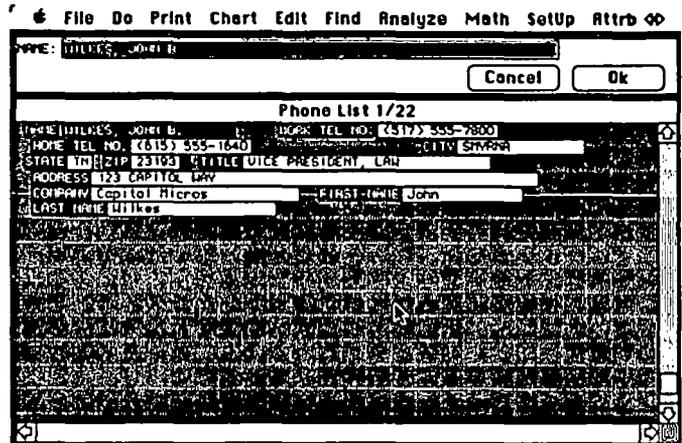


Illustration 2 - Zoom to Individual Record

Creating columns for a file is extremely easy. You pull down the Setup File and choose New Column (or Command k). You then name the column and set the display width (fields can contain up to 62 characters, but you can vary how much is displayed). The Attributes menu allows a number of formatting options for inputs including: variations in text type (any text, alphabetic, alphanumeric, numeric, money, date, time, phone or yes/no), right flush (as opposed to the default, left flush), word caps, all caps, no duplicates (to prevent superfluous identical entries), identical (where one field will always be the same), clairvoyance (where the program searches earlier entries as you type and guesses the entry), space tab and two space tab (to allow moving between fields easily). Also other options help ease entry. You can format an input pattern - this is extremely useful for things like telephone number. The parenthesis, space and dash can be automatic permitting you to just type the numbers. Also, you can create a "value bar" with radio buttons for common entries in the "edit box." In Illustration 3, I have created three choices for entry - the three surrounding jurisdictions.

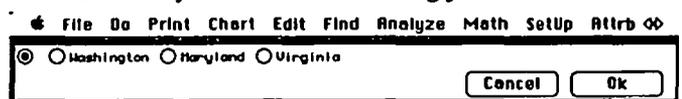


Illustration 3 - Edit Box with a Value Bar

Like many of the options, you can override the choices and enter what you want. With all these options, creating the file and entering data is quite easy. Three commands let you rapidly fill cells with repetitive data: Fill, Empty Fill and Sequence which allow you to replace a column's entry with any user defined entry. Empty Fill does the same in only empty fields of the column. Sequence lets you to use step values (i.e. 1, 2, 3, and so on) in a column. The Propagate command permits you to fill empty cells with the contents of the cell above. This can be a time saver. Unpropagate will eliminate duplicate information.

Creating summary records is almost too easy. But, they contd.

can be easily deleted in one operation. Charts can be easily created and up to six user defined formats can be established. You can pre-program (using the notepad desk accessory) 20 macros. These are placed on the Do menu. Thus, repetitive operations can be automated. For printing, you can create up to eight report templates. These are placed on the print menu. Font choices, however, are not available. You have only six font sizes (Pica, Elite, Semicondensed, Condensed, Ultracondensed and Default).

There are several areas which I would like to see improved in a subsequent version of OverVUE. When you first open OverVUE it defaults to a blank sheet asking you to click "Cancel" or "Ok" in the command box. This can be disconcerting. I would prefer an open file dialogue box (a nice feature in that box would be a command to create a new file) as the first screen upon opening the application.

A pet desire of mine is "standardization" of alternative command keys. A well taken criticism by IBM-types is the "need to remove your hands from the keyboard to use the mouse." Many mouse driven operations are great substitutes for a series of key strokes (such as moving large sections of text in a word processor, or choosing printer options, etc.). On the other hand, small cursor movements or other operations are faster with key commands. One excellent feature of the Macintosh interface are the menus which have alternative key commands. They act as a tutorial until the user is comfortable with the command key alternatives.

While there are no standards, I have found that the early Apple applications (MacWrite, Paint, Draw) as enhanced by Microsoft's Excel provide an excellent base of standard commands. (Remember, one of the great advantages of the "standard Mac interface" is to make switching from program to program easier.) Thus, for example, Command-z should always mean "undo." (This is a good example, because it is one of the most often accidentally typed entries and does the least harm.) On OverVUE, Command-z will slide the active column of fields up one record. If, as I have done on many occasions, you inadvertently hit Command-z, your file becomes quite mixed up. Fortunately, the revert to saved command will save the day if you notice the error before you save the file. Speaking of saving, Command-s will not save the file, but will "select" the current field and activate the edit box. When I have a chance, I will probably use the ResEdit program from Apple to change OverVUE's key command alternatives.

Another minor but irritating problem is that while OverVUE takes advantage of the spreadsheet format you cannot edit on the spreadsheet. Editing can be done only in the edit box. Also a minor irritant, the edit menu features are inactive in the Zoom mode for individual records. While individual records can be conveniently edited in the Zoom mode, toggling back and forth when editing several noncontiguous records is not ideal (especially without a key command for zoom). Also, although not relevant for MacUsers, OverVUE will not take advantage of the larger XLisa screen.

Finally, changing column sizes is an unnecessarily cumbersome operation. The best interface is the mouse driven Microsoft Excel method of "spreading" columns, with the alternative of changing several columns at once through the menu. This feature would definitely improve OverVUE.

Performance. Many of OverVUE's features, such as sort and find, are much faster than other databases I have used. This is because it loads the entire database file into RAM. A disadvantage for 512K users (or those of us with more memory but who use Switcher extensively), is the limitation on the size of a file. Under the Apple menu, About OverVUE... gives a complete summary of the amount of memory available. On 384K of RAM (my allocation on Switcher) 402 records on my "Phone List" file uses 23.5 percent of available memory.

Moving information from other databases into OverVUE works quite smoothly. Despite the lack of information from Apple on migrating from LisaList, the "Import" feature of OverVUE transferred my entire list from Lisa easily and without a flaw. I used the Lisa Migration program to create text files (which resulted in an ASCII file). The default Import settings created an OverVUE database which only required me to name the columns. Also, I "imported" a large Filemaker file without any problems--again, just requiring column names.

OverVUE is a relational database. Thus, you are able to join two files. While not as easy to use as other features, it is powerful and a welcome feature. It is somewhat complicated by the need to create a separate "join file" which requires the use of a word processor. The MockWrite desk accessory speeds the operation. Also, once joined, if you update information in one of the earlier files you must change it in the new file that relies on the other manually. A truly relational file structure, such as that established between dependent spreadsheet in Excel, would be welcome. But, the powerful Macro feature helps simply this task.

The reports feature, as noted above, permits the storage -as menu items--of up to eight report forms. But, you have no font choices. The report forms are easy to create. The mouse allows easy placement of fields, page numbers, dates, etc. The lack of a preview feature, however, forces you to use the trial and error method of formatting your document. This is another feature I would like to see on an enhanced version. Also, you are limited to 150 characters in landscape mode, even using the wide-carriage Imagewriter or the Laser. So far that hasn't been a problem, but I can envision databases where this would be a limitation.

Support and Documentation. Support from ProVUE has been outstanding. Their support people are extremely pleasant and anxious to help. In fact, because of limitations in the XLisa Migration, I could not transfer an entire LisaList file. The ProVUE customer service people worked up a solution and called back the same day.

The manual is one of the best for any Macintosh product. I particularly like their introduction, which lists the standard Macintosh functions (like turning on the machine, clicking on icons, scroll bars, etc.). The manual then says if you are unfamiliar with any of them, please see the Macintosh manual or take the guided tour. The manual is liberally sprinkled with helpful screen shots and easy to understand instructions.

Conclusion. OverVUE 2.0d is an excellent database which I recommend for medium-size databases (unless you have 1 meg. or greater and do not use OverVUE in conjunction with Switcher). It is easy to learn and easy to use. While I have a number of relatively minor complaints, they

contd. on pg 69

TML PASCAL: A Review

by Robert C. Platt

In the February WAP Journal, I reviewed the different Pascal implementations available on the Apple // and Macintosh. One new Pascal from TML Systems promised to be compatible with both Lisa Pascal and Apple's MacPascal. At present, TML Pascal is the only implementation of Lisa Pascal that allows programming on the Mac without also requiring the use of a Lisa/MacXL. TML requires either a 512K Mac or MacXL.

TML offers "MacLanguage Series Pascal" for a list price of \$99, although it has been available from a WAP group purchase for substantially less. It supports a full implementation of the ISO Standard Pascal including all calls to the Mac's ROMs.

Unlike the other Pascals on the Mac, TML produces 68000 machine language "native code" rather than using an interpreter to execute the program. This results in much faster program execution, but adds the step of compiling the program each time that it is modified. The result is a stand-alone application (or desk accessory) that can be executed directly from the finder without a separate "runtime" file to help execute your program. Unlike other Pascals, TML will not allow a program to be divided up into separately compiled units.

What you get

Despite TML being a small operation, it has produced a very professional package. The manual is excellent, although it lacks an index. The system comes with two disks, which are not copy-protected. The first disk includes the TML Compiler, the same Editor program and Linker program that were written for the Consulair C package, Apple's Resource Compiler (RMaker), and Apple's Font/DA Mover.

The second disk contains a Macintosh interface library and various runtime routines to be linked into your finished program. Because TML conforms to most Lisa Pascal specifications, you can use *Inside Macintosh* and *Macintosh Revealed* without translation when accessing the Mac's system and ROMs.

Additional library routines support: (1) 3-dimensional QuickDraw Graphics, (2) AppleTalk, (3) the Printing Manager for both the ImageWriter and LaserWriter, and (4) the "Macin-Talk" speech synthesizer routine that speaks text through the built-in sound port. The library also supports the standard Pascal built-in string and input/output procedures. Because units are not supported, you must manually include interface information from the library in your program. Machine language routines are then automatically linked to your program before execution. As a result, an application that uses a variety of system ROM routines will add about 2 minutes to every compile to process the 'library include' commands.

Besides the library, the second disk has 130K worth of sample programs, ranging from a binary tree sort, to the classic "Grow" window and text edit sample application. Sample desk accessories, graphics programs, window and menu applications are also included.

Although TML Pascal routines are compatible with and can link to Apple's MDS Assembler, no assembler is included

with the package.

Oh, is it fast!

On the whole, TML is faster than MacAdvantage. First, each program includes a Transfer menu item that permits you to transfer to the next utility (e.g. Compiler to Linker) without returning to the desktop. This is faster than MacAdvantage's "Executive." Although I have not completed benchmarks, programs appear to execute faster too.

The compiler's user interface is well-designed. One nice feature is that in addition to displaying error messages on the screen, they are saved in a separate file for later listing and printing by the editor. The compiler can produce a binary file for the linker or can generate assembly language source for use with the MDS Assembler. The compiler also has a faster "Syntax Error Checking" mode. However, this mode does not check for semantic errors such as procedure parameter type mismatches. On the whole, compiler error messages are helpful. The compiler directives allow you to segment your program to fit into the Mac memory and to include useful information for the linker. The compiler generates both an object code file (.rel) and a set of linker commands (.link) to make the linker extremely easy to use.

Negative points

A significant problem is TML's implementation of *read* and *readLn* from the keyboard. *ReadLn* will not recognize backspaces or any other error correction keys. In fact, both *read* and *readLn* refuse to recognize that the command key has been pressed. They input the character value for the normal character. (That is command-C is read as a C.) Option keys work correctly as do enter and return keys. The backspace key does not read an ASCII value at all. Thus, you will have to write your own read routines before you can port a program from a different Pascal implementation.

The system worked on the sample programs as promised. But I was very surprised by the semantic errors that suddenly appeared when I shifted from Syntax checking to a real compile! Also, if a program has more than 32 errors, compilation terminates, and the error message listing file is not saved (and has already scrolled off the screen.) I have also bombed the linker repeatedly with System Error 02.

The biggest drawback is the lack of units. The Mac system calls are divided into six libraries, but an entire library must be digested into the symbol table even if only one item is used. (MacAdvantage's 'selective uses' feature is better in this respect by keeping down the size of the symbol table.) This means that if your program accidentally uses an identifier that also appears in one of the included libraries, you will get an "Identifier declared twice" error message. As with MacAdvantage, you can work around this problem by selectively pasting declarations from the library files into your source program and linking in external routines with the {\$U} directive.

It is important to note that although TML is extremely close to both Lisa Pascal and MacPascal, it is not fully compatible. Some conversion is necessary. (That is the subject

contd.

of next month's column.)

One severe implementation restriction is that sets can only have 32 possible members! Thus many existing programs that use *set of char* will not run under TML.

How good is it?

A big factor in judging a native code compiler is the quality of the machine language produced. A few tests indicate that although TML is not as efficient as some, it does a reasonable job. To test this, I used the Generate Assembly option in the compiler to see how TML treated case statements and nested ifs. Here is what it produced: (You can read the Pascal source program from the lines that begin with double ;; comments.)

```

                string_format 0
;; Program NestedIf(input,output);
;; {test Nested if statement}
;; var i,j : integer;

input          xdef          input
               ds.b          14
               xdef          output
output         ds.b          14
               xdef          PAS$Xfer
PAS$Xfer       jmp          nestedif
;; begin

               xdef          i
i              ds.b          2
               xdef          j
j              ds.b          2
               xdef          nestedif
nestedif       link          A6,#0
               jsr          PAS$InitMacEnv
               pea          il2
               pea          input(A5)
               pea          output(A5)
               jsr          PAS$CreatePWnd
;; if i=1 then j:=1
               cmpi.w       #1,i(A5)
               bne.w        il4
;; else if i=2 then j:=2
               move.w       #1,j(A5)
               jmp          il5
il4            cmpi.w       #2,i(A5)
               bne.w        il6
;; else if i=26 then j:=26
               move.w       #2,j(A5)
               jmp          il7
il6            cmpi.w       #26,i(A5)
               bne.w        il8
;; else j:=0;
               move.w       #26,j(A5)
               jmp          il9
il8           clr.w         j(A5)
il9
il7
il5
;; i:=j
;; end.
               move.w       j(A5),i(A5)
               dc.w         $A9F4

```

```

il2           String_format 2
               dc.w         'nestedif'
               xref         PAS$InitMacEnv
               xref         PAS$CreatePWnd

```

The above listing shows the prolog and termination routines added by the compiler for a "plain vanilla" program that relies on TML to initialize a window, etc.

Unlike UCSD Pascal, TML does not generate a jump table to implement a case instruction. Thus, a series of *cmpi.w* and *beq.w* instructions are generated for each value listed in a case instruction.

TML holds great promise, but additional work needs to be done. In my next column, I will cover conversion between TML and MacPascal. After that we will tackle conversion between TML and MacAdvantage. ☺

Review Corner contd. from pg 67

are more in the nature of improvements for the next version. None of them are significant enough to prevent me from recommending the product.

AFTERWORDS

The product list is short this month. Last month's was incredibly long. I guess the AppleWorld conference sparked a spate of new announcements.

I had intended to have a review of Tempo. But version 1.0 will not work properly on HFS. I just received word from Affinity that version 1.1 should be out shortly and will work on HFS. I will keep you posted.

New Products:



SOFTWARE -

HealthCare Communications, 245 So. 84th St., Suite 301, Lincoln, NE 68510. **MacHealth Series: DentalMac.** \$3500. **OpticMac.** \$3500. Practice management, insurance and patient processing, statement processing, patient recall and tracking, has full merge capability with Microsoft Word and Microsoft File.

Rubicon Publishing, 6300 La Calma Drive, Austin, Texas 78752. **Dinner At Eight.** \$59.95. Chefs of the Nation's finest restaurants offer this collection of their favorite recipes, step-by-step--from shopping list to wine list recommendations. Additional data disk available: **The Silver Plate Collection.** \$ 49.95. Enhance your Dinner at Eight program with these recipes from the renown Silver Plate Cookbook by Julee Rosso and Shelia Lukins.

Summit Systems, Inc., P.O. Box 91, 1050 Turnpike Street, Stoughton, MA 02072. **Payroll: dbsPay.** \$275. Payroll and personnel system that utilizes the Macintosh interface. **dbsForm.** Payroll forms package that permits the creation of personalized design for checks, statements, payslips, etc. ☺

ACCOUNTING ON THE MACINTOSH: Part 1

by Ed Myerson

This is the first of two articles reviewing accounting packages for the Macintosh. It was to have been the first of one. Material for the reviews was received from:

- Chang Labs - The General Ledger and Receivables modules of Rags to Riches,
- Sierra On-Line - The Cash Disbursements module of MacOneWrite,
- Future Design Software -The General Ledger module of Strictly Speaking, and
- Digital, Etc.- Maccountant

The packages were compared by these ordered criteria:
Integrity of data - including program characteristics and security

Performance - including statement availability, error handling and correction, capacity, departmentalization, and adherence to Macintosh characteristics

Ease of learning, including documentation

Ease of use

Vendor support

In order to make the comparisons I established on paper a business, Laura's Lovely Laces (LLL), and endowed it with a set of transactions typical of a small merchandising proprietorship. The transactions included:

Deposit of capital, receipts and disbursements against trade accounts, borrowing and repaying loans, transferring funds between accounts, and payroll including withholdings.

Recording liabilities from services provided, and from purchases of equipment, materials for resale, and supplies.

Cash and credit sales, with and without sales tax.

Recognizing inventory changes and depreciation.

The final step in the review process was to keep books for LLL using each of the packages and then to evaluate them against the criteria.

Of these packages, only Maccountant, which is reviewed below, integrates the General Ledger (the "main" books), Cash, Accounts Receivable, and Accounts Payable. The others rely, or will rely, on modules for each of these functions which link together to provide an accounting system.

I've discussed the lack of functional coverage with each of the other three vendors. Chang told me that they had released Accounts Payables and an Inventory/Sale Module, and had updated as of January the two modules noted above. They also sent me the whole package. I was impressed by the earlier Chang material and am looking forward to reviewing the integrated package. I will report to you next month on it.

Future Design has only released the Strictly Business General Ledger module, but they are sending me an update which I'll also review next month. They expect to release Accounts Payable and Receivable in "2-3 months". Job Cost, Inventory, Order entry, and Payroll modules are all anticipated for "1986" release. The structure of Strictly Business is very

sophisticated: 99 journals, profit centers, and departments are available - and it talks. How about "Read back that list please, Mac"!

To date Sierra On-Line has only released the Cash Disbursements module of MacOneWrite, which is reviewed below. They told me that they expect to release the General Ledger module "this month", but didn't tell me of any other plans.

Maccountant, from Digital, Etc., has had an undeserved bad press. The version which I first examined had some problems, but I have experienced no problems with the current release (V2.0). Vendor support has been excellent.

After entering the program, a display of icons, the Open Book Window, is available (Fig. 1) from which you can select the Company Folder to enter the name of your company, and if desired two passwords allowing either unrestricted access, or access limited to data entry and retrieval. The date defaults to the system clock, but may be reset easily.

Date	Vendor/Description	Ref	Account#	Expense Amount	Invoice Amount
01/02	Softco, Toomes, & O'Brien	12/16/85	6048	550.00	
	Advice re start-up/org/ST&O	12/16/85	2050/0005		550.00
01/01	Reed, Em, & Heep CPA's	12/13/85	6048	400.00	
	Set up accounts/REEM	12/13/85	2050/0004		400.00
01/01	Pencils & Pads/Desks&Chairs	6592	1431	3600.00	
	Pencils & Pads/Supplies	6592	6035	432.95	
	Furniture & Supplies/30,60H	6592	2050/0003		4052.95
01/08	1500yds Spanish# 5/Lots 0'	83992-9	1400/01	7500.00	
	1500yds Spanish# 5/5-10H30	83992-9	2050/0001		7500.00
01/07	1600yds Tidy #1/3/strung out	Au7156	1400/02	1600.00	
	1600yds Tidy #1/5-10H30	Au7156	2050/0002		1600.00
01/30	350yds Belgian#12/03 Lots 0'	500001	5000/01	4200.00	
	350yds Belgian#12/5-10H30	500001	2050/0001		4200.00

Figure 1

USE OF THE HELP WINDOW

- SETTING UP YOUR BOOKS
- DATING ENTRIES
- DEPARTMENTS WINDOW
- ENTERING NEW ACCOUNTS
- MAKING ENTRIES
- IS IT A DEBIT OR CREDIT?
- NEW DATA DISK
- NEW YEAR
- SPEED UP YOUR REPORTS
- Chocolate break

SETTING UP YOUR BOOKS

First - Click the Company Folder icon and enter the first month of your fiscal

Figure 2

Fig. 1 also shows the wide variety of reports that Maccountant can generate. These do not include a Statement of Changes in Financial Condition, but neither did any of the other three packages. The Functions pull-down menu by

contd.

which the date is changed also provides account balances. There is an on-screen help program with its own pull down menu. The user can add items to the help menu as Laura has done in Fig. 2.

All accounting entries in Maccountant are made from five pre-defined journals ("books" in which the entries are first written). Thus no balances can get into the records without first being entered in a journal. The journals are "Cash Receipts", "Cash Disbursements", "Sales/Accounts Receivable", "Purchases/Accounts Payable" (shown open with three others in the background in Fig. 3), and "Non Cash" (or General). Each bank account--up to five are accommodated--has its own Cash Receipts and Disbursements Journal. LLL has a checking account and an insured money market account and therefore a total of seven journals. Journals are opened with a single click from the Open Book Window. Several journals may be opened at the same time.

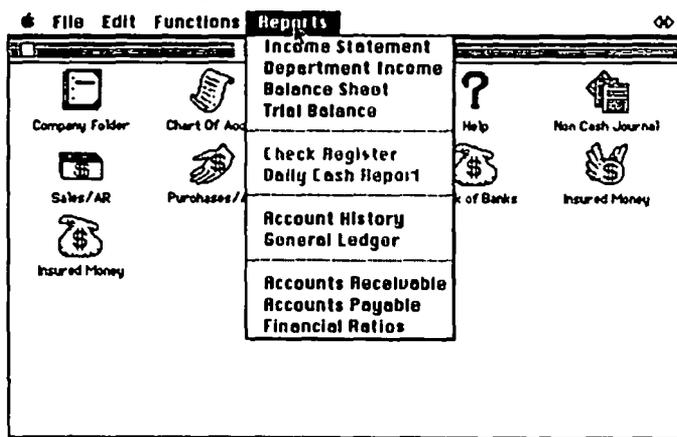


Figure 3

Because entries are made into Journals in much the same way that they are into a manually kept journal of the same type, the transition from manual books is non-traumatic, if not comfortable. Entry of the date in a journal signifies the start of each entry. Columns are available for description, reference, the account affected, (except for the cash journals where cash is always on one side of the transaction), and the amount.

The program will prompt with the amount necessary to complete recording transactions with multiple parts such as a payroll check with several deductions. Posting, that is, writing new journal entries into the principal account book, or General Ledger, is accomplished by closing the journal. The program will not let you close a journal if there is an entry with no amount, or one that doesn't balance. I consider this a positive feature of the program--others have criticized it as "rigidity". Correction of errors is done from the pull-down functions menu which offers restricted, easy to use choices appropriate to the journal and transaction to be corrected. Complete freedom to make correcting or other special entries such as recording depreciation, or reserve for uncollectable accounts is offered in the Noncash Journal. It would be useful if non critical data such as references and descriptions were correctable without re-entry (as is allowed in Rags to Riches).

Subsidiary accounts are well accommodated by the numbering system. Thus if accounts receivable is account 1050, then customer #1 is 1050/0001; customer #2 is 1050/0002,

etc. Accounts Payable are handled in the same way. Departmentalization of expenses is handled in similar fashion.

Capacity on a two drive or hard disk system is large enough to handle the needs of a small or medium business.

A serious (non-fatal) criticism I have is that the journal entry description areas, particularly for customers in the Sales Journal and for Vendors in the Purchases Journal is too small to include address and other needed information. I understand that Turbo Maccountant, a new product from Digital, provides screens for complete customer and vendor information, as well as payroll and other improvements and refinements. I'm anxious to get a look at it. If I get a review copy, I'll do a follow up review of it. Unfortunately it is not an upgrade from Maccountant, but a different product.

Learning to use Maccountant was made unnecessarily difficult by a very poor manual. It has been produced in a very difficult-to-read type face and is also incomplete, in that it does not tell the consequences of deviations from its procedure. For example, the manual instructs the user to make a new disk from a backup, but not that starting a new data disk trashes all data on the disk.

Maccountant is the only package reviewed which could export to Excel and Jazz. Export to a spreadsheet is very useful, for instance at budget or tax times. If gussied-up reports are desired, export to a text file is also available.

In a rating system of (E)xcellent, (G)ood, (A)cceptable, and (U)nacceptable, I rate Maccountant an overall G. For integrity an E, performance a G, ease of learning an A (the manual), ease of use a G, and Vendor support an E. Maccountant lists for \$150. The Software Specialist, Washington and Tyson's Corner, has agreed to sell any of the packages to Pi members at reduced prices. For Maccountant, that is \$114. Turbo Maccountant lists for \$495, and is available at The Software Specialist for \$369.

MacOneWrite is strictly a cash receipts and disbursements journal. It has little or no utility as a general accounting system except to small cash-basis businesses. The package is very easy to learn, and use and the documentation is good.

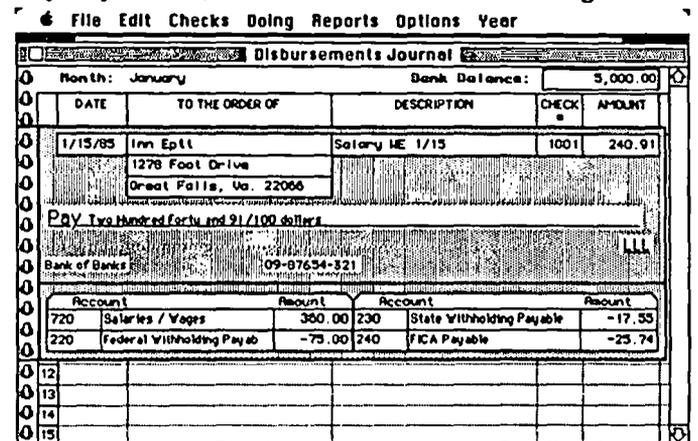


Figure 4

When the program is opened, a convincing representation of a One-write pegboard system fills the screen, check in place, ready for "one-writing" (Fig. 4). MacOneWrite presumes the use of computer printed checks, but does allow for hand written checks. With computer printed checks, it provides for

contd. on pg 58

WORKING WITH A 512K MAC AND A SINGLE DISK DRIVE

by Lloyd B. Swift

Believe it or not there are still some of us out here who have a 512K Mac but haven't gotten even an external disk drive, let alone a hard disk or a Macintosh Plus! If you are in that category, this article is for you. If you're not in that category, this article may be for you anyway, since it has to do with using big Systems and Ramdisks and such, which could be helpful even if you have a second drive. (I think--since I don't have a drive, I'm not sure.)

The problems with a single drive are:

- Too little space on a 400K disk to put on an application plus all the fonts you'd like to use.
- Too many disk swaps.
- Too much time involved in moving from one application to another (without using the Switcher).

I'll suggest solutions to all three by describing what I do. You may have a better way--if you do, write it up for all of us.

I have a startup or "System" disk which has a System file (339K) with all the fonts I ever expect to need for whatever job I'm going to do. Also on that disk I have set up an "empty" Ramdisk of 220K (big enough to hold, say, MacPaint plus Microsoft Word but still leaving enough RAM for printing, etc.) There is 57K of available disk space.

At present I have on this system the following fonts: Athens 18; BostonII 9,10,12,14,18,20,24; MinibostonII 12, 24; Cairo 18; Cartoon 12; Chicago 12,18,24; Dallas 12; DoverPS 12; Geneva 9,10,12,14,18,20,24; Greenbay 18; Istanbul 12,24 (this is font which is like Geneva but writes Turkish); London 18; Monaco 9,12; pica 12; Saigon 18,24; Ultra 12,24; and Venice 14. I won't bore you with explanations of why these particular fonts--each of us has his favorites, no doubt.

Additionally I have disks with smaller systems, single applications--such as Dollars & Sense, MSBasic, Microsoft Chart, MacDraw and MacProject--and various sizes of Ramdisks on them as well as what I call my "Word Processing Disk" with MacPaint, MacWrite, Microsoft Word and Ready-Set-Go on it, but no System.

When I have a sizeable job to do--let's say I want to work on my Memoirs using Microsoft Word--I first boot my startup disk. When the Finder comes on showing that disk and the Ramdisk, I eject the startup disk and put in my Word Processing disk, drag Microsoft Word into the Ramdisk and open it. If I want to work on a chapter already started, I put the Memoirs data disk in, drag the current chapter into the Ramdisk and open *it* (instead of Word). Mac asks me to put back the startup disk, which I do. I've gone through three or four disk swaps (depending on whether I had to go get an existing document) but I now have all those fonts available to use with Word. The Ramdisk gives me great speed. Any documents I edit or create I save in the Ramdisk. Saving to the Ramdisk is very fast, but, of course, you need to save to a real disk from time to time to avoid loss. Until then, I won't have another disk swap.

If all I want to do is write a letter, of course, I don't go to that trouble. Rather I boot a disk with a smaller system (fewer fonts), MacWrite, and an empty Ramdisk. Why the

Ramdisk? Because if I create a document of some size and want to transfer it to a separate data disk (say a letterfile disk), and I put the data disk in and drag this document out of my application disk, *I get requests for several disk swaps*. If I store the document in the Ramdisk, all I do when I'm finished is kick out the application disk, put in the data disk and drag the document out of the Ramdisk into the data disk. It transfers fast without swaps, no matter the size.

Be careful! If you have a Ramdisk on the machine, use it! If you try to transfer documents between disks without using the Ramdisk when there is a Ramdisk resident, you'll get many, many disk swap requests because of reduced RAM size! I have a big sign over my computer desk reading, "Put it in the Ramdisk!"

Now, if I know that I'm going to need to draw some pictures with MacPaint and put them into a document in MacWrite or MSWord, I drag *both applications* from my word processing disk onto the Ramdisk. Changing from one to another through the finder isn't as quick as with the Switcher, but it is pretty fast. (The Switcher plus two applications is too big for the Ramdisk.) With both MacPaint and MacWrite in the Ramdisk, it takes me 36 seconds to quit MacPaint, open MacWrite and paste a picture. Going the other way it takes 24 seconds to quit MacWrite, open MacPaint and paste. To paste a MacPaint document into Word takes a little longer (40 seconds) because Word is bigger. If I'm working on a newsletter page, I can save, for example, this document (7K) as text only, go through the Finder to Ready-Set-Go and paste the text into a block in one minute. And I still have all those fonts, sizes and styles to doll up my newsletter with!

By using these techniques, I minimize disk swaps, have all the fonts I can possibly need available with any application, and can move from one application to another as quickly as is possible without using the Switcher. ☺

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BEST OF THE MAC ITEMS FROM UBBS

by Regina Litman

Mac Hardware

Thunderscan

BOB MASSO ON 02/05 TO ALL

The announcement re Thunderscan upgrade to handle the new Mac+ without the DC voltage lines: To use a Thunderscan with a Mac+ you will need to connect a plug-in power supply which goes between the Mac+ and TScan and "fills-in" the missing +5/+12 volts. The TScan Co. is working on it, and it will be out REAL SOON NOW. I imagine once you can get these jobbers, you could also use them to fix the same problem with other hardware which uses those lines on the serial ports to get their power.

Mouse Problem

CHARLES TURNER ON 02/06 TO RICH NORLING

Rich, my mouse also failed on a different Mac at Clinton Computer repair. The problem seemed to be electronic rather than mechanical because it got worse with time as the circuits warm up. New mouse \$60 with trade in. No WAP discount on replacement items. New one works fine and has a crisper feel than my old one that I've had for two years. Thanks for the note.

Print Head Fix

KEITH BLAIR ON 02/13 TO JOHN MARKEY/ALL

John, I had a similar problem on another printer. What had happened was some of the paper (I didn't know to use good paper then) had wedged itself into the wires. I went to Cox Electronics in Odenton, and they sold me some spray that is specially made for cleaning VCR heads. The spray comes out as a heavy mist and penetrated deep into the head forcing everything out. As a side effect it also forces out any and all lubrication and nearly instantly dries. I don't know about your printer, but this worked fine for me. I just made sure that none of the stuff went anywhere else that would be hard to lubricate. I'm sure any good electronics store would carry something similar.

Musical Drives

TOM VIER ON 02/18 TO ALL

Anyone here had their drives sing to them in high pitched whine while spinning?

STEPHEN C. WARREN ON 02/19 TO TOM VIER

I've noticed some peculiar noises, but the most impressive tune my drives have come up with reminded me of Cheap Trick, Twisted Sister, AC/DC, and Kiss coming together for one big concert.... Wait, there was the time I thought I heard "Sunshine on my Shoulder".... Never mind!

KEITH BLAIR ON 02/23 TO TOM VIER

Yes!! I've had my internal and external drives do it to me. The occurrences seem to be few and far between though. The one program I noticed it the most was a utility called 'Patch Disk'. Any other times it just squeals for a second or two and quits. I haven't lost any data or applications yet...knock on wood. At least I'm not the only one this has happened to.

Mac Software

Flight Simulator

COREY ZIMMERMAN ON 02/10 TO ALL

In the back of the latest issue of Macazine they mentioned a new program from SubLogic called Flight Simulator. Is this a MAC version of the famous game used by the world on IBM PC's? I hope so. I would appreciate any comments or descriptions that anyone has.

RICK STICKLE ON 02/10 TO COREY ZIMMERMAN

Corey, yes this is a Mac version of the PC game. A call to SubLogic revealed that it will be marketed by Microsoft and should be coming out in March. I couldn't get a price.

Graphing

KEITH BLAIR ON 02/12 TO ALL

I am looking for a program that will graph a function of up to 3 dimensions and is fairly simple to use - that is, the function can be entered directly without having to define every variable. I am hoping to be able to solve some differential equations and to find relative maximum and minimum pts. I haven't seen anything commercially and would like to know if there is anything in public domain. Thank you.

KEVIN NEALON ON 02/26 TO KEITH BLAIR

I have StatWorks and can highly recommend it as a good statistics program. It is capable of 3D graphs, and you can input the data directly or a text file using tabs to separate fields and a CR to separate records. It is also very inexpensive.

Two Questions

JAMES B. REESE ON 02/20 TO ALL

Does anyone know: 1. Does the new driver for the Imagewriter II printer offer any advantages to the owner of the original Imagewriter? 2. Exactly how does MacDraw 1.9 differ from the original release? What bugs were fixed? Any information will be appreciated.

KEVIN NEALON ON 02/26 TO JAMES B. REESE

I have the ImageWriter II Driver. But I have been having problems using it with the software I have. I have even had trouble when I used it on an ImageWriter II. Mind you I have v2.0 of the driver, and I understand there is a newer version. I'm afraid I can't help you with the MacDraw upgrade.

Mac Misc. & Gossip

Mac Tech Notes

TOM WARRICK ON 02/09 TO JASON DELOOZE

Be aware that the Tech Notes on MacWrite file formats do not conform to reality. In other words, the Tech Notes are (shudder!) wrong!

Inside Macintosh

JAMES B. REESE ON 02/09 TO ALL

The final (?) printed versions of Inside Macintosh are now available at B. Dalton bookstores. I have seen them at both Springfield Mall and Seven Corners Mall. Inside Macintosh comes in three volumes printed on high-quality 8.5 by 11 inch paper with paper covers. Volumes I and II are \$24.95, contd.

and Volume III is \$19.95. The contents are similar to the "phone book" version.

Macs

JIM RHODES ON 02/21 TO ALL

Can a Macintosh wreck a nice beach?

JOHN MARKEY ON 02/24 TO JIM RHODES

Pair halves Macintosh canned wreck a nice beach, butt knot because of a cinder sized axe scent!

Telecommunications

Downloading Pit File

BRUCE ST. GERMAIN ON 01/27 TO ALL

Having trouble downloading files labeled XXX.pit. Most recent was downloading pool.pit CompuServe. Apparently it is two packed files if I understand the description correctly, but it bombs after the first is downloaded. What I received is one text file. What do I need to convert what I have, and what do I have to do to download the entire file? I was downloading using XMODEM with Red Ryder.

BOB MASSO ON 02/05 TO BRUCE ST. GERMAIN

Bruce, I think you don't quite understand what a .PIT file is. There is a software application on the Mac called PACKIT which allows you to bundle/unbundle several files into one file for up/downloads. This allows someone to merge an application with any accompanying documentation or datafiles so that it can be sent and stored as a single file. Then after downloading, you run PACKIT and re-constitute the individual files on your Mac. What you need to do is get the PACKIT application & run it. OK?

Red Ryder and CRC

CHARLES TURNER ON 02/06 TO REGINA LITMAN

What have you observed, or heard, the problem to be? Is it with transmission or errors with the resulting file or something else?

REGINA LITMAN ON 02/10 TO CHARLES TURNER

The problem seems to be that when Red Ryder misses a NAK or ACK due to line noise or some other problem, it keeps asking for a resend. This loop continues until someone manually aborts the transfer. This request for a resend is on the same block, over and over.

CHARLES TURNER ON 02/12 TO REGINA LITMAN

Thanks for your reply; have you, or anyone else out there, been in touch with Scott Watson's BBS about this? So often we assume someone else has reported a problem, especially when any single person may rarely experience it.

REGINA LITMAN ON 02/22 TO CHARLES TURNER

From what I hear, Scott Watson has finally admitted there is a problem with XMODEM using Red Ryder 7.0. Version 8.0 is due out in the next week or so.

JIM RHODES ON 02/06 TO REGINA LITMAN

I've been using RR7 on a RBBS with CRC with no problems. You can also turn CRC off with RR7 easily.

REGINA LITMAN ON 02/10 TO JIM RHODES

No it's not true that you can turn CRC off easily with RR7. Although there's a menu option to do this, it doesn't work.

When I tried it on Jeff Davis' Falcon BBS, which uses the new version of Mouse Exchange that supports CRC, I found that I got an error right away. An unrecoverable error, it appeared to be. It gave the first block a large (in absolute terms) negative number. With FreeTerm 1.8, on the other hand, there is an option to turn off CRC, and this one works.

BOB MASSO ON 02/06 TO CHARLES TURNER

Charles, the RR vs. CRC problem is in the transmission. It is apparently a problem with handling of timing. The symptoms are that after a random amount of time, your Mac will freeze up. This must result during an error-handling sequence (because of the randomness). Anyhow the Mac just keeps asking for the block but can't get it and goes into an endless loop. This occurred ANYTIME I saw an error occur. As a result I now use FreeTerm 1.8 to talk to download BBS's with this version of CRC and can only use my Red Ryder neat-to-torpedo features for the remainder. Oh well. PS - Anyone out there using Red Ryder who HASN'T PAID FOR IT? This is probably THE best piece of shareware out on the market. A LOT of programmers who wrote short utilities as shareware felt burned when they saw their software being used but never paid for. Personally I think you are foolish to market as shareware something which will only be used once or twice in a year at best, as many of these were. But the stuff I can use daily (Red, MockWrite, QuickPrint, etc.) I paid for. I couldn't stand the guilt trip for those, but something to print out a Font table is used so infrequently that the line between trial-use and unpaid-use is not as obvious to the user. Anyhow, what I am leading up to is that the Try-Before-You-Buy concept of shareware is something which, if used by a lot of programmers, would really help the success (& usefulness) of our machines. BUT IT HAS TO BE SUPPORTED BY US! Right now a lot of former-shareware programmers have already declared that it is unprofitable, that only (fill in the blank) percent of people who use the software bother to pay for it. I would like us to prove them wrong. So if you find you are using a shareware-application or DA all the time - PLEASE please PLEASE pay. Nuff said.

CHARLES TURNER ON 02/12 TO BOB MASSO

Thanks for your description of the RR/CRC problem. Now I can at least recognize it, even if I can't prevent it.

JIM RHODES ON 02/14 TO ALL

I've had no problems using RR7.0 to download or upload. I'm using a 128K Mac and a Prentice PopComm modem. I also always use the Slow Timeout option as suggested by SYSOP Paul Heller of "Twilight Clone" as a way to avoid the CRC problem. I got my RR7.0 direct from Scott, the writer of it. Maybe someone's defective copy has been spreading. Mine was uploaded to "Twilight Clone" in Rockville, 946-8838.

1200 Baud for \$140!

GEORGE KINAL ON 02/13 TO ALL

This is not a testimonial or recommendation. However, the Volks mini modem is now being advertised for \$140 mail order. It is a manual dial, auto answer 300/1200 baud modem. I also note that DAK is advertising their 1200 baud "Smart Duck" in the CompuServe "ONLINE Today" magazine for \$169. This is the Prometheus Promodem 1200 with an "ADC" (a BSR subsidiary) case/label. By next year, they'll be giving them away in cereal boxes!

contd.

Smart Duck 1200

KEITH BLAIR ON 02/13 TO GEORGE KINAL

To all, I ordered and am happily using the 1200 baud "Smart Duck" by ADC. I had to make my own Mac cable with the help of Lynn Trusal, who told me that it has the same pin connections as a Hayes modem. Surprisingly enough, one of the hardest parts of making a cable is finding the 9-pin male connector required for the Mac. 3 Radio Shacks were sold out in my area, but fortunately one was lying around at work. I wonder if everyone is buying them so they can mate their current peripherals to the Mac+. Oh well, anyhow the modem is great and works with Red Ryder and MacTerminal.

STEPHEN C. WARREN ON 02/24 TO KEITH BLAIR

This all sounds too good to be true! Since I am not a Source or CompuServe subscriber, how can I order this Smart Duck? Complete address and ordering phone number would be appreciated.

KEITH BLAIR ON 02/25 TO STEPHEN C. WARREN

Stephen, call 1-800-423-2866, and you will get an operator who seems to take calls for many assorted companies, and you will have to know exactly what you want. You will want a '1200 baud Smart Duck ADC'. They will also ask for an ad # which I have forgotten. Fear not, it is in the Dec. 85 WAP Journal at the very end of the article titled '\$175 1200 Baud Modem'. You must have this # to place the order. I'll have to hunt for it, and I'll post it this Thursday night, assuming I can log on.

Mac+ and Comm Soft

JIM RHODES ON 02/17 TO ALL

Any suggestions about what to do if you get a Mac+ and can't use Red Ryder until 8.0 comes out? MockTerminal doesn't transfer files. SmartComm I don't have.

BOB MASSO ON 02/23 TO JIM RHODES

Do you know if FreeTerm 1.8 will run OK?

JIM RHODES ON 02/23 TO BOB MASSO

No, I don't, but Marty Milrod seems to think it might. Maybe you'd like to check with him.

Games & Gamesig

Orbiter

RONALD WARTOW ON 02/05 TO RICK STICKLE

Rick, I wonder what must be going through the Spectrum Holobyte people's minds in view of the Shuttle tragedy. We all know what happens when any flight simulator on a computer is not well "played."

RICK STICKLE ON 02/05 TO RONALD WARTOW

When I called them I really didn't want to ask how they felt about the accident. I do know that quite a few of the beta testers that were picked (like me) work for NASA. They said that they did this to get better feedback on the accuracy of the program and the payloads they are simulating. In a way the delay is good for us because as you can realize, if the betas had been received last week, a great number of the testers would not have had the proper time to test it.

Games in Stock

MICHAEL DROLET ON 02/09 TO ALL

I was in Family Computers in Fair Oaks Mall today. They had 45 games for the Mac in stock. Best selection I've seen

anywhere outside of mail order houses. List price naturally.

Brataccas

RONALD WARTOW ON 02/25 TO ALL

Requires 512K Macintosh. State-of-the-art game. Appears to be an adventure game but not like anything I've seen before. Seems to be entirely mouse-run. There could be some role-playing aspects, but it's hard to tell the documentation. This is a review copy, so any GAMESIG'ers out there with FAT MACS, come to next meeting, and you'll get a shot at reviewing this.

Mac Programming

Hard Disk 20 and MDS

TOM PARRISH ON 01/12 TO ALL

Your SYSOP has finally come to life! Does anyone know the true story with regard to Apple's MDS (as well as TML Pascal and Consulair C) working with the HFS/Hard Disk 20? The general problem is that nothing works quite right; a specific problem is that the Linker doesn't seem to work at all. All problems appear to be due to the programs not using HFS file manager commands correctly.

RICH NORLING ON 02/04 TO TOM PARRISH

Yep, the problem is that the authors of Edit, Linker, and RMaker seem to have ignored Apple's warnings about using the file system correctly. They seem to work OK if you put them all and their data files in the volume directory (the first window) instead of burying them inside a folder. Some day maybe everyone will listen when Apple Tech Support speaks.

Finder 5.1/LAYO

TIM BUEHRER ON 02/09 TO ALL

For a good time use ResEdit 1.0D4 or greater to modify the new LAYO resource in Finder 5.1. By modifying the parameters of that resource you can drastically change the layout of the finder desktop. For instance, by changing the icon vertical phase you can easily stagger the position of icons within a window. By changing the font sizes and the height of the bottom line you can use 24-point Los Angeles type as the default type font on the desktop (this does not affect the use of Chicago as the system font). Have fun.

HFS

TOM WARRICK ON 02/09 TO JIM RHODES

The new ROM upgrade works with 800K disks, which are supposed to be HFS only (although there is a way around this). The ROM allows HFS or MFS disks. Don't know about RAMdisks.

TIM BUEHRER ON 02/11 TO TOM WARRICK

But Tom, the question seems to be whether there will still be problems on the Plus if you run an MFS disk. While most of the disk problems should be cured (for instance, the problem with Word not finding the glossary); others will still exist, like the problem with the immediate bit in the mock desk accessories. Similarly there is the odd problem of RR 7.0 on the Plus that does not show up on RAM-based HFS. Interesting problems, no?

ELABORATION OF AN ITEM WHICH APPEARED IN LAST MONTH'S COLUMN:

In last month's "Best of the Mac Items - UBBS" column, I inserted an item in which someone described a problem he had in opening MacWrite documents on recently-purchased

contd. on pg 58

MEMBERSHIP DIRECTORY

by Dana J. Schwartz

The next edition of the Washington Apple Pi Membership Directory will be published in the next few months. There will be over 4700 names listed, and with such a large number there are bound to be some unavoidable errors. In order to catch some of these problems before publication, we are listing below the WAP membership numbers of those members who will not be included. The list includes new member numbers up to #8250, and information received (via renewals and other communications) in our office as of February 22, 1986. An asterisk (*) to the right of the number indicates that you have given us permission to publish your information in the directory but did not give a telephone number. If you want to be included you must supply a telephone number.

The Directory will include **ONLY** the following information: first and last name, home phone number, city and zipcode. There will be two lists, one sorted alphabetically and the other sorted by zipcode. The Directory will be distributed only to those persons who have given WAP permission to include their names. There will be a nominal cost for the Directory (to cover printing costs), and details of pre-ordering will be included in next month's Journal.

If the information below is incorrect, or if you wish to change your directions to the club, please fill out and return the form in the back of this issue. Changes and corrections **MUST** be received in the WAP office no later than April 27. Information arriving after that date will not be included in this edition of the Directory.

0027	0543	1134	1898	2736	3453	4092	4646	5060	5697	6064	6462	6781	7006	7275	7489	7756	7970	8206
0054	0620	1181	1920	2832	3475	4133	4649	5062	5738	6092	6475	6806	7008	7289	7494	7760	7971	8207
0059	0645	1298	1922	2898	3477	4157	4650	5076	5744	6124	6480	6817	7013	7290	7498	7778	7972	8209
0094	0649	1313	1938	3042	3511	4230	4672	5079	5758	6141	6481	6839	7038	7293	7504	7782	7978	8210
0144	0713	1340	1947	3096	3512	4239	4674	5103	5789	6180	6485	6851	7040	7297	7535	7785	7984	8221
0186	0741	1406	1965	3106	3568	4244	4702*	5121	5810	6247	6486	6852	7041	7299	7552	7791	7985	8225
0187	0753	1425	2005	3112*	3569	4258	4703	5126	5823	6256	6490	6872	7047	7307	7553	7794	7993	8235
0207	0783	1469	2065	3124	3600	4379	4751	5144*	5835	6258	6502	6875	7087	7318	7559	7828	7994	
0233	0802	1530	2088	3175	3619	4395	4759	5228	5839	6266	6544	6884	7103	7336	7582	7835	8007	
0234	0825	1534	2099	3186	3621	4429	4787	5235	5870	6268	6545	6901*	7120	7339	7587	7839	8008	
0250	0844	1556	2159	3197	3648	4438	4791	5243	5875	6291	6552	6915	7121	7340	7605	7848	8035	
0284	0850*	1588	2196	3215	3655	4445	4802	5261	5883	6294	6567	6918	7134	7342	7606	7865	8057	
0314	0878	1611	2217	3235	3737	4481	4833	5281	5890	6334	6577	6928	7145	7354	7615	7873	8058	
0328	0884	1718	2260	3254	3820	4525	4881	5303	5895	6339	6586	6929	7147	7365	7635*	7874	8071	
0372	0960	1723	2296*	3312	3854	4556	4899	5358	5901	6356	6600	6939	7154	7374	7636	7876	8084	
0429	0967	1725	2321	3319	3863	4558	4938	5423*	5933	6368	6656	6942	7160	7381	7652	7888	8098*	
0450	0972	1730	2392	3320	3895	4564	4977	5524	5945	6373	6659	6945	7187	7400	7656	7895	8135	
0451	0981	1759	2421	3344	3904	4569	4987	5548	5963	6380	6672	6949	7195	7424	7662	7905	8137	
0455	1004	1778	2462	3353*	3915	4577	5005	5575	5992	6400	6685	6962	7200	7439	7677	7911	8155	
0475	1024	1801	2476	3371	3940	4587	5009	5583	5998	6407	6722	6963	7224	7451	7700	7918	8169	
0486	1043	1820	2575	3380	3969*	4589	5016	5610	6018	6420	6729	6984	7230	7453	7737	7942	8174	
0492	1065*	1876	2618	3398	4008	4603	5034	5646	6020	6440	6752	6996	7270	7468	7738	7960	8187	
0503	1128	1881	2619	3440	4061	4618	5046	5675	6024	6454	6780*	7004*	7271	7484	7750	7962	8200	

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DISKETTERIA DISPATCH

by Jim Little

We have three new disks this month in the Eamon adventure series and two new SigMac disks. ProDOS Disk /WAP 801 PROCMD (The Commander) has been withdrawn from our disketeria at the request of the author.

Disk 227 is *Death's Gateway*, by Bob Linden. During the night of the last full moon Locus, the blacksmith, disappeared. Red-eye, the town drunk, relates that he saw Locus lifted into the sky. Laughter greeted this crazy tale. However, your search of the smiths shop uncovers a map... Following clues on it you find yourself at the ruins of a castle keep. Searching the ruin you stumble across the burned body of Locus. Nearby is a stairs going down into the bowels of the earth. You take it from there!

Disk 228 is *Escape from Orc's Lair*, by Jay Hink-leman. You are feeling great as you stride down a dark alley. You feel so energetic that you hardly notice that a gang of Orcs is following your trail. A club crunches down on your skull. The gang takes you home (their's not your's) and you awake in a dark cell to overhear fragments of a conversation-- #1 we have nearly enough hostages... #2 hope we get enough ransom to... you lapse back into dreamworld. Later you wake up to find the cell has no exit. Must get out to warn the Guild. But how?

Disk 229 is *The City in the Clouds*, by Evan Hodson. Based on the theme of Star Wars after the destruction of Death World, you have partly finished training with Yoder. As you prepare to leave he concludes with "you must find your way back to your own world, I do not have all the answers."

More material for the Apple // is on the way for next month.

The descriptions of the following SigMac disks are taken from the notes of Tony Anderson as submitted by Dave Weikert.

SigMac Disk 35: Fun and Games III

Kick off your shoes. Grab a diet Coke. Turn on the answering machine and get ready for some serious Mac-Gaming. You are about to discover some of the best games available for the Macintosh anywhere. Be a pinball wizard with PSC Player, or get behind the eight ball with Billiard Parlour. Play the favorite sport of the information age, Silicon Volleyball or play one of the solitaire games of an earlier age, canfield.

On the DESKTOP:

Silicon Volleyball (by R.Malissa) This is a version of a game ATARI made popular in its heyday. At that time it was called Breakout.

canfield (by Michael A. Casteel) A delightful version of a popular solitaire game. Highly detailed graphics of the cards, music, and an excellent user interface combine to make this a very addictive application.

Bomber This program does not qualify as a game but it sure can be fun. It is a rewrite of an early Microsoft Basic program. This one is a compiled version of the same idea.

Make this the start-up application on a disk and watch as you ask some unsuspecting MacUser to boot it up. I don't want to spoil the fun by telling you what it does, but to avoid rebooting the system remember to click on the RESUME button.

In the Billiards Folder:

Billiard Parlour (by R.Crandall, S. Gillespie, S.Lew) This is an incredible simulation of a Billiard Table. You can play a whole menu full of different games. The game itself is great but in addition there is detailed information in it about how it was developed. This application is an example of what can be done with a new Macintosh programming language called Rascal.

Billiard Parlour.Help This is the file containing the text for the help command built into Billiard Parlour.

In the Pinball Player Folder:

PCS Player (by Bob Upshaw, Bill Budge) PCS is short for Pinball Construction Set. PCS is a program by one of the best-known Apple // programmers of them all, Bill Budge. PCS had a graphic interface with many of the Macintosh-like concepts long before the Mac existed. Needless to say PCS is right at home on the Macintosh. Using PCS you can create just about any pinball game you can dream up. You need the complete Pinball Construction Set to create original games, but with PCS Player you can give copies of your favorite creations to friends (or submit them to the WAP Library) without their being required to purchase the complete PCS.

SAMURAI a PCS pinball game.

SAMURAI.MP a MacPaint file used by PSC for the Samurai background.

Twilight Zone a PCS pinball game.

Twilight Zone.MP a MacPaint file used by PSC for the Twilight Zone background.

SigMac Disk 36: Utilities III

Utilities! You want utilities? Have we got utilities! We got your basic Disk Librarian utility. We got your Scrolling Menu utility. What? You say you think you're losing your memory? Well here's just the thing. It'll check every nook and cranny of your ram till the cows come home. Oh you mean your biological memory. Well, I can't help you there. How about an application compactor instead?

On the DESKTOP:

FatDisk Init (by Micro Analyst) This routine will format a 400K disk with less than the normal amount of space allocated to the storage of the directory. By doing this you get about 5K more usable space on a disk.

Lister (by J Pitts Jarvis III, and Brian Bechtel) A nice little print formatter for ASCII files. Those are files created by a number of text editors or documents from MacWrite saved with the text only option used. It paginates the text, places a time and date header on each file and prints a nice border around the text.

SuperCopy (by Ron Gibb) Will allow you to make a backup copy of some of your protected software. This is only for the copying of software for which you have a license.

Memory A very thorough memory test routine.

Living Art Sort of a utility for the mind. Just click the mouse to return to the desktop.

In the Disk Librarian Folder:

Disk Librarian (by Little Bit) Finally get a handle on all those disks. This utility will read the directory on a disk and keep a little database of your collection. Now if you could only get labels on those disks.

Librarian Doc (by Little Bit) How to use Disk Librarian.

In the System Modifiers Folder:

Autocursor (by Kevin Mitchell) Modifies the system files so that any wait of more than about half a second will cause the arrow pointer to change to the watch.

BigCursor Sets the arrow cursor to double in size to 32 X 32 points.

MacWait Quite amusing. Try this in combination with BigCursor.

JClock (by James T. Sulzen) Displays the time on the menu bar at the top of the Mac's screen. It remains there even when you start an application.

Scrolling Menu Installer (by Michael C. O'Connor) Now have as many fonts on the disk as you need. If there are more than can normally be displayed, just pull down to the bottom of the list and the others will scroll into view.

PRAM (by Ken Winograd) The Mac's clock chip also contains some memory. This memory is call Parameter Ram. Use this utility to view the memory and change it.

KeyBoard 0.1 (by Loftus E. Becker) Change any key to produce any character.

Change Application Font (by Loftus E. Becker) Does what it says. The application font is used by the finder for titles. Now you can have a choice.

In the Launch Folder:

Launch Launch allows you to create a disk that will automatically start up in an application with a specific document loaded. Now you can start up MacWrite with a document already loaded. Do not start this application before reading the documentation. Without properly named documents on the same disk as this application it will bomb.

Launch Documentation The instructions for the above.

In the File Handlers Folder:

Compact (by Steve Brecher) Compress application files to save space.

The Encoder/Decoder (by Micro Technology) A compression routine that works on any Macintosh file but the file must be decompressed before it can be used.

TabUtil (by Chet J. Graham) This routine allows the user to convert tabs to spaces and vice versa.

In the WayStation Folder:

WayStation 1.9B (by Steve Brecher) Similar to the MiniFinder. Save space on a disk by replacing the finder with WayStation.

WayStation Documentation (by Steve Brecher) The instructions for WayStation.

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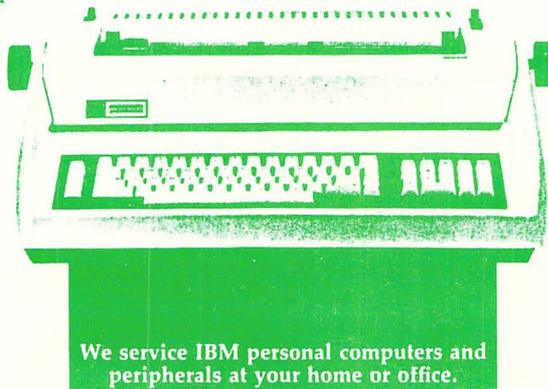
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