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Washington Apple Pi

The Journal of Washington Apple Pi, Ltd.

Volume 9 September 1987 Number 9

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- FCC Access Fee of $5/Hour?
- Word Processors for the IIGS
- I Love Apple Music: Part 4
- Wizardry IV—The Return of Werdna
- Software Industry: Its Economic Structure
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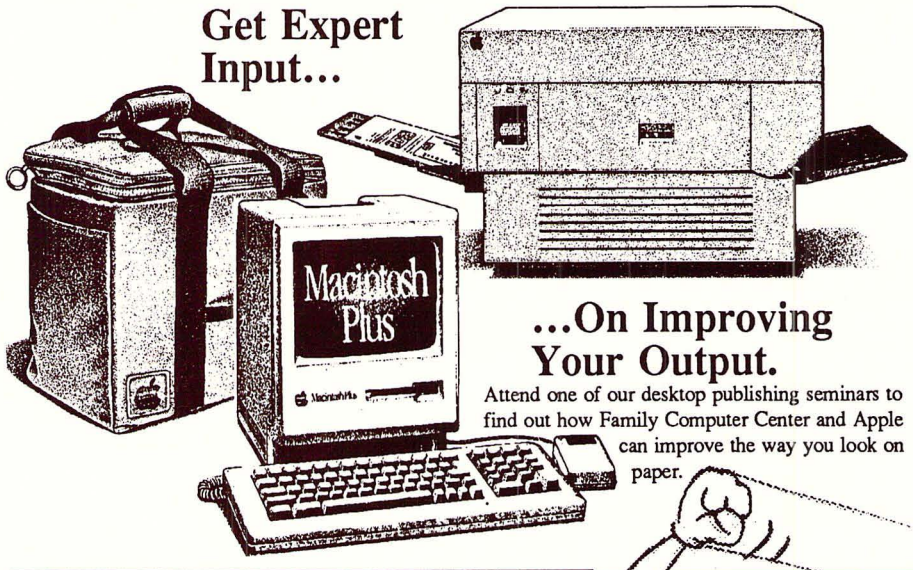

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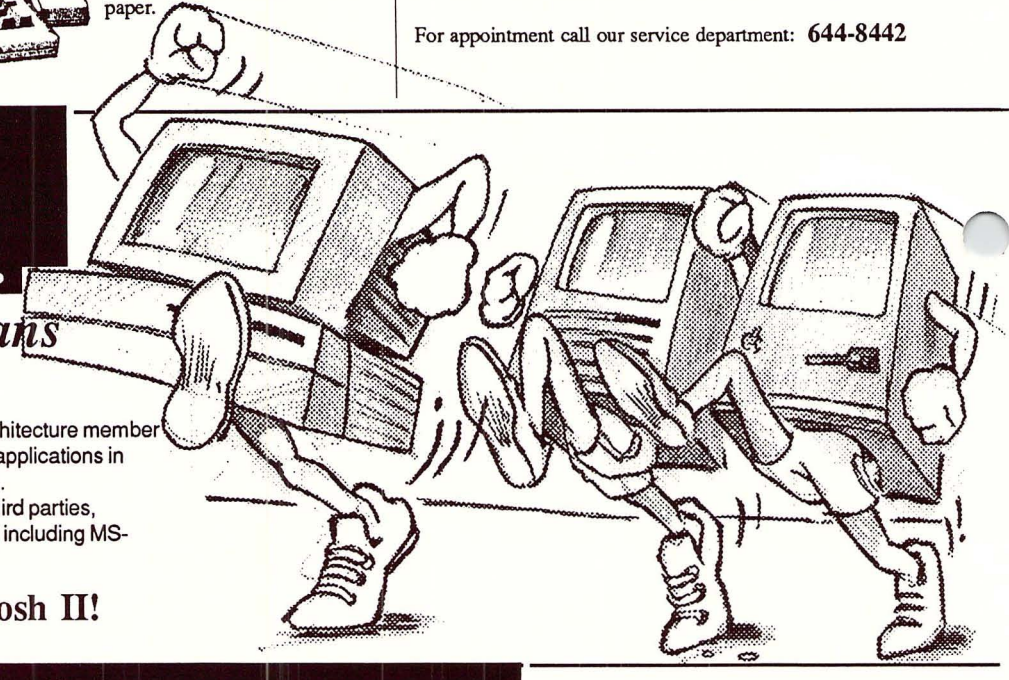

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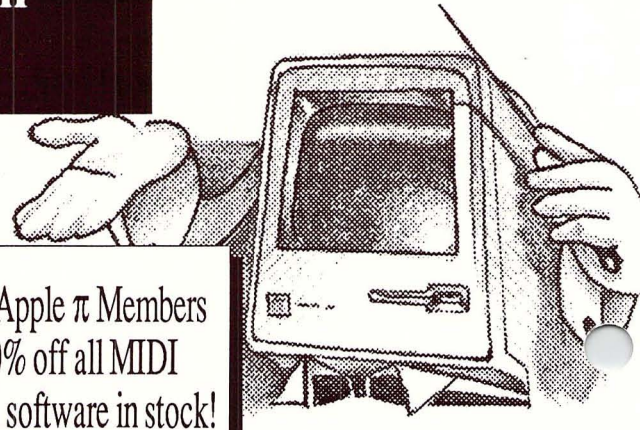

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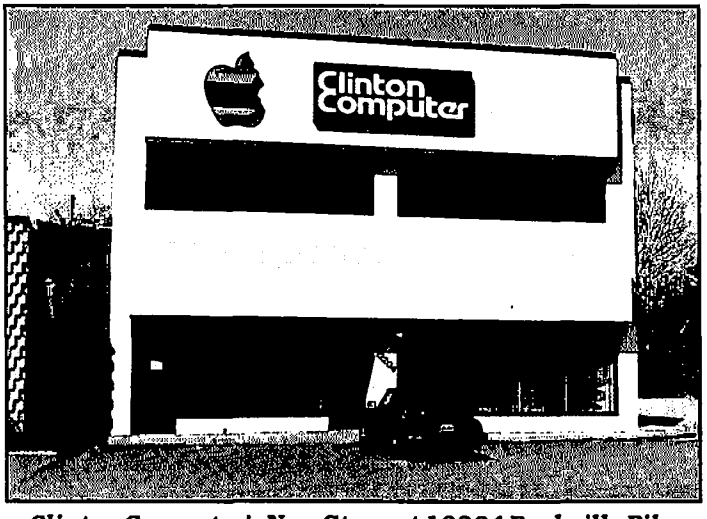

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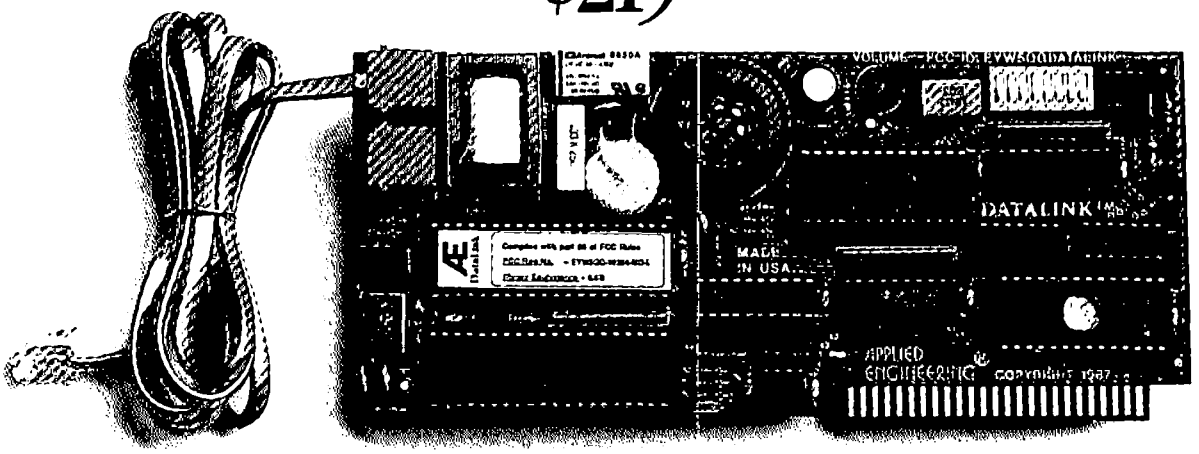

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LET THE FCC KNOW WHAT YOU THINK! by Tom Warrick

Note: As this went to press, we heard that the deadline for the public to file comments on the Federal Communications Commission's proposed $5.00/hour access fee for certain data transmission services has been extended to September 24, 1987. Comments in response to those filed September 24 are due October 26, 1987.

The Federal Communications Commission (FCC) has proposed an access fee of $5/hour for "enhanced service providers"—online database vendors such as CompuServe, GEnie, The Source, Mead Data Central, MCI Mail, Dialog, and Dow Jones. There is general agreement among the vendors, at least, that this fee, which they say will almost certainly be passed onto users of these services, will so affect the economics of the industry that the industry's economic viability will be threatened. For example, if the access fee results in higher costs for the use of these services, many users may stop using online services, thereby forcing the vendors, who face high fixed costs, to raise the rates for their remaining subscribers, thereby beginning a vicious cycle that may lead to many companies dropping out of the field. Others say the effect will be less severe.

As this is written (August 8), Washington Apple Pi has not yet taken a formal position on the FCC Access Fee. This issue will be taken up at the September 9 Board of Directors

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PRESIDENT'S CORNER

by Tom Warrick

As you read in last month's Washington Apple Pi Journal, we are mourning the death of ***Richard Rowell***, who died in an accident in July. Richard had been a long-time contributor to the Telecommunications System and to the tutorial program. He was an active leader in the AppleWorks Special Interest Group, one of the Pi's most important SIGs. You had just elected Richard to his first term on the Board of Directors.

Richard's death is a great loss to the Pi, but of course a greater one to Richard's family, who are in the thoughts of all of us. Friends of Richard have set up the ***Richard Rowell Memorial Fund*** to assist Richard's family. They will need our help, both spiritual and material. Please send your contribution to:

Richard Rowell Memorial Fund
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Bethesda, Maryland 20814

On a much happier note, Rochelle and I were in London a few weeks ago and were able to have dinner with ***Adrien and Siew Youell***. Few people who attended WAP meetings in the last couple of years could forget Adrien. Adrien was for one year the WAP Program Coordinator and, later, Vice President for Programs. You will be pleased to know that Adrien, a Colonel in the Royal Army Medical Corps, is now the head of pathology (his speciality) at the Royal Army's equivalent of Walter Reed Army Medical Center. Siew, whose valuable assistance in the WAP office we still look back on, has been moving the Youell household from place to place (soon for the third time since they returned to the U.K. one year ago) and looking after the clan (all three children now being together in the same country must be a help!). Siew has also been trying to use her Macintosh skills to her business advantage. They asked particularly to be remembered to ***Ray Hobbs***, ***Bruce Field***, the ***Urbans***, ***Paul Koskos***—and, of course, all their other many friends here.

You may also remember that ***Tim Buehrer***, WAP's former Mac Programmers' Group chair, is now in the Federated States of Micronesia in the tropical Pacific. His many friends here will be pleased to hear that one of the senators with whom Tim worked has become the President of this new country, and so Tim has moved with him over to the executive branch. Tim is now an Economic Planner in the Office of Planning and Statistics, where he serves as an adviser to the President of the Federated States of Micronesia.

Tim reports that he now has a Macintosh II to go with his other Macs, but he, like many others, was shipped a Mac II without the color monitor he had ordered. He reports that a Mac II sans monitor makes an excellent, if expensive, doorstop. Seriously, though, Tim reports that the Mac II speaker had come loose during shipment, apparently because the machine that was supposed to position it did not do so properly.

I am also pleased to report that Tim is now making his ***LegalTerm™ for LEXIS®*** and ***LegalTerm™ for WESTLAW®*** available as shareware. If you are an attorney with a Macintosh, or if you use Mead Data Central's NEXIS, I can tell you from personal experience that LegalTerm is fabulous. The LEXIS and WESTLAW versions come as both standalone applications and desk accessories. We will be offering LegalTerm on a future WAP Mac disk.

Another person moving on is ***Jim Burger***, who for the last few years has been Washington Apple Pi's General Counsel. We are very sorry to lose Jim as General Counsel, as he has served the Pi on a *pro bono* basis, providing his services without compensation. The position of General Counsel is one of many that goes on behind the scenes here at Washington Apple Pi, but it is even the more valuable for that. Among Jim's principal accomplishments are the effort a number of years ago to incorporate the Pi and the successful resolution of our differences with Sunol over the hard disk drive we bought from them some time ago. But it is very exciting to report that Jim has become Chief Counsel-Government for none other than Apple Computer, Inc. Jim will be staying on as one of the Pi's Review Coordinators, so we hope to see him continue to write for the Journal as his even-busier schedule permits.

A necessary byproduct of this is that the Pi is looking for a new ***General Counsel*** to serve on the same basis. In addition to needing general legal advice on corporate and intellectual property law, the Pi will have a need in the coming months for advice on how to become a §501(c)(3) organization, and we also have a need for some research in antitrust law. If you or your law firm are interested in helping out, please give me a call at 333-4000.

An unabashed plug: We are proud to announce that the July 1987 edition of the Washington Apple Pi ***Member Reference Book*** is now available. A separate article elsewhere in this Journal describes what's in the Member Reference Book, which should give you reason enough to go right out and get one! If you joined the Pi and got a rain check for this edition, it will be mailed automatically to you. Otherwise, the cost is only $2.00 if you pick up a copy at the office or at a Pi meeting, or you can mail the Pi office a check for $3.00 if you want the book mailed back to you.

A different type of plug: One of the most useless things in all the Macintosh world is a ***single-sided external drive*** to a Macintosh 512K owner who has just upgraded his or her system to two double-sided drives. Now, however, there is hope that the old single-sided drive can be something more than an expensive paperweight. ***Central Point***, which markets the Laser 128 (an Apple IIc clone) and the Copy II series of disk copy programs, is marketing something called a ***"Universal Disk Controller,"***

contd.

which allows Apple II+, //e, IIgs and Laser 128 owners to connect to their systems Macintosh single-sided (or double-sided) disk drives. The controller costs $90, and from what I have heard (which may not be conclusive, to be sure), it seems to work. This would seem like an excellent opportunity for a Macintosh owner to convert a 400K disk drive into money—and for an Apple II owner to upgrade from the 143K capacity of the old Apple Disk II to something much more. (The one caveat I have is that there is no indication from the advertisement in Central Point's latest catalog of how to get a ProDOS driver for the single-sided Macintosh drive. If you are an Apple II owner thinking of getting one of these controller cards, check on this yourself before you buy.)

Washington Apple Pi participated in a special demonstration on July 30 to the ***House Subcommittee on Telecommunications and Finance***, chaired by Massachusetts Democrat ***Ed Markey***. The purpose of the demonstration was to show the capabilities of the WAP Telecommunications System along with the major players in the online industry—CompuServe was there in force, as was GEnie, The Source, Dun and Bradstreet, and many more. The subcommittee also saw a demonstration of the French Minitel videotex system. This demonstration was an opportunity to show that a few dedicated volunteers and some inexpensive hardware can provide a service that rivals what large companies with millions of dollars' worth of mainframes and hundreds of employees can do. Thanks go to our Public Affairs Committee Chair ***Joe Chelena*** and TCS Operator ***Lee Raesly*** for joining with me in putting on the demonstration. Thanks also to ***George Minot***, former Executive Vice President of CompuServe, for inviting us to help out. To give equal time, let me mention that ***Don Ritter***, Republican from Pennsylvania, was also at the demonstration—to his credit, *he* has Macintoshes in *his* office!

The demonstration on the Hill also provided an opportunity to find out that ***Tom Mackie***, one of the active volunteers in the Princeton Macintosh User Group, is moving to Washington. We are fortunate to have someone of Tom's stature in the national user group community come to Washington, and we should all make him welcome. (This also means we're not going to ask him to *do* anything in Washington Apple Pi...well, for awhile anyway!) Also, Tom, who works for GEnie, would like to see the Pi take a more active role on GEnie's Apple-oriented forums. We would like to work something out soon in this regard—more details next month, we hope.

Things Microsoft Is Not Telling You About the Word 3.01 Upgrade: If you are a registered user of Microsoft Word 3.0, you should have received your free upgrade to version 3.01 by now. However, the upgrade that Microsoft sends you is only the program disk, containing the new version of Microsoft Word itself along with a few other things. However, Microsoft has also changed three files on the Word Utilities disk—which are *not* normally included in the free 3.01 upgrade. The three files are (1) the ***DCA Conversion*** utility (upgraded from version 1.0 to 1.1), which helps convert Word 3.0 files to and from the DCA standard used by many MS-DOS word processing programs like Word Perfect and Multimate; (2) the ***Serial Printer*** printer driver (modified date changed from January 7, 1987, to January 30, 1987), which allows Word to use printers other than the ImageWriter or the LaserWriter; and (3) the ***"math typesetting"*** document in the LaserWriter Samples folder, which has the same "created" date it originally had (February 10, 1987) but appears now also to have been "modified" on July 13, 1987. Few people will be interested in any of these new documents, but if you have need for the DCA Conversion utility or the Serial Printer printer driver, I recommend you contact Microsoft's customer service number, (206) 882-8088.

My firm learned about these revised files only when my law partner ***Warren Olsen*** bought a copy of Word 3.01 from ***MacSource***, a relatively new store in Alexandria run by long-time Pi member ***Tony Taylor***. When I called up Microsoft's public relations department to ask about the DCA Conversion program, they were surprised that any retail store had received a shipment of Word 3.01 so quickly. Congratulations, Tony!

I should also say that my experience with ***Word 3.01*** has been excellent thus far (knock silicon!). Microsoft has fixed many of the more loathsome six-legged critters. Under Word 3.0, if you hyphenated an underlined word, Word would not underline the portion of the word on the preceding line. Word 3.01 fixes this. Word 3.0 would not properly index entries with periods or commas in them. Word 3.01 does this correctly. During hyphenation, Word 3.0 would show you the word you were considering hyphenating only in the top line of the window, making it impossible to judge whether the words in the preceding line really needed closing up. Word 3.01 tries to put the line with the word being hyphenated on the second line in the window, so that you can see the preceding line. I have not noticed a number of the other intermittent problems that plagued Word 3.0, but I've had 3.01 only for a few days. Still, though, it appears as though Microsoft has gotten its act together. Their stock, coincidentally, will split two-for-one later this year.

Finally, all active Pi volunteers should be getting an invitation soon to the annual Washington Apple Pi active volunteers' ***picnic***, held this year in September. If you haven't heard anything by Labor Day, check the TCS or contact the Pi office. And if you'd like to come but aren't an active volunteer—that can be remedied! Contact ***David Morganstein*** at 972-4263.

AN APPEAL FOR HELP

The following letter was received in the Pi office from Marie Sobers, County of Prince William, Juvenile Detention Home, 14873 Dumfries Road, Manassas, VA 22111.

"Dear Members,

I teach incarcerated adolescents. Many of them are interested in and motivated by computers. In my classroom I have an Apple //e. We use the computer with software provided by the school system. It has proven to be a big success. This year, a printer and additional commercial software has been added. However, I'm sorry to say, my expertise is limited.

I would like to know if there is someone in your group, or if you could put me in contact with someone, who would be willing to work with my students and me (or just me) so we can better utilize and appreciate our computer.

You can contact me at work (703) 791-3181 between 8am and 3pm or at home (703) 670-0290. Thank you very much for your consideration."

CLASSIFIEDS

WANTED: To borrow for photocopying, the February 1987 (Vol 2 #2) issue of Main Menu, to complete my set. The publisher is out of stock. Will be delighed to reciprocate. Call Bob (301) 262-1355.

WILL GIVE AWAY: Or sell for whatever you want to pay, shrinkwrapped brand new copy of Apple Writer //, ver 2.0, ProDOS. I have an extra copy. Call Bob (301) 262-1355.

FOR SALE: Applied Engineering Apple //c External Clock. Purchased September, 1986; mint condition with original box, extra software. Call Howard at (301) 460-5796, evenings. Asking $60.

FOR SALE: Alpha Music synthesizer for Apple][+, IIe, IIgs. 5-octave keyboard, 8 voices, multi-timbral; sequencer, waveform/envelope editor, music editor, over 100 instruments and special effects already constructed on disk. Full complement of software, extras. $550. Call 725-5972 evenings, ask for Ray.

FOR SALE: Apple 400K external drive for the Mac. Best offer within 1 week. Call Wayne Rivers, w (301) 565-2970, h (703) 451-6463.

FOR SALE: Practical Peripherals Graphicard with cable, printer interface card, parallel w/graphics. New in box, $50. Manual included. Call Bill Cavanaugh (301) 523-0778, Baltimore.

FOR SALE: Microsoft Softcard II CP/M system, $150; Microtek QDisk Card (128K memory/RAM disk) with software $75; Microtek 80-col card for Apple][and][+, $50 (new); CCS 7710 Serial card $40; Titan Accelerator //e speedup card $160 (new). **WANTED:** Used Apple //c green monitor and stand. Call Tom, evenings, 935-5520.

LOW ENTRY PRICES to desktop publishing with PageMaker 1.0 at $100; Microsfot Word 1.05 at $50; Cricket Graph at $85. Converting from IBM? MacLink Plus with cables at $105. Also, Reflex with warranty card at $55. Apple 800K drive $175. Ask for Richard at 462-1045.

FOR SALE: Apple][+ 48K, 16K RAM card, Apple disk controller card, Apple Super Serial Card, Videx Enhancer II, Function Strip, Mountain Computer ROMPLUS+ card, Teko 12" green-screen monitor, computer stand, Apple Sack, system disks, manuals, software. $150. Call Larry Bond at 698-7826.

FOR SALE: Epson FX-80+, excellent condition. Hanzon interface for Mac. Works with Mac, Apple II or IBM. Have all original documentation. Includes Mac cable. $225 complete. Call Dwin Craig at (703) 461-0509.

FOR SALE: 2000K External RAMdisk for the Macintosh (Mac+ requires a cable), $275. Call Dan Adkins for information (h) 822-8052 or (w) 586-5990.

FOR SALE: 128K Macintosh with 400K external disk drive, great starter machine or inexpensive upgrade alternative for experienced user. Perfect condtion, well cared for. Tons of the latest Mac software programs come with the machine: Excel, Word (1.05 & 3.0), Jazz, Thunder, MacSpell, MacWrite, MacDraw, MicroPlanner, Filemaker Plus, many games, etc. Software alone is worth $$$. Asking $1000 or best offer. Marty Biggs, (w) 703-979-5000 or (h) 703-998-8517.

FOR SALE: Apple //c, Imagewriter, b/w monitor, AppleWorks, Sensible Speller, 1-year repair contract. Like new. Call evenings and weekends, (703) 538-2316.

FOR SALE: Apple //e 128K CPU unit, includes extended 80-column text, 64K card, all cables, manuals and original cartons. $450. Call Milt Goldsamt, evenings (301) 649-2768, days (301) 921-0010.

FOR SALE: Apple /// software and Silent-Type /// printer. Call S. Cohen, (301) 774-9182.

FOR SALE: Abaton 300A scanner with software. $1650 (list price is $2495). Call Earl Douglas at (301) 279-0396.

FOR SALE: Prometheus 300 baud modem for the //c. Auto answer/auto dial, with internal speaker. Asking $45. Comes with manual and communications software. Write to Brian at 5314 - 134th Pl. SW, Edmonds, WA 98020 or call (206) 743-9357.

COMMERCIAL CLASSIFIEDS

FOR SALE: Apple //e, Grn. Screen monitor, dual drives, 320K Ramworks w/80 col., CP/M card, Serial Interface w/Hayes 300 modem, Gemini 10X DM printer, joystick, MFJ Radio TTY interface, books, software, and more. $1100. Call 703-430-7455.

FOR SALE: PageMaker templates for SF-171 or SF-129 ($55 each). Call Dan Adkins for information (H) 822-8052.

SIDER SALE! Up to 43% off!! For Apple II or IBM external hard drives - New 40 MEG - $950; 20 MEG - $525; B-Sider - $525; 10 MEG - $425 while they last! All plus shipping and delivery. Call PLS, Inc. 439-1799 and ask Lee Raesly for details! PLS, Inc. is a Certified First Class Peripherals dealer in Wheaton.

JOB MART

HELP WANTED: Fast growing, creative Ad Agency look for PageMaker Wizard to design and produce advertising. Sense of style and knowledge of type styles needed. College Park area. (301) 559-3200.

HELP WANTED: Part-time Xmas help for publishing books in Bethesda/Rockville area. Having Apple //c and Apple Printer would be desired but not required. For information call S. Cohen 301-774-9182.

HELP WANTED: Tysons Corner desktop publishing operation looking for person experienced with Mac, PageMaker, Word and MacDraw. Full-time, salary commensurate with experience. Sends resumes to Master Copy, 8601 Westwood Center Drive, Vienna, VA 22180.

Gaithersburg print shop looking for desktop publishing person with PageMaker/Word/Paint skills to assist in preparation of flyers, newsletters, business cards, etc. Candidates must have Macintosh expertise, design, layout and paste-up experience. Part time—flexible hours. Resumes to: Strokes & Strategies, Inc., P.O. Box 5113, Laytonsville, MD 20879.

DO YOU TalkApple? We are looking for well-seasoned professions with expertise in the following areas to join our team:

- **Training** - The ability to train on MacIntosh Software Applications, and System/Network Operations and Administration.

contd.

• **Desktop Publishing** - Experience using the Macintosh to support Artwork and Illustration, Page Layout, Document Processing and Presentaiton Graphics. Understanding of various Desktop Publishing configurations and network options desired.

• **Macintosh Engineering Solutions** - Experience desired using the Macintosh to support CAD (2D and 3D), Drafting, Stress and Vibration Analysis, Structural Analysis, Software Development, Schematic Capture and Circuit Board Design, and Laboratory and Statistical Analysis. Understanding of various engineering workstation configurations and networking options desired.

Desktop Communications - Experience configuring and installing Desktop Communication Systems to allow the sharing of information in workgroups, multiuser information management, integrating and enhancing company mainframe information, and timely access to information services.

• **Business Management** - Experience desired with Accounting, Database Managment, Spreadsheets, Office Automation and other business software for the Macintosh.

If you are interested in joining our team on a full-time, part-time or consultant basis, please send resume to Gestalt Systems, Inc. 470 Spring Park Place, Suite 600, Herndon VA 22070. (703) 471-6842.

MEETING REPORT

by Robert C. Platt

The July 25 WAP meeting drew a crowd of about 300 people. The Macintosh program featured Adobe Illustrator, a software package for generating Postscript illustrations and drawings. Once Postscript is generated to describe a shape, it can be imbedded in documents that are produced on the LaserWriter. Tom Piwowar introduced a video tape demonstration of the package. The tape and two 25" color monitors were donated by Heath/Zenith of Alexandria.

Jay Heller, outgoing VP, demonstrated the MacVideo Converter 2010 by N-squared Products. This device converted the Mac's screen output into "normal" television signals for recording on video tape, or in our case, for display on large TV monitors. Jay also demonstrated the USR Courier HST 9600 Baud modem.

Jim Lanford demonstrated the Radius 68020 accelerator board and a 9 track tape drive which operates on the SCSI port. The meeting concluded with a question and answer session conducted by Jon Hardis.

The Apple people were treated to nuts and bolts telecommuncations tutorial and demonstration by Lee Raesly, Harvey Kaye and Dale Smith, aided and abetted by Dale's daughter. Communications were accomplished throughout the Apple II line with a special emphasis on connection to WAP's own TCS. The telecommunication packages demonstrated included: ASCII Express, Point to Point, and MouseTalk. Perhaps the best part was the ability to see Lee, our TCS Wizop, rapped up in the umbilical cords of the telecommunications world, about 5 or 6 phone cords.

During the business session, the membership approved WAP's budget for 1987-88.

Smart Computer:

More Reasons to Buy Our Generic PC.

by Bud Stolker

In the IBM PC-compatible world there are many kinds of computers. Though they may look alike, they all differ under the cover—in the quality of the components, in the scope and usefulness of software, in the degree of care and foresight with which they're engineered and built. Some are better buys than others. Herewith we present a few criteria useful in comparing PC-compatibles. No matter what you need in a personal computer or where you buy it, you should ensure that the PC comes with the following features:

- **Fully IBM-compatible.** We've tested our systems extensively, and have found them to work with all software designed for the IBM PC. Our PCs are strictly compatible with the IBM hardware standard, too. The cheaper clones, though attractive in price, sacrifice full hardware compatibility, in effect locking you out of major future upgrades.

- **Fully equipped.** Even our least expensive models have battery-operated clocks for automatic time and date stamping. They each come equipped with enough "ports" to handle a modem, printer, mouse, joystick, and light pen—all at once. Software installation is complete. We provide 15 or more floppy disks (or 400-500 hard disk program and data files) linked into a menu system that puts all common tasks just a few keystrokes away. Word and idea processing, data base management, spreadsheet, telecommunications, name and address file, notepad, calendar, alarm clock, printer management—all that and more is standard with our Generic PCs. We match software to your needs, and install your own software, if any, at no charge. You get capabilities you'll want, tools you'll like, performance you'll appreciate, and a solid foundation on which you'll build quickly and easily.

- **Well-tuned.** The systems we offer strike a proper balance among speed, storage, and software. They have the good "feel" that only a properly optimized PC can provide. Even our lowest cost systems benefit by intelligent applications of appropriate software. We recently boosted performance of two competitors' PC clones by 75% and 90% respectively just by setting them up properly. They way PCs are built and configured makes a big difference.

- **Carefully performance-tested.** Parts that don't meet our standards wind up in our reject pile, not in our clients' PCs. (Ask about our second-tier systems at scandalous prices. They're great buys if you don't mind a noisy fan, a mushy keyboard, or an out-of-square video display. All are guaranteed to drive you crazy, but they're cheap, and they work. Yes, Virginia, there really is a $500 PC, but do you really want one?)

The Generic PCs we custom-build for clients seem to be what folks want. Our clients typically stay in touch, and often come back for more equipment as their needs grow. Many send their friends and colleagues to us. We must be doing something right. Give us a call when you're ready for a PC, and let's talk about why *a custom-tailored personal computer from Landmark Computer Labs is the best buy you can make.*

Landmark Computer Laboratories
Suite 1506
101 South Whiting Street
Alexandria, Virginia 22304

Telephone (703) 370-2242 ☎ SourceMail TCB076

IBM PC, PC XT, and PC AT are registered trademarks of International Business Machines Corporation

APPLE TEAS

Washington Apple Pi
Bowie Apple Tea
Sunday, September 13, 3:00 - 5:00 PM
Latest Mac Innovations: A Report on the
Boston MacWorld Expo
with Marty Milrod
2616 Kingsley Lane, Bowie, MD 20715

Refreshments. RSVP 464-5981. Directions: From DC, take Rte 50 toward Annapolis. Take 197 North (Collington Road) to Kenhill Drive, 1st traffic light. Turn right. Take Kembridge Road, 2nd right, 1/2 mile just past Kenilworth Elementary School. Turn left on Kingsley to 2616.

Washington Apple Pi
Bethesda Apple Tea
Saturday, September 26, 1:30 - 3:30 PM
(After the USUHS WAP and AppleWorks SIG)
AppleWorks and its RAM-ifications:
Uses of the Ram Disk, Revisited
with Resources Ken DeVito and George Sall
Stone Ridge/Country Day School
9101 Rockville Pike, Bethesda MD 20852
(Next to Navy Medical Center)
Refreshments. Bring computer if convenient.

RSVP to Sister Laurine Haley, (O) 657-4322, (H) 897-5666. Directions from USUHS: Turn right on Jones Bridge Road and right again on Rockville Pike (Wisconsin Avenue extended). Turn right on Cedar Lane and right again at 2nd driveway by the tennis courts. Come to first circle on right. Park on circle. Look for WAP signs on door and up the stairs to Lower School Library, 1st level.

Calling All Scientists!
Scientific Applications for the Macintosh
Saturday, October 10th, 2:00 - 4:00 PM
The Seelig Labs
1405 De Sale Street, Vienna VA 22180

RSVP Fred Seelig (703) 849-9408. Bring your Mac and extension cord, and a demo program that might be of interest to fellow engineers or scientists. Let's discuss the usefulness of the Macintosh in a scientific environment as well as the impact of the Macintosh II workstation on science and engineering. Directions: Take 495 Beltway to I66 exit going away from DC. Take Vienna exit (1st exit), make an immediate right on Nutley. Go another 1/4 mile to Kingsley, turn right. Go about 1/2 mile to DeSale. Turn right. Drive 1/2 mile to 1405 on righthand side.

See how easy it is to HOST AN APPLE TEA! Would you like to gather some Apple users to discuss a topic you're interested in, orthat you'd like to know more about? Apple Teas are opportunities for Apple users to get together in small groups (from 3 to 12) to learn more about a specific area of Apple computing, expand each other's knowledge, ask questions and share tips.

To host an Apple Tea...

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

2. Obtain a resource person, if you like. The WAP Hotline is a good place to start searching for a knowledeable and helpful person.

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

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

5. Any questions, call Amy Billingsley at 622-2203, or George Sall at 768-0212. If you mind is made up, be prepared to give topic, resource person, date and time, place and directions.

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

EVENT QUEUE

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

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

Following are dates and topics for upcoming months:

September 26 - 4th Dimension for Mac
- TBA for the Apple II

October 24 - Education Special

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office.

GENERAL INFORMATION

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

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

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

Current office hours are:

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

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

* Beginning in September, the office will again be open on Tuesday evenings.

* September 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Apple II Beginning Tutorial #1 7:30-9PM Office	2 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	3 GameSIG 7:30 PM Office	4	5
6 Deadline for Journal Articles is Sept. 8 -->	7 Labor Day Federal Holiday Office Closed	8 Apple II Beginning Tutorial #2 7:30-9PM Office	9 Executive Board 7:30 PM Office	10 Stock SIG 8:00 PM Office	11	12 Telecomm. on the Apple Tutorial 9-12AM Office
13	14 Introduction to Macintosh Tutorial - Office 7:30-9:30 PM	15 Apple II Beginning Tutorial #3 7:30-9PM Office	16	17 Pascal SIG 8:00 PM Office	18 Intro. to --> the IIGS 1-4 PM Office on Sat. Oct.19-->	19 Telecomm. on the Mac Tutorial 9-12AM Office
20	21 Intermediate Mac Skills Tutorial - Office 7:30-9:30 PM	22 Mutual Fund Sub-Group (Stock SIG) 8 PM Office	23 Apple /// 7:30 PM Office	24 EDSIG 7:30 PM Office - Touch Typewriting	25	26 WAP Meeting USUHS 9:00 AM
27	28 Becoming a Mac Power User Tutorial - Office 7:30-9:30 PM	29	30			

* October 1987 *

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 GameSIG 7:30 PM Office	2	3
4 Deadline for Journal Articles is Oct. 7 -->	5 PI-SIG 7:30 PM Office	6 Apple II Beginners Tutorial #1 7:30-9PM Office	7 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM Office	8 Stock SIG 8:00 PM Office	9	10 Frederick Slice; Annapolis Slice; Music SIG
11	12 Macintosh Beginners Tutor. #1 - Office 7:30 - 9:30 PM	13 Apple II Beginners Tutorial #2 7:30-9PM Office	14 Executive Board 7:30 PM Office	15 Pascal SIG 8:00 PM Office	16	17
18	19 Macintosh Beginners Tutor. #2 - Office 7:30 - 9:30 PM	20 Apple II Beginners Tutorial #3 7:30-9PM Office	21 Fed SIG Apple Computer Offices, Reston	22 EDSIG 7:30 PM Office	23	24 WAP Meeting USUHS 9:00AM EDSIG
25	26 Macintosh Beginners Tutor. #3 - Office 7:30 - 9:30 PM	27 Mutual Fund Sub-Group (Stock SIG) 8:00 PM Office	28 Apple /// 7:30 PM Office	29	30	31

SIGNEWS

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

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the WAP office. Next meeting is September 23.

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

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

dPub SIG (Desktop Publishing) meets on the 1st Wednesday of the month at 7:30 PM in the PEPCO Auditorium at 1900 Penn. Ave., NW. The next meeting is on September 2.

EDSIG (the education special interest group) meets on the 4th Thursday of the month at 7:30 PM at the office. The Sept. 24 meeting - Touch Typewriting Programs for Apple II & Mac.

Fed(eral) SIG will meet on October 21 at the Apple Computer Federal Office in Reston, VA.

GameSIG meets on the 1st Thursday of the month at the office, 7:30 PM. The next meeting will be on September 3.

Mac Programmers meet on the 1st Wednesday of the month at the office, 7:30PM. Next meeting is September 2.

MusicSIG meets on the 2nd Saturday of each month. Call Bill Bittle (301) 236-9898 for details.

PIG, the Pascal Interest Group, meets on the 3rd Thursday of each month at 8:00 PM at the office. New and prospective users are welcome. The next meeting will be on September 17.

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

Stock SIG meetings are on the second Thursday of each month at the office, 8 PM. The next meeting is on Sept. 10.

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

WAP HOTLINE For Use by WAP Members Only

Have a problem? The following club members have agreed to help other members. PLEASE, keep in mind that the people listed are VOLUNTEERS. Respect all telephone restrictions, where listed, and no calls after 10:00 PM except where indicated. Users of the Hotline users 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.

Apple II

General	John Day	(301) 621-7543
	Dave Harvey	(703) 578-4621
	Robert Martin	(301) 498-6074
Accounting Packages		
Accountant(Dec.Sup.)	Mark Pankin	(703) 524-0937
BPI Programs	Jaxon Brown	(301) 350-3283
	Otis Greever	(615) 638-1525
Home Accountant	Leon Raesly	(301) 439-1799
Howardsoft (Tax)	Leon Raesly	(301) 439-1799
	Otis Greever	(615) 638-1525
APPLE SSC	Bernie Benson	(301) 951-5294
Apple TechNotes	Joe Chelena	(703) 978-1816
AppleWorks	Ken DeVito	(703) 960-0787
	Charles Baumgardner	(703) 538-2316
	Ken Black	(703) 369-3366
AppleWorks Data Base	Morgan Jopling	(301) 261-3886
Apple //c	John Day	(301) 621-7543
Communications Packages		
ASCII Express	Dave Harvey	(703) 578-4621
XTALK CP/M Comm.	Bernie Benson	(301) 951-5294
Data Bases		
dBase II	Paul Bublitz	(301) 261-4124
	John Staples	(703) 255-6955
dBase II & III	Ray Hobbs (BBS)	(301) 490-7484
	Jim Kellock (day)	(301) 986-9522
	Leon Raesly	(301) 439-1799
Data Perfect	Leon Raesly	(301) 439-1799
PFS	Bill Etue	(703) 620-2103
	Ginny Spevak	(202) 362-3887
Q-Pro-4	John Staples	(703) 255-6955
Hard Disks		
Corvus & Omninet	Tom Vier (BBS)	(301) 986-8085
Corvus	Leon Raesly	(301) 439-1799
Sider	Jaxon Brown	(301) 350-3283
	Otis Greever	(615) 638-1525
Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)		
A	Louis Biggie	(301) 967-3977
A	Peter Combes	(301) 251-6369
A,I	Jeff Dillon	(301) 422-6458
A	Richard Langston	(301) 869-7466
A	Leon Raesly	(301) 439-1799
A,I,M	Richard Untied	(609) 596-8816
A,I,M	John Love	(703) 569-2294
M	Ray Hobbs (BBS)	(301) 490-7484
P	Michael Hartman	(301) 445-1583
Forth	Bruce Field	(301) 340-7038
MS Basic	Ray Hobbs (BBS)	(301) 490-7484
Monitor, RGB	John Day	(301) 621-7543
Operating Systems		
Apple DOS	John Love	(703) 569-2294
	Adam Robie	(301) 460-6537
	Richard Untied	(609) 596-8816
CP/M	Ray Hobbs (BBS)	(301) 490-7484
	Leon Raesly	(301) 439-1799
MS-DOS	Ray Hobbs (BBS)	(301) 490-7484
ProDOS	Leon Raesly	(301) 439-1799
	John Love	(703) 569-2294
Print Shop	Thomas O'Hagan	(301) 593-9683
Newsroom	Carol Thomas	(301) 424-1266
Spreadsheets	Leon Raesly	(301) 439-1799
	Walt Francis	(202) 966-5742
VisiCalc	Walt Francis	(202) 966-5742
Sprdsht.2.0(MagicCalc)	Leon Raesly	(301) 439-1799
SuperCalc Ver. 2.0	Leon Raesly	(301) 430-1799
	Terry Prudden	(301) 933-3065
Word Processors	Walt Francis	(202) 966-5742
Apple Writer II	Dianne Lorenz	(301) 530-7881
	Leon Raesly	(301) 439-1799
Gutenberg	Harris Silverstone	(301) 435-3582
Gutenberg & Jr.	Neil Muncy Can.	(416) 298-3964
Letter & Simply Perfect	Leon Raesly	(301) 439-1799
Magic Window and II	Joyce C. Little	(301) 321-2989
Apple PIE	Jim Graham	(703) 643-1848
ScreenWriter II	Peter Combes	(301) 251-6369
	Gene Carter	(202) 363-2342

Apple II Word Processors contd.		
Word Handler	Jon Vaupel	(301) 593-3316
Word Perfect	James Edwards	(301) 585-3002
	Henry Donahoe	(202) 298-9107
Word Star	Leon Raesly	(301) 439-1799
	Dana Riel	(301) 350-3283

Macintosh

General	Terry Monks	(703) 471-4610
(eve. & wkends only)	Michael Yourshaw	(703) 534-2077
	Donald Schmitt	(717) 334-3265
Data Bases		
Helix	Jim Berry *	(703) 662-0640
	Harvey Levine	(301) 299-9380
MS-File	John Love	(703) 569-2294
Omnis 3 and 3+	Paul Tabler	(703) 278-8708
OverVue	J.T.(Tom) DeMay Jr.	(301) 779-4632
	Tom Parrish	(301) 654-8784
Desktop Publishing		
& Graphics	Jay Rohr	(301) 655-0875
ReadySetGo	Jim Graham	(703) 643-1848
	Marty Milrod	(301) 464-5981
Inside Mac	Jon Hardis	(301) 330-1422
LISA/Mac XL	John Day	(301) 621-7543
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* Calls until midnight are ok.

ON THE TRAIL OF THE APPLE ///

by David Ottalini, /// SIG Co-Chairman

Richard Rowell

First off, /// SIGers, I want to add my voice to those who will miss WAP member Richard Rowell, who died suddenly during July. Richard was a soft-spoken person who always had time to help others. I will remember him as someone who did not consider the Apple /// as a "dead" machine. He used our machine in the office with 3 EZ Pieces during his AppleWorks tutorials. And he readily added the program to his advertising for the templates his Pacific Technology Systems sold.

Richard's expertise will be sorely missed in our user group. But beyond that, his easy-going manner and willingness to share with others will be missed even more. A Richard Rowell Memorial Fund has been set up to help his sons through college, and is being administered by Harvey Kaye. Any /// SIGer willing to contribute may do so by sending a check to the WAP office, made out to The Richard Rowell Memorial Fund.

Sun Systems News

Lots of news this month /// SIGers from Bob Cook, the President of Sun Systems Recycling in Logan, Utah.

• Sun has about 1200 Apple ///s still in stock at the present time. Cook says an offer, set to begin in Sept., will allow any Apple /// owner with a sick machine to turn it in for a reconditioned /// at a flat price of $349! It would come with a one year warranty. The sick ///s would then be reconditioned for resale.

• Sun is running low on Profiles for the ///, so they are currently redesigning the ROM chip used for their Lisa 10 and 20 MB hard drives. Once that is completed (probably by the time you read this), you will be able to use those same hard disks on your /// with the controller card and driver you are already using! Cook says they've had excellent reliability with their hard disks so far and would expect the same for those converted for use with the Apple ///. Look for the 20 MB to cost about $899.

• Apple's attorneys have apparently (and finally) said YES to the release of the source code for SOS and various Apple /// drivers. However, nothing is down on paper yet. I have reported to you in the past about this, but Cook says this time things are looking good. The big question is what, if any, restrictions Apple will put on Sun for using the SOS source code; that is, can registered developers get their hands on it, or will Sun be required to let it go no further than their front door. If released, an upgrade for the operating system could certainly be a possibility (On Three has indicated they would like to do that) and with the new 65C802 chips now selling for about $20, a reasonable upgrade path to a "SOS 16" might be possible. Bob says he hopes to be able to make an announcement about this in Chicago during the Phase /// Conference.

• Despite the recent success of Sun's clearance sale, their inventory of some Apple /// products (like Apple Writer, Apple Speller, Business Basic, Pascal, CP/M cards, etc.) is still very high. So, look for another sale, possibly tied in with the purchase of a product. Cook says prices will probably be no higher than $29 or so but could be lower depending on what is involved. By the way, during their last promotion, all ///+// cards were sold out, along with Apple /// carrying cases, and PFS File and Report. All their Apple DMP and Silentypes are also gone.

• Sun is doing more Apple /// service than ever before. Business overall is 60 percent ahead of the same time last year. This is good news for us /// folks since it means we will be able to continue getting service for a long time.

• Cook says that he had to drop plans to produce a disk controller card for those 400K Mac drives because he sold out of them! All 2000 on hand are now gone and they are hard to get.

• For you Lisa/Mac XL owners, Cook says he has 7000 on hand at this time and sells about 6-8 per day. Many folks calling about the machine are considering it for their first computer.

• Finally, Cook says he wants to expand the company so that it doesn't rely entirely on Apple for its recycled products. He is planning to buy any used Apple computer from anyone interested, recondition it and resell it. That could also expand to other Apple products as well.

Meeting Queue

Our September meeting in the WAP office will deal with backing up the files you have on your hard disk, 3.5" or 5 1/4" floppies. We'll take a look at Backup ///, as well as D3 Backup, a PD offering soon to be in the PD library thanks to /// SIG member Dr. Al Bloom. Backing up information is critical for anyone who is interested in staying in business or insuring that valuable data is available. We'll answer questions and give demos of both programs.

For October, we'll be discussing telecommunications. What programs are available, how to use them and access the WAP TCS, CompuServe, Three's Company and other BBS's will all be discussed.

And Finally

Thanks to the WAP Executive Board, we now have a second disk drive for our Apple /// in the office! And hopefully, by the time you read this, our Profile hard disk will be back from Sun Systems and running as well. I'd also like to mention that /// SIG member Jim Salerno has put together a special "Boot Disk" for use in the ///. It contains a number of useful utilities, including a copy of our Menu.Maker program so that you can run any other Basic program you might want to try out. We will also include a version of that in our PD library.

Don't Miss These
New Apple II Library Disks!
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813-816 - AppleWorks Utilities
817 - Telecommunications
420 - CP/M Small c Compiler
2003 - IIgs Freeterm Terminal Pgm

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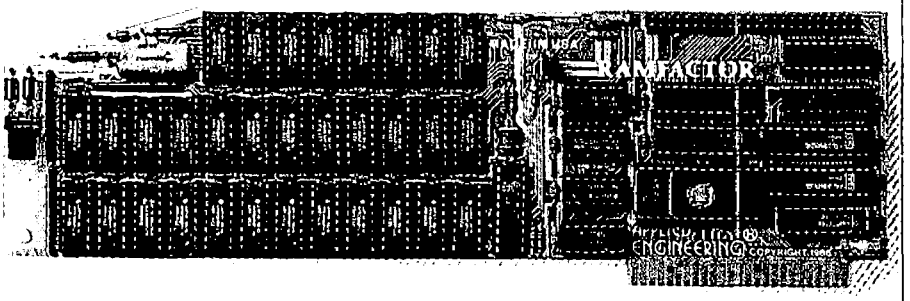

Very Compatible

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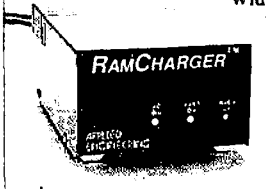
AppleWorks Power

There are other slot 1-7 cards that give AppleWorks a larger desktop, but that's the end of their story. But RamFactor is the only slot 1-7 card that increases AppleWorks internal memory limits, increasing the maximum number of records in the database and lines permitted in the word processor, and RamFactor is the only standard slot card that will automatically load all of AppleWorks into RAM dramatically increasing speed and eliminating the time required to access the program disk, it will even display the time and date on the AppleWorks screen with any ProDos clock. RamFactor will automatically segment large files so they can be saved on 5¼", 3½", and hard disks. All this performance is available on the Apple II+, IIe, Franklin, or Laser 128 when used with an 80 column display. RamFactor, no other standard slot card comes close to enhancing AppleWorks so much.

The "Instant On" Apple.



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

Stump WAP's experts with your Apple // or Apple /// mysteries. Send your questions to the WAP office or come to our monthly meetings.

Correction: In the July column, Tom Vier's FID patch to handle multiple drives has a typo. Please remove the dollar signs from the BSAVE FID command, as the address and length were given as decimal numbers.

Mailbox: Last month, I reported that control-2 on the main IIgs keyboard returns a "null" (ASCII 0.) My sources at Apple tell me that this is not a bug, but an example of //e compatibility. The //e does the same thing to avoid confusion with control-shift-2 (control-@).

Bud Simrin suggests two additions to the ProDOS patch routine which appears in the May column. The routine unlocks ProDOS but does not relock it. Bud added the following two lines:

```
445 PRINT CHR$(4);"LOCK PRODOS"
475 PRINT CHR$(4);"LOCK PRODOS"
```

In an earlier column, I reported that Apple's manual indicated that DuoDisks below a certain serial number will not work on the Smartport of the IIgs. Apple responded by noting that all Apple dealers now have a free DuoDisk modification which will allow them to connect to the IIgs. Contact your dealer for this upgrade.

Q. I have a IIgs and want to run your ProDOS patch program. (See above.) But I keep getting messages saying, "Error! No patches made. ProDOS not found." What am I doing wrong?

A. First, go to your Apple dealer show him your System Disk (with the original Apple printed label) and he will allow you to copy the new Version 2.0 System Disk. Second, make a copy of this disk. Finally, using the copy, enter and run the patch program with one important set of changes. The copy of the ProDOS 8 operating system which is stored in a file named "PRODOS" on non-GS disks, is named "P8" in the "SYSTEM" folder on the IIgs System Disk. You must change all of the PRINT statements accordingly, For example PRINT CHR$(4);"UNLOCK PRODOS" to "UNLOCK SYSTEM/P8", etc.

Q. What is on the latest IIgs System Disk?

A. Version 2.0 of the System Disk features ProDOS 16 version 1.2 (May 18, 1987); ProDOS 8 version 1.4 (Apr 17, 1987); Loader 1.2; Launcher 2.0; and BASIC.SYSTEM 1.1. As noted above, it's available from Apple Dealers or the WAP Disketeria.

Version 2.0 adds the Print Manager and QuickDraw Auxiliary Tools while also correcting many problems found on System Disk 1.1. In addition all of the tools have been compacted and the loader has been revised to work with these compacted files. My source at Apple reports that new ROM's for the IIgs have been released by Engineering and sent to Apple's Manufacturing Department. No decision has been reached on how the ROM's will be exchanged in existing IIgs's.

Q. What is the "Apple DeskTop Bus" (ADB)?

A. Apple has decided to standardize the manner in which input devices communicate with the central computer. Hence, the Mac SE, Mac II and Apple IIgs all use interchangeable keyboards and mice. Each device is "intelligent" and has its own microprocessor which sends messages to the Apple in a standard manner. In addition, the devices have standard cable connectors. They can be interchanged and third party manufacturers can offer alternatives to the Apple products.

Do not confuse the ADB with the Apple II gameport, which is used for panels, joysticks and other controllers.

Because the mouse on the IIgs conforms to the ADB standard, it is not compatible in operation with earlier mice offered on the //e's AppleMouse card or built into the //c.

Q. How do I access the mouse from Applesoft BASIC on the IIgs?

A. Mouse firmware is built into your IIgs as if you had a mouse card installed in Slot 4. First, make sure that your control panel is set to use the built-in Mouse firmware in slot 4, rather than your card in that slot. You can then designate Slot 4 as your INput slot and read the x and y coordinates as well as the status of the mouse button. The status is 4 if the button is up, and 1 if the button is held down.

Here is a sample Applesoft BASIC program which will turn on the mouse, maintain 80-column mode for display output, and list the x and y coordinates of the mouse on line 15 of the screen until any keyboard key is pressed.

```
10 HOME
20 D$=CHR$(4)
30 PRINT D$;"PR#4":PRINT CHR$(1):REM TURN
   ON MOUSE
40 PRINT D$;"PR#0":REM RETURN TO SCREEN
   OUTPUT
50 PRINT D$;"IN#4":REM ROUTE INPUT FROM
   MOUSE
60 INPUT "";X,Y,S
70 VTAB 15
80 PRINT X;",";Y;"-";S;
83 IF S=4 THEN PRINT"UP    ":GOTO 60
87 IF S=1 THEN PRINT"DOWN  ":GOTO 60
90 IF S>0 THEN 60
100 PRINT D$;"IN#0":REM ROUTE INPUT FROM
    KEYBOARD
110 PRINT D$;"PR#4":PRINT CHR$(0)
120 PRINT D$;"PR#3":REM RETURN TO 80 COL
    OUTPUT
130 END
```

This is essentially the same as working with an AppleMouse card in Slot 4.

contd.

Q. How does the motherboard on the IIgs upgrade for the //e differ from the one on original IIgs's?

A. The upgrade motherboard has an ADB port as well as a traditional keyboard socket. You can use them both at the same time. To use an Apple //e mouse you must also have the Apple mouse control card.

Q. Is it better to leave your Apple on all of the time or to turn it on and off for each period of use?

A. Experts as well as everyday users differ on this question. Turning the Apple on and off may shorten its useful life; however, if you use your Apple in an area with an unstable power supply, or use your Apple infrequently, you will want to turn it off. Remember that the on/off switch on the II+ and //e is an integral part of the power supply. If that switch wears out, you have to replace the entire power supply. For that reason, I recommend that you use the on/off switch on a power strip instead of the one built into your machine.

Q. Since you're saying that I should not use the on/off switch to change between applications, what is the proper procedure?

A. Pressing <Open apple-control-reset> (or just <control-reset> on the II+) is all that is required to have the computer read in a new copy of the operating system from the "boot disk."

Q. What determines which slot and drive will be used for "booting," that is for reading in an operating system and application program?

A. On Apple II's (except for //c with the new ROMs), each slot beginning with slot 7 is scanned to see if a disk drive control card is present. If such a card is found, the ROM attempts to read from drive 1 in that slot. If no drive is found in Slot 7, Slot 6 and each lower slot is tried in turn. On a //c with the new ROMs that were a part of the RAM expansion card/3.5" drive modification, the scan pattern is: Slot 4, then Slot 6 and then Slot 5. This allows for booting from the RAM disk in Slot 4. On the IIgs, the boot slot is determined by the Control Panel. The "startup slot" submenu under the "Slots" menu can be set to "SCAN", to any slot from 1 to 7, or to "RAM disk."

Q. Should I clean my //c? Will it collect dust?

A. Don't attempt to clean the vent slots of your //c. At the most, wipe the exterior of the case with a damp rag to control dust.

Q. How can I learn more about the ProDOS operating system?

A. Two books are particularly valuable: Beneath Apple ProDOS by Don Worth and Pieter Lechner (Reston Publishing $17.95) and ProDOS Inside and Out by Tom Weishaar and Dennis Doms (TAB Books $16.95). The Weishaar and Doms book is particularly valuable for Applesoft BASIC programmers.

Q. What is the difference between a "surge protector" and a "line conditioner?"

A. A surge protector eats voltage spikes and blows if there is too heavy a peak. A line conditioner is designed to maintain a level voltage even during summer brownouts. Line conditioners are generally more expensive.

Q. How do you run DOS 3.3 programs on a IIgs?

A. The procedure is easy, but depends on how you have configured your machine. I'll assume that you have 5 1/4" drives in Slot 6. If you are going to run a number of programs, you might want to use your control panel <open-apple-control-escape> to select the Slots menu and then set the Startup Slot to Slot 6. Then press return, escape and two more returns. After turning off the power for about 30 seconds to allow the change to be recorded, any future booting of your IIgs will automatically read from Slot 6 drive 1. If the disk in that drive is a DOS 3.3 disk instead of a ProDOS disk, you will be running DOS 3.3. (Note, unlike ProDOS or the p-System, all DOS 3.3 disks have a complete copy of the operating system on the disk and can be used for booting.)

A second method is to go to Applesoft BASIC by launching BASIC.SYSTEM. Type PR#6 <return> from the] BASIC prompt. A third method, if you are in the monitor, at a * prompt, type 6 <control-P><return>. If your Startup Slot has been set to a 5 1/4" drive, <open-apple-control-reset> will also reboot and cause DOS 3.3 to be read from the disk in Slot 6 Drive 1.

Once you are in DOS 3.3, you can return to ProDOS by inserting any Startup Disk in Drive 1 of any Slot and typing PR#n <return> at the BASIC prompt, where n is the number of the Slot.

Q. Can I run "Eamon" adventure games on my IIgs?

A. Eamon is a series of public domain adventure games programmed in Applesoft under DOS 3.3. You can obtain them from the WAP Library. My friends have run a number of them on the IIgs without any problems. Follow the procedure described above.

Q. How can I tell what type of Apple II is running my program?

A. Apple has designated three locations in the ROM to uniquely identify each type of machine. This information is summarized in the following table:

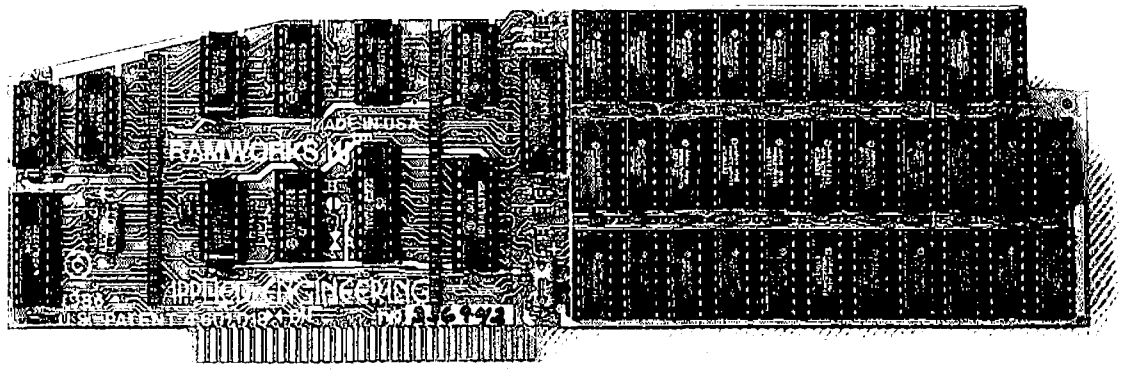
System	$FBB3	$FBC0	$FBBF
II	$38	$60	$2F
II +	$EA	$EA	$EA
//e	$06	$EA	$C1
//e Plus	$06	$E0	$00
IIGS	$06	$E0	$00
//c	$06	$00	$FF
//c Plus	$06	$00	$00

The "//e Plus" is also known as the enhanced //e. "//c Plus" is a //c with the memory card motherboard change. An Apple /// running emulation has a $EA in $FBB3 and a $8A in $FB1E. Notice that the values for a IIgs is exactly like those for the enhanced //e. (That's what I call compatibility!) To test to see if you are running a IIgs, run the following assembly routine with the ROM enabled in the language card address space:

contd. on pg 20

RamWorks® III

Patented Performance from the Recognized Leader



The Best Selling, Most Compatible, Most Recommended, Most Expandable Card Available.

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While RamWorks III is recognized by all memory intensive programs, NO other expansion card comes close to offering the multitude of enhancements to AppleWorks that RamWorks III does. Naturally, you'd expect RamWorks III to expand the available desktop, after all Applied Engineering was a year ahead of everyone else *including Apple* in offering more than 55K and we still provide the largest AppleWorks desktops available. But a larger desktop is just part of the story. Look at all the AppleWorks enhancements that even Apple's own card does not provide and *only* RamWorks III does. With a 265K or larger RamWorks III, *all* of AppleWorks (including printer routines) will automatically load itself into RAM dramatically increasing speed by eliminating the time required to access the program disk drive. Switch from word processing to spreadsheet to database at the speed of light with no wear on disk drives.

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

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RGB color is an option on RamWorks and with good reason. Some others combine RGB color output with their memory cards, but that's unfair for those who don't need RGB *and* for those that do. Because if you don't need RGB Applied Engineering doesn't make you buy it, but if you want RGB output you're in for a nice surprise because the RamWorks RGB option offers better color graphics plus a more readable 80 column text (that blows away any

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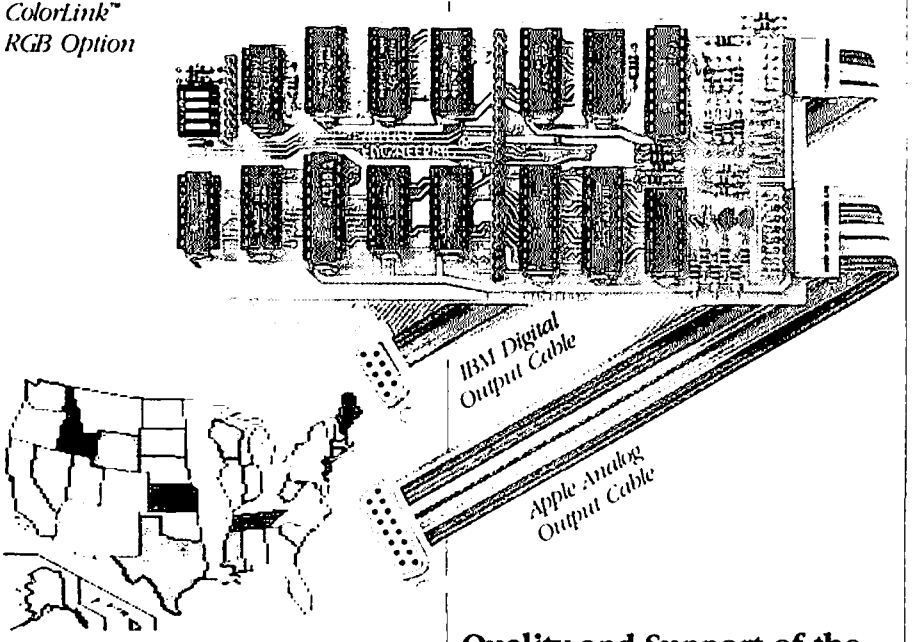
ColorLink™ RGB Option



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Steve Wozniak, the creator of Apple Computer

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- Accelerates AppleWorks
- Built-in AppleWorks printer buffer
- 100% compatible with all standard IIe software
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- Takes only one slot (auxiliary) even when fully expanded
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APPLE II NEWS AND NOTES
by Walt Mossberg

This month's column is a review of four Macintosh-style, mouse driven word processors for the Apple IIgs.

WORD PROCESSORS FOR THE IIGS

Word processors are a personal thing, and it's hard to generalize about what makes people like them. But the basic idea is that word processors ought to allow you to easily perform a wide variety of editing and printing actions on documents of all commonly-used lengths, with the kind of speed computers are supposed to bring to doing work.

This is the general standard I tried to apply to the four new IIgs word processors reviewed here. The four are: Writer's Choice Elite, GraphicWriter, MultiScribe IIgs, and MouseWrite. The first two are new word processors, written for the IIgs. The last two are new versions of existing programs, which were modified to use the IIgs memory or other special capabilities.

There are two other word processors which support some of the new features of the GS—AppleWorks V2.0, and Word Perfect IIgs V1.1. But these two will be referred to below and in the accompanying tables mainly for reference.

There isn't much new to say about AppleWorks, even though it supports the GS memory and RamDisk. WordPerfect is unquestionably the most powerful Apple II word processing program. But this review will largely ignore it because the somewhat clumsy, hastily-done GS version out now is being replaced by an all-new GS version so radically different as to make an evaluation here meaningless.

Writer's Choice Elite (V1.0), GraphicWriter (V1.1) and MultiScribe GS (V2.0) are the first word processors to make full use of the IIgs toolbox, and to rely on the computer's graphics screen, rather than its text capability, to do their work. They are the first to fully emulate Macintosh word processors in displaying, on screen and on paper, a variety of fonts in a mix of styles and sizes, and in mixing text and graphics.

MouseWrite (V2.6.8B), an older program that runs on the IIe and IIc as well, also uses the Macintosh-style mouse and pull-down menu approach, but it makes use of the text screen on the GS, and thus can't produce special fonts, styles and sizes on screen, nor mix text and graphics.

OVERVIEW

Writer's Choice Elite, GraphicWriter, and MultiScribe GS are the leading edge of a new generation of Macintosh-like word processors that stress the way documents look, rather than their contents. This type of program probably has bright prospects for repeating on the IIgs the great success it has had on the Mac. Unfortunately, in their present form, the first three examples aren't suitable for serious writing in business, the professions, journalism, academia, or any other field, in my opinion.

The three programs are different. But all three lack the features of a power word processor, they are painfully slow on anything but a one or two page document, and printing with them can take forever. What's more, the fancy fonts and styles they feature are mainly, to this reviewer's eye, unsuitable for serious documents, at least using an Imagewriter II and current printer drivers, (including a new driver just released by Apple). They may look great on a $6000 LaserWriter, but your reviewer wouldn't know, lacking his own LaserWriter.

In other words, the three vanguard packages flunk the test set out at the start of this column: they don't allow you to manipulate documents in as many ways as old-style word processors, they can't handle most commonly-used document lengths with acceptable efficiency, and they're so slow, on screen and printer, as to make users forget that computers are supposed to do things quickly. They meet the criteria only in one respect: the mouse-pulldown menu interface makes them easy to use, without memorizing commands.

I wouldn't recommend using these three unless you intend to focus on producing short flyers, signs, or title pages where unusual fonts and the ability to mix text and graphics are crucial. For business reports, academic papers, and articles of even modest length, they're just not up to the job.

On the other hand, the oldest of the lot, MouseWrite, really shines in comparison. If you can do without the font-and-picture capability, but love the Mouse and pull-down menu approach of the Mac, MouseWrite is for you. It is nearly as fast as AppleWorks, handles multiple long documents with ease, and packs all the features of a very powerful word processor behind the Mac-style Mouse-driven interface. What's more, it comes complete with a spelling checker, mail merge, macro capability, built-in telecommunications program, and more. For writers who like the Mouse/Mac interface, MouseWrite runs rings around the other three.

WRITING SLOWLY

Writer's Choice Elite, GraphicWriter, and MultiScribe GS are s-l-o-o-o-w compared to the old style of Apple word processor, because the computer takes longer to manipulate events on the graphics screen they use. For most operations, MouseWrite's speed is in line with that of AppleWorks. MouseWrite uses the computer's built-in MouseText routines to build its screens. These do not allow the on-screen display of fonts, underlining, boldface, etc. But some programmers say they are as much as 8 times faster than the GS graphics tools used by the others.

Here are the times it took the four IIgs word processors to ready themselves for writing on a clean screen, and then perform 3 common operations. Each was tested with the same document, an uncomplicated 2890-word article, about 6 single-spaced pages in length using the standard ImageWriter II typeface (35 blocks in straight ASCII TXT).

This document is quite typical of a modest-sized report for a business or professional office, or a modest-sized college paper. It was deliberately kept simple. On the graphics-oriented programs the test article was limited to a single font (usually the default Shaston), a single small type size, with only a dozen lines of bold-facing and no other styles. The GS was set on fast speed,

contd.

and contained 1.25MB of RAM. AppleWorks and WordPerfect are shown for comparison. Times are in minutes and seconds.

Program	Bootup To Write	Scroll Top-Bottm	Change Rt. Margin	Replace Word
AppleWorks	0:32	0:01	0:02	0:04
MouseWrite	0:28	0:01	0:18	0:09
WordPerfect	2:15	0:12	0:05	0:24
GraphicWriter	1:29	0:02	0:26	NA
Wr. Choice Elite	3:28	0:02	0:37	0:44
MultiScribe GS	2:27	0:05	0:02	0:17

It should be noted that, if AppleWorks and MouseWrite are loaded into RAM at bootup, their bootup times lengthen to 0:47 for AppleWorks and 1:17 for MouseWrite, but that's still better than the others. Bootup time for the last 4 programs includes time needed to use Apple's ProDOS-16 launcher screen. The word-replace test involved replacing 59 instances of the word "Apple" with the word "Peach" in a global operation. GraphicWriter has no find-and-replace capability.

PRINTING SLOWLY

If writing is slow on the three newest programs, printing is even worse. You can grow old waiting to get the best-quality printout on an Imagewriter II with Writer's Choice Elite, GraphicWriter, and MultiScribe GS. This may be Apple's fault because MultiScribe and Writer's Choice Elite, like many new IIgs programs, use a IIgs printer-driver Apple wrote and recently released to developers. But much of the slowness comes from the program's treatment of text as if it were art—each image is painstakingly drawn on screen and printer, not instantly displayed from the Apple and Imagewriter's built-in selection of text fonts and pitches.

Here are the times it took the word processors to print the same sample document on an ImageWriter II, in both fastest (draft) and best text modes. No pictures or color were used.

The fastest (draft) mode is plain vanilla, and on the newer programs doesn't feature any fonts, pictures or even boldfacing or underlining; it isn't acceptable for formal use. To obtain "best text," the highest quality text option was selected from within MouseWrite, GraphicWriter, MultiScribe and Writer's Choice Elite (in the latter two this was the "Better Text" option in the Apple-produced printer driver.) To obtain "best text" on AppleWorks and Word Perfect, the printer front panel was set on NLQ, the highest-quality but slowest setting. Please read the note following the table for an important caveat.

Program	Fastest Mode	Best Text Mode
AppleWorks	2:02	10:55
MouseWrite	2:01	10:50
WordPerfect	2:41	11:47
GraphicWriter	8:26*	29:06
Wr. Choice Elite	2:18	41:17
MultiScribe GS	4:37	22:07*

*On my system at least, MultiScribe GS garbled the text each time I tried to use its "Better Text" (highest quality) mode. So I tested it with its second-best mode called "Better Color." This prints much faster. Presumably, MultiScribe's best text mode would take at least half an hour to print the test document, but I couldn't test that. Similarly, GraphicWriter garbled the text each time I tried to use its fast draft mode. So I tested it with its second-fastest "standard" mode, which takes much longer to print. Presumably, GraphicWriter's draft mode is roughly as fast as the others', but I couldn't tell.

Here are capsule reviews of all four.

MULTISCRIBE GS Version 2.0

StyleWare, Inc., $99.95 List

Of the three newer programs in the group, this one has, for me, the best collection of features and feel. And its manual is by far the best of the newest three. Version 2.0 has fixed some bugs and lapses in the original release, and has added some nice features, such as the ability to directly import AppleWorks files and draw boxes and other shapes in the text. Among the nice touches are the lack of copy protection, the appearance on screen of page numbers, and very easy use of rulers, graphic devices which alter the margins and other text formatting aspects of material below them in the document.

MultiScribe also boasts the best set of commands of any of the three for selecting (highlighting) text—the essential step in this sort of program for cutting, pasting, copying, deleting, or changing fonts, sizes and styles. In MultiScribe there's a "select all" command that does an entire document, and triple-clicking selects a whole line. The program also facilitates moving around the document, by providing the AppleWorks-type Open-Apple 1-9 commands to supplement the scroll box.

But, as in the others, there are major limits. You can't set top and bottom margins independent of headers and footers. Printing is slow. Up to 8 document "windows" can be open at once on screen, but if the open documents total more than 10 single-spaced pages or so, program speed diminishes to uncomfortable levels.

And, while StyleWare has designed the best package of the three, it may have designed in bugs. The pre-release test copy of version 2.0 used for this review crashed every time it attempted to directly upload an AppleWorks file, for instance. And on my IIgs, the "Better Text" print mode yielded seriously garbled copy, though I know of at least one other GS owner who didn't have this problem. But these flaws may be fixed on the full release version.

WRITER'S CHOICE ELITE, Version 1.0

Activision, $99.95 List

Similar in many respects to MultiScribe, Writer's Choice Elite has a few advantages: more fonts (13 vs 9), the ability to type text on a color background and to make text appear "crossed out" in various colors. It also can have 16 document windows open at once, vs. MultiScribe's eight. Its printouts seemed a bit better. And it seemed freer of bugs, a big plus. But, overall, Writer's Choice Elite seemed a weaker program than MultiScribe. For one thing, it's copy protected, requiring the use of a key disk even when using it from a hard drive. And you have to rip off the cover of your manual and send it in to fully register with Activision.

With our test document loaded, it was much slower on three of our four speed tests—it became really irritating waiting for the active cursor to reappear after many operations, even though my system has an extra 1MB. And, despite the 16 window capability, the manual notes the program slows way down if more than 3 are used. It suggests keeping the number of fonts and graphics used "to a minimum", to preserve program efficiency, and limiting documents to 5-6 single-spaced pages for the same

contd.

reason. The program is so memory-sensitive that it is loaded with warning messages about running out of memory, and the manual urges users to split their documents into smaller pieces when these notices appear.

The program also has a "Select ALL" command, but fewer text-selection shortcuts than MultiScribe, and fewer colors of text available. I found its system of adding rulers so different sections of text take different formats to be so complicated it was almost impossible to use.

GRAPHICWRITER, Version 1.1

DataPak, $149.95 List

This is the most limited of the three as a word processor, and conversely, the best at art/graphics/page layout functions. It's the only one with a paint program's drawing tools and palettes available on screen, and really strong freehand painting capabilities.

In fact, DataPak says it really doesn't think of GraphicWriter as a word processor at all, but rather as an evolving desktop publishing program that happens to include a pretty good word processor. It is the strongest program reviewed here, by far, in page layout capabilities. Still, the box says it's a "Full" word processor, and we judge it here on its word-processing capabilities.

The software is copy-protected. However, DataPak has softened the blow somewhat by providing a free backup disk to registered users and by including a utility that will install GraphicWriter on hard disks.

GraphicWriter has some unique features—the ability to display text on screen in doubled size, for instance. And it is built around an unusual system whereby documents are split into independently-editable "regions" for better control of page layout. These "regions" can contain text in various fonts, colors and sizes, or graphics, either in the form of movable "objects" or freehand drawings. The program can also "mask" text with a see-through overlay of color.

But it supports only one document on screen at a time, has only three fonts, no find/replace command, no onscreen page numbers, and poor text-selection ability. And on my machine, draft printing came out garbled. A new version, the company says, will add fonts and features. But for now, GraphicWriter is the best on art and page layout, the weakest on word processing power.

MOUSEWRITE, Version 2.6.8B

Roger Wagner Publishing, $149.95 List

When you boot up MouseWrite on the GS, it looks just like it does on the IIe/IIc—unpretty. It features the top menu bar and document window, but no nice white "paper," no fancy fonts, no onscreen color or pictures available. But this program makes full use of the basic mouse/pulldown menu interface. And, alone in this group, it is a real, feature-laden word processor that works fast and handles long documents. You can load in up to 12 documents of 48K each if you have at least 384K of memory.

The program features extensive printer support, custom printers, color text, and generates a very nice near-letter-quality typeface from the ImageWriter II. It also comes with custom fonts you can download to the printer, though they can't be seen on screen. You can chain-print documents from disk, merge text onscreen, and even get a word count and analysis by educational grade-level. It has extensive disk and file handling capabilities and is completely non-copy protected. It can directly load unconverted AppleWorks or DOS 3.3 files. It comes with built-in desk accessories, communications program, spelling checker, mail merge, and a powerful macro system to automate commands and enter frequently-used text.

MouseWrite comes with two fat, very clear manuals—an alphabetized reference book covering every feature and a tutorial manual. The program also includes extensive sample files for training.

For serious writing, MouseWrite was a winner on the IIe. It's still a winner on the IIgs.

CONCLUSION

The mouse-driven, pull-down menu interface pioneered by the Macintosh has much to recommend it in word processors, and so do the onscreen display of fonts and styles, and the mixture of text and graphics. Such features theoretically allow the same software used for heavy-duty composing of text to be used to make the document look great, too. And the IIGS seems, on paper, to have the speed and graphics capability to emulate the Macintosh in this respect.

But we're not there yet. Writer's Choice Elite, GraphicWriter, and MultiScribe GS—the first efforts at full fledged Mac-style word processors for the GS—have had to sacrifice huge degrees of writing power and speed to yield the visual results they sought. In doing so, they have placed themselves outside the category of acceptable word processors for serious writing. The best that can be said is that they are useful for very short documents, or possibly for prettying up longer documents written first on faster, more powerful programs (for those who have the time).

For now, MouseWrite, which achieves the Mac-style interface but not its onscreen font capabilities, is still the best Mac-type word processor that supports GS features. Its programmers didn't trade off the features and speed of a powerful writing tool, because they didn't have to pay the penalty of a graphics-based display.

It's to be hoped that somebody will yet issue a program that does graphic tricks and still allows serious word processing. These now exist on the Mac, but it took some years for them to appear. Remember that the original Mac, running MacWrite and the like, was so slow and clumsy many businesses just ignored it. But that changed. Presumably, the GS holds the power to allow the same evolution, possibly via a class of programs that will require much more than the now-standard 512K to run.

Q & A contd. from pg 15

```
        SEC
        JSR     $FE1F
        BCS     IIEROUTINE
        BCC     GSROUTINE
```

In your GSROUTINE, the Y register will have a machine ID value (=0 for a GS, 1-255 for future models), and the X register contains the ROM version number.

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APPLE IIGS SIG NEWS by Peg Matzen

Over 35 IIgs owners participated as Chairman Ted Meyer booted up his offerings for the SIG meeting at 8:00 a.m. on July 25. Ted covered current SIG business first:

1) The need for volunteers, that is, disk copiers and persons to assist with programs and Apple Teas.

2) The need for persons downloading from commercial telecommunications services for the Disketeria to coordinate with SIG librarian David Todd (301-228-0237) or Sherman Lewis (703-437-3483), who is the collecting agent for WAP Disketeria software.

3) The need to consider meeting formats that would best fit members' needs.

4) The need for ideas to be incorporated into tutorials for new GS owners.

A Tutorial for IIgs owners will be held on September 19 at 1:00 p.m. in the WAP office—under the able tutorship of Bob Platt. Call the WAP office to reserve this opportunity to learn.

David Todd reports that the IIgs Disk Library in the Disketeria now offers a disk that converts DOS 3.3 to ProDOS and both a ProDOS and IIgs disk for new members.

Ray Hakim donated his computer for demonstration of Graphic Writer and, assisted by Greg King, made demo copies of Graphic Writer and the new IIgs System Disk for members supplying a disk.

Demo programs will be offered at future meetings—IF YOU WANT A COPY, BRING YOUR OWN 3.5 DISK.

Ted introduced Andy Gavin and Jason Ruben, who presented a demonstration and their assessment of paint programs for the IIgs: Paintworks Plus, Deluxe Paint, and 816 Paint. A brief summary of their findings is given below.

The program for the August SIG meeting will feature demos of several Word Processor programs. COME—add your expertise to the demonstrations and discussions, or ABSORB the wealth of information the experts so willingly share.

Feature	Paintworks+	Deluxe Paint	816 Paint
Cost	$80	$99	$75
Company:	Activision	EOA	Baudville
Modes:	310	320,640 tru full page mde	Single;dbl.;32;40;
Animation:	Picture cycling	Rotation cycling	8-bar cycling
Zoom:	1 size,poor prec/def.	4 sizes(1 useless)	3 sizes;excel. prec/def.
Tools:	ProDOS 1.0; Tools 1.0	ProDOS 1.1; Tools 1.1	ProDOS 1.2; Tools 2.0
Extra Tools:	—	Gradient;persp. gd brushes	Spline;French curve
Scrn Mver:	Hand,fair	Keyboard,poor	Hand,excellent
Full	—	Fair,no Undo	Excel.;complete
Palettes:	128;1 at a time	1	8 at once
Select:	Fair;desgn gd but awkwrd	Good;awkward at times	Excel.;works in all 8 palettes
*CCP:	Box;lasso;zoom;copy;paste	Brush w/many funct.; good but slow	Box:zoom,nom; lasso:zoom,no zoom; copy;move;smear;stretch;rotate
Modes:	Restrain,hand	Restrain	Restrain,pick,hand
Page Feat.:	1 event	Stencil;spare;lock;fix	Reverse
B&W Print:	—	Poor	Excellent
Fill(shape):	Solid or pattern	Pattern;gradient;perspective	Excel.;solid or pattern

*CCP: cut, copy, paste.
Note 1: In each program 16 of 4,096 colors are available.
Note 2: The DeLuxe Paint disk can be duplicated but a Key Disk is always required (info. courtesy of Rick Saunders).

APPLEWORKS SIG NEWS by Peg Matzen

The 12-N AppleWorks SIG got off to a late start because most AppleWorks SIG members lingered in the Auditorium, fascinated by the Apple II program demonstrating Telecommunications. Nevertheless, a number of faithfuls came to participate in the SIG's always lively Q & A session. In Ken De Vito's absence, Lou Pastura chaired the session.

The constant search for reasonably priced software and the need to try it before you buy it was discussed. A return policy beneficial to the purchaser was also recommended.

Morgan Jopling told of attending a recent AppleWorks seminar featuring Dr. Warren Williams, who represented the National AppleWorks Users Group (NAUG). The seminar was held on June 27—the day of the WAP Garage sale. Morgan believes he was the only WAP member to attend, so he has graciously offered to report on this seminar and share some of its handouts at our SIG meeting August 22. Come—hear Morgan tell what Dr. Williams and NAUG had to offer.

Our SIG will sorely miss Richard Rowell, a faithful member and resource, who died recently. Harvey Kaye is in charge of a memorial fund for Richard. For further information, call the WAP office.

Have you made your reservation to attend the Bethesda Apple Tea in September? This tea promises a wonderful opportunity for RAM disk users and those considering memory expansion to LEARN! What's more—our AppleWorks SIG Chairpersons, Ken De Vito and George Sall, are the information resources. Advance reservations are required: Washington Apple Pi, Bethesda Apple Tea, Saturday, September 26, 1:30-3:30 PM (after the USUHS WAP and AppleWorks SIG); Topic: AppleWorks and its RAM-ifications: Uses of the RAM Disk, Revisited with Resources Ken De Vito and George Sall; Place: Stone Ridge/ Country Day School, 9101 Rockville Pike, Bethesda, MD 20852; RSVP to Sister Laurine Haley, (O) 657-4322, (H) 897-5666.

Remember, there are two meetings for AppleWorks SIGs: 8:00 AM or 12 N before and after the regular WAP meeting. Both offer real opportunities to learn more about AppleWorks. New users will find members knowledgeable and helpful.

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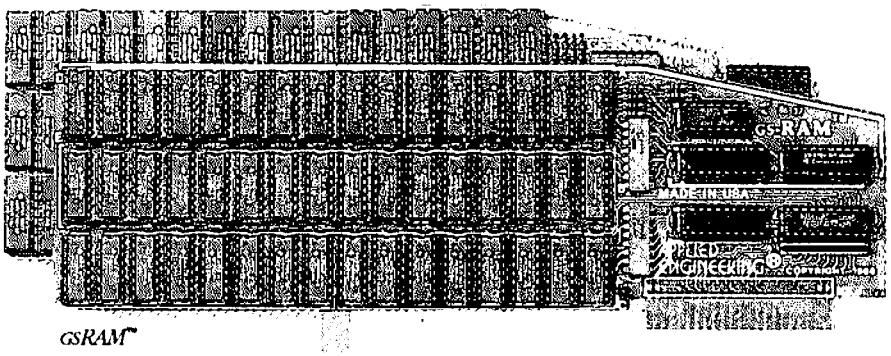

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- Made in USA

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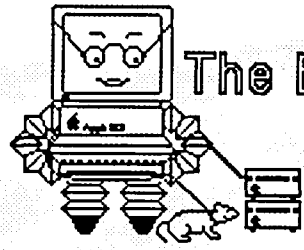

The Button-down Apple

by Raymond Hobbs

Last time, we took a look at about one-half of a topic—that of how to get a machine language program loaded into the Apple. This time, we're going to look at the other half of the topic, which is what to do when the machine language is not given, but only the assembly language program is listed. In order to look at this problem, I shall employ the same listing that I used in the last article (from Apple Graphics & Arcade Game Design, by Jeffrey Stanton - The Book Co., Los Angeles, CA., 1982):

```
                ORG $6000
6000: 20 E2 F3 JSR $F3E2 ; HGR
6003: A2 03    LDX #$03  ; COLOR=WHITE
6005: 20 F0 F6 JSR $F6F0 ; HCOLOR
6008: A0 00    LDY #$00  ; HORIZ. POSITION HI BYTE
600A: A2 64    LDX #$64  ; HORIZ. POSITION LO BYTE
600C: A9 32    LDA #$32  ; VERT. POSITION
600E: 20 57 F4 JSR $F457 ; HPLOT POINT 1
6011: A2 00    LDX #$00  ; HORIZ. POSITION HI BYTE
6013: A9 96    LDA #$96  ; HORIZ. POSITION LO BYTE
6015: A0 64    LDY #$64  ; VERT. POSITION
6017: 20 3A F5 JSR $F53A ; HLINE TO POINT 2
601A: A2 00    LDX #$00  ; HORIZ. POSITION HI BYTE
601C: A9 32    LDA #$32  ; HORIZ. POSITION LO BYTE
601E: A0 64    LDY #$64  ; VERT. POSITION
6020: 20 3A F5 JSR $F53A ; HLINE TO POINT 3
6023: A2 00    LDX #$00  ; HORIZ. POSITION HI BYTE
6025: A9 64    LDA #$64  ; HORIZ. POSITION LO BYTE
6027: A0 32    LDY #$32  ; VERT. POSITION
6029: 20 3A F5 JSR $F53A ; HLINE BACK TO POINT 1
602C: 60       RTS       ; RETURN
```

The machine language code is in the left column, while the assembly language listing is in the center column. Comments appear at the right. Of course, if the machine language code is not given, only the middle and right columns will be available. If your Apple is equipped with the Mini-Assembler, then the assembly language code may be entered using it, but even without the Mini-Assembler, the assembly language code may be translated and entered directly into the Apple, even if you know nothing about assembly language.

The machine language code corresponds to the assembly language code on a one-for-one basis. That is, one assembly language instruction generates exactly one machine language instruction. Each instruction consists of one or two parts: the ***opcode*** , or operation code (instruction) and the ***operand,*** or address part (what the opcode operates upon). These parts are labeled below, both for the assembly language part and the machine language part of the listing:

Our task is just to translate the opcode and operand into machine language. You may notice that the opcode "JSR" is always represented by the machine language "20". The opcode "RTS" (the last instruction) is represented by the machine

```
      opcode  operand   opcode  operand
        ↘      ↙        ↘       ↙
6000: 20 E2 F3          JSR $F3E2        ; HGR
6003: A2 03             LDX #$03         ; COLOR=WHITE
6005: 20 F0 F6          JSR $F6F0        ; HCOLOR
```

language "60", "LDA" equates to "A9", "LDX" is "A2" and "LDY" is "A0". Of course, this is easy as long as the machine language code is included alongside of the assembly language code. What to do, though, when the machine language code is absent? Any 6502 reference book will have a table of machine language equivalents of assembly language opcodes - the one I use is Rodnay Zaks' "Programming the 6502", published by Sybex. Armed with a reference book and a little knowledge of addressing, any assembly language listing may be quickly converted into machine code.

Notice that in the assembly language listing, certain operands begin with a dollar sign, while others start with a pound sign followed by a dollar sign. These signs are ***addressing mode*** indicators, specifying ***absolute*** and ***immediate*** address modes, respectively:

```
                                  ←—— absolute
6000: 20 E2 F3          JSR $F3E2        ; HGR
                                  ←—— immediate
6003: A2 03             LDX #$03         ; COLOR=WHITE
```

Absolute addressing indicates a specific memory location, while immediate addressing indicates an actual value. In the above cases, the absolute mode of the first instruction (JSR = "Jump to Subroutine") indicates that the 6502 is to transfer control to the subroutine located at memory location F3E2, while the immediate mode of the second instruction (LDS = "Load the X Register) commands the 6502 to load the value 03 into the internal X-register. The sample program includes one more addressing mode, called ***implied*** addressing, in the last instruction, which reads simply

RTS

Since there is no operand in this instruction, the address is implied by the opcode itself (RTS = "Return from Subroutine"), which tells the 6502 to return from the current code segment to the program that called it (in the sample given, this means the BASIC program which uses the machine language subroutine to draw a triangle on the screen).

The last feature of assembly language listings to point out is that the addresses given are read normally, but the machine language equivalent inverts the address:

contd.

```
        lo-order  hi-order     hi-order  lo-order
            ↓  ↓                  ↓  ↓
6005:  20 F0 F6        JSR $F6F0        ; HCOLOR
```

The two bytes that make up a 6502 address are identified as *lo-order* and *hi-order*. When the 6502 reads them into its address registers, it needs to read the lo-order byte first, then the hi-order byte, and for that reason, we must invert the order of the two bytes that make up the assembly language address. Notice how the absolute address F6F0 in the assembly language instruction above was inverted to F0F6 in the equivalent machine language instruction.

That gives us enough information to convert the total subroutine from assembly language into machine language. After that, we simply enter the Monitor as before, and start entering the code as machine language. For a routine this short, it is easiest to enter it at location $300:

```
* 300:20 E2 F3 A2 03 20 F0 F6 A0 00 A2 64 A9 32 20 57
F4 A2 00 A9 96 A0 64 20 3A F5 A2 00 A9 32 A0 64 20 3A
F5 A2 00 A9 64 A0 32 20 3A F5 60
```

Then we just save that block of memory to disk as a binary file, and run as before. There are a few more twists to addressing modes, and in order to finish off this subject, I'll cover the rest of the addressing modes next time.

Music Sig News
.....by Raymond Hobbs

MUSIC SIG is a special-interest group dedicated to music lovers. We use all software and synthesizers, and run on Apples, Ataris, Commodores, IBMs and Macs. Our meetings are held on the second Saturday of each month, in the early afternoon. Call Bill Bittle (301)236-9898 for meeting place and time information.

Our May meeting was held at the White Oak Public Library in Silver Spring, Maryland. An original program written by one of Music SIG's own for the Apple][gs was demonstrated, showing off a few of the musically sophisticated features of Apple's newest in the][line. After the demo, the meeting reconvened for a picnic in nearby Burtonsville - guess who provided the music?

Our thanks to the outgoing officers of Music SIG, who helped launch on of the most successful SIGs in WAP. The officers for the upcoming year are:

Chairman - Bill Bittle
Vice-Chairman #1 - Carol-Lee Erikson
Vice-Chairman #2 - temporarily vacant
Membership Secretary/Treasurer - Chris Ehemann
Music Librarian - Kedenzze Carpentre
Reporter - Ray Hobbs

The next meeting will be held on Saturday, September 12 at 1:00 P.M. at the White Oak Public Library in Silver Spring, Maryland. Call for directions.

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I LOVE APPLE MUSIC - SIMPLE APPLE MUSIC: Part 4

by Gary Hayman ©1987

In Part 3 we took a look at using published sheet music and deciphering it so that we could enter our pitches and durations in our programs in order to produce our sounds and songs. I presented you with several tables that you could easily use to identify the correct durations and notes. I discussed the use of "Easy Music" which is of great value to the beginner or the non-musician. We developed a "One Song Data Player", and I showed you how to enter some song data. We then had some fun with several songs. I hope that you were following along. If not, it is not too late to catch up by reviewing your WAP Journals.

This time, continuing in our series, I want to tie up some loose ends in writing our music to our computer from the sheet music that you will be using. I will also discuss array music which you will find very helpful.

SLURS & TIES

Speaking of "ties", the symbol that I called a tie in Part 3, Figure 1, is not really a tie but a "slur". Please make the correction to your drawing. It is again drawn in Figure 1 here. A tie, however, is a slur. Confused? In music, when the composer desires two or more notes, that are next to each other, to be sustained (held) so that there is a smoothness or connection (no breaks) between the notes, he/she will indicate this by placing a curved line over the group of notes. This means that the notes are to be played "Legato"—smooth and connected. Using this simple sound driver program we cannot duplicate this smoothness if the notes next to each other are not of the same pitch—they cannot be connected without a small break. However, if the notes next to each other are of the same pitch, those notes are called a "tie" and we CAN do something about the tie. In order to reflect the tie in our computer music, that is making it appear connected, here is the TIE RULE—If the printed music indicates a tie for two or more notes that are next to each other and are OF THE SAME PITCH (Example: F&F, G&G but not F&G) then add the durations of the notes together and treat the tie as ONE note. Example: if 4 eighth note Bs are indicated to be tied, treat them as one half note B. Remember that the tie is indicated in the printed music by a curved line over the notes. Many times you will see the tie crossing the measure boundary. That's O.K. if you take care.

When using the Tie Rule, if the durations of the tied notes add up to over 255, (this will only happen when you are crossing measures) treat it in the following manner. Either don't tie them at all or (preferred) subtract 255 from the combined duration amount and program two notes of the same pitch using the shorter duration first. If the tie crosses several measures, don't use the Tie Rule at all. And, of course, another good Tie Rule is that one should never wear a striped tie with a checkered suit.

FERMATA

The next symbol that we can take advantage of is the Fermata which means to pause or hold the note longer than its usual time (duration) value. It looks like the top half of an "O" with a dot in the center. (See Figure 1). You may, if you desire, increase the duration value of the note about 10%. Thus a quarter note which would normally have a duration value of 64, if it was marked with a Fermata, would receive a duration value of 70 (64 + 6) instead. You may experiment with the 10% value either increasing or decreasing or decreasing it, but don't increase it so much that it approaches 50%. If you are just starting out I suggest that you ignore the Fermata until you become more comfortable with the programming.

STACCATO

Another symbol is the Staccato. (See Figure 1). This is a dot above or below the individual note that tells the musician to release the key at the instant of sound. Please note that this dot is different from the dots found in a dotted note (extension of duration) or the dot of the Fermata (explained above). Now since this note is to be played in a short manner, here is a suggestion for you to consider when you run across it. STACCATO RULE—Reduce the duration of the note by approximately 30% and add a period of silence after the note from 10 to 30% of the original duration of the note. You will have to play with these values a little to discover what sounds best to you. Example: If an eighth note is indicated to be played Staccato, reduce its normal duration of 32 to 22 (30% of 32 = approx. 10) and add a duration of silence of 10 (or a little less, depending upon how it sounds to you). Remember, in order to program silence you use a pitch or frequency value of "1" in your program. So a silence value of duration 10, in your program would look like - DATA 1, 10.

Now, normally, in the easy music you don't run across the Staccato very often. But if you do, such as in old folk tunes that are to sound as if they are played by a banjo, you now can make the song appear a little more authentic. If it gets too complicated, then ignore this too.

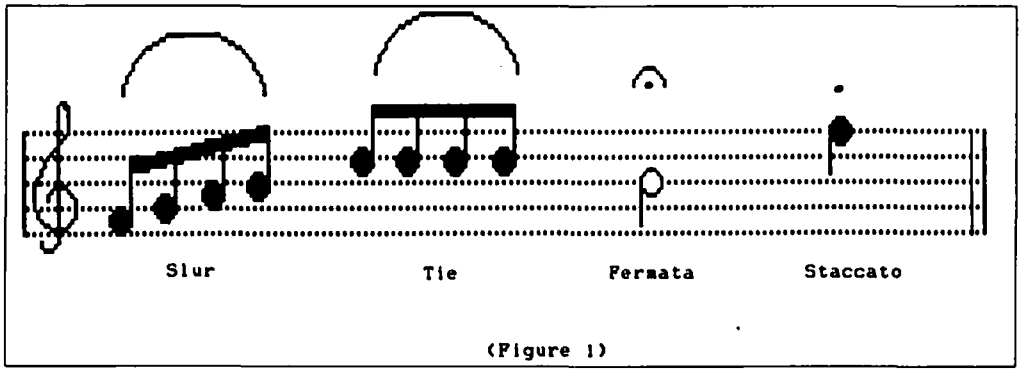
REPEATS

There are several symbols and words that are incorporated into a piece of music that signify that parts of the music are to be played again. They are known as repeats, and they really make life easy, for you the programmer, to enable you to include music in your programs much more quickly. First, I will discuss the common repeats and then I will discuss what you do with them.

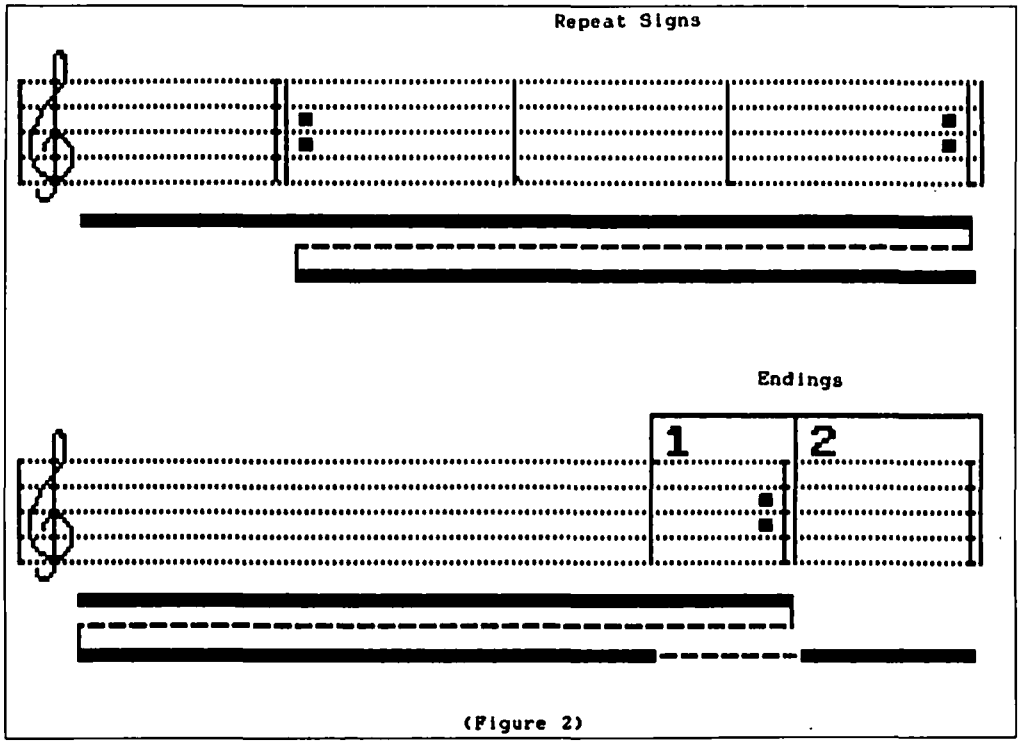
The most common repeat sign will be the double bar with two dots to the right (start of the repeat section) or left (conclusion of the repeat section) of the bar (See Figure 2). Since this music is to be repeated, when you get to the conclusion sign (dots to the left of the double bar) you return to the start part (dots to the right of the double bar) and play the notes again till the conclusion is reached a second time.

Sometimes the repeat conclusion sign appears alone (no start

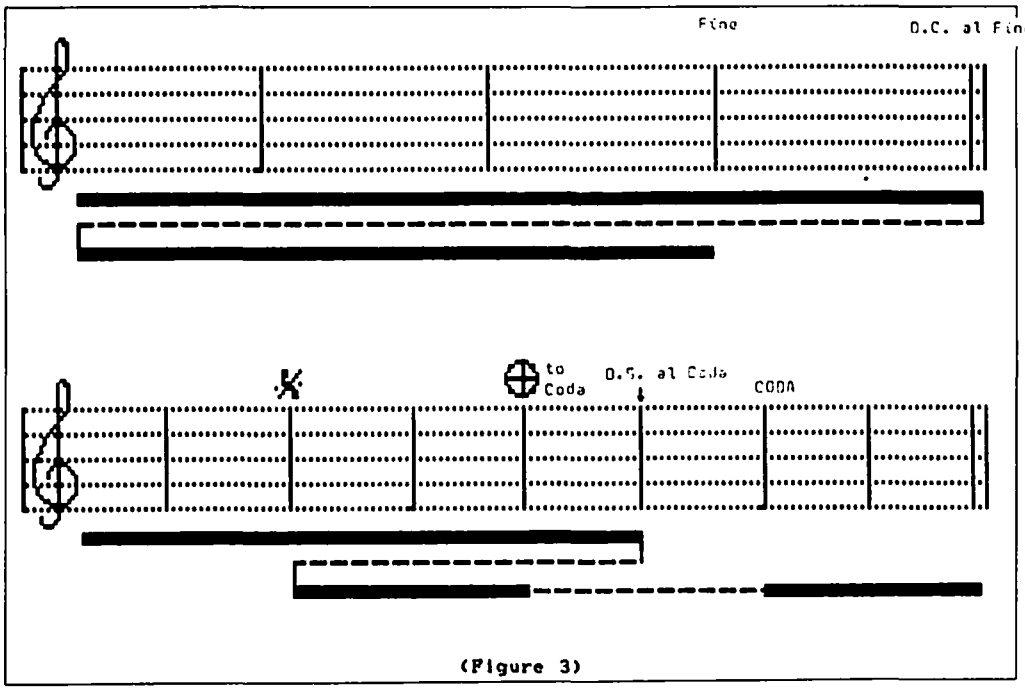
contd.



(Figure 1)



(Figure 2)



(Figure 3)

sign), then the repetition starts from the beginning of the musical piece.

Many times you will see special ending signs (See Figure 2). What you will do is to play through the first ending and then repeat. However, during the second time through, you skip the first ending and play the second ending instead.

The composer may have a different form of repeat in mind. You may find the symbols "D.C. al Fine" over a measure of the music. This means that you are to return to the BEGINNING of the music and play until you come to the point in the music marked with a "Fine." (See Figure 3). Another form of repeat that is common is indicated by the symbol "D.S. al CODA". Upon reaching this symbol, you are to return to symbol 1 (See Figure 3) and continue to symbol 2 (See Figure 3), and then SKIP to the symbol "CODA" and continue from there. Whew! That's complicated.

Now let me assure you that if you are using "Easy Music" that I discussed in my last article (Part 3 of the series), the publisher of the music takes you by the hand and eliminates the complications so that you can follow the repeats easily When reviewing your music, you should be aware of the repeat signs and should arrange your DATA statements so that the repeats are in DATA statement blocks. This way, when you are going to program a repeat, all you have to do, using a line editor program such as G.P.L.E (which I discussed before), is to reproduce the DATA line statement(s) that are to be repeated, change the line number(s) to higher progressive line numbers, and you will have saved yourself much programming time.

Let me give you a brief, but common example. You have a piece of music that has an "ending 1" symbol above the eighth measure and an "ending 2" symbol above the ninth measure. You are immediately aware that measures one through seven are to be repeated so there is no sense for you to have to program those measures twice. You start by programming measures one

contd.

through seven in DATA statements. (See Listing 11 below, statements 1001-1007). Then program the notes in measure 8 (the first ending) in a DATA statement. Now go back to the DATA statements for measures 1 through 7 using your line editor and just change the line numbers to a higher progression. Finally program measure nine (the second ending). It might look something like this:

```
1001 DATA 64,32,72,64,....      : REM DATA FOR
     MEASURE ONE
1002 DATA 72,64,54,127,....     : REM DATA FOR
     MEASURE TWO
1003 DATA 76,32,76,32,....      : REM DATA FOR
     MEASURE THREE
1004 DATA ....                  : REM DATA FOR
     MEASURE FOUR
1005 DATA ....                  : REM DATA FOR
     MEASURE FIVE
1006 DATA ....                  : REM DATA FOR
     MEASURE SIX
1007 DATA ....                  : REM DATA FOR
     MEASURE SEVEN
1008 DATA 54,32,64,32,....      : REM DATA FOR
     MEASURE EIGHT
              (THE FIRST ENDING)
101  DATA 64,32,72,64,....      : REM SAME DATA AS
     1001
1012 DATA 72,64,54,127,....     : REM SAME DATA AS
     1002
1013 DATA 76,32,76,32,....      : REM SAME DATA AS
     1003
1014 DATA ....          : REM SAME DATA AS 1004
1015 DATA ....          : REM SAME DATA AS 1005
1016 DATA ....          : REM SAME DATA AS 1006
1017 DATA ....          : REM SAME DATA AS 1007
1018 DATA 64,32,64,32,....      : REM DATA FOR
     MEASURE NINE
            (THE SECOND ENDING)
```

————(Listing 11)————

TEMPO

Some music is to be played faster than other music. You may find at the beginning of the music written indications such as: vivace (fast and lively), tranquillo (calm), moderato (moderate), largo/lento/andanate/andantino (slowly), allegretto (fairly rapid), allegro (lively), presto (very fast), alla marcia (in march style), etc. The best way to judge the appropriate tempo or speed is by listening to it and making speed adjustments. I have provided you with an easy way to adjust the OVERALL speed of the music with the DURATION MULTIPLIER—the variable "DM". In part 3 of the series, starting with Listing 7, you will find the variable DM. If the music is too SLOW for you, speed it up by changing DM from 1 (the default number) to .9 or .8 or .7 etc. This will decrease the duration of each note and thus speed up the music. If the music is too FAST for you, slow it down by changing DM from 1 to 1.1 or 1.2 or 1.3. You have to be careful here for you don't want any DM multiplication to create a (D * DM) duration of over 255. In general, if no note in your music has a duration in excess of a half note (127), then you can increase the DM up to 2 without any problem. Otherwise you can't go all the way up to 2 without an error message appearing when the program sees a number in excess of 255. However, you can cheat.

THE SOUNDS OF SILENCE

You know how it is when you look at an object, turn your head or close your eyes and the impression of the object is still there for a second or so. This is called "perseveration". Your ears do this too. When a note is sounded and there is a period of silence after the note, the impression of the note tends to linger in your ear (or mind). We can take advantage of this. If we have to make the music slower by using the DM and it does create a (D * DM) number larger than 255, you can shorten the duration of the note so that when multiplied does not create a number greater than 255. We then follow the note with a period of silence of a duration equal to the amount that we reduced the original duration of the note. Confused again? Let me give you an example. Suppose you programmed a piece of music that contained notes of duration less or equal to 127 (the half note), except for one which was a dotted half (192). The music, when played, was too fast for you. You wanted to slow it down so you changed DM to 2. This would REALLY slow the music. The music would play until it came to the dotted half note, which now has increased from 192 to 384 as a result of the DM (2 * 192) (which is in excess of 255) and you would receive an error message. Your fix would be to change the dotted half note (192) to a half note (127) and program a quarter rest period of SILENCE (64) just after the note. Now you would have a sound duration of the note (127), that when multiplied by the DM (2) would equal 254 (does not exceed 255) and a silence of 64 x 2 or 128. The 254 plus the 128 would equal 382 (which is close enough to the original 384) which would have created the error, but now the 382 is in two pieces—one sound and the other silence. During the period of silence there would be a perseveration which would trick your ear into hearing a lingering note. You may want to use the same technique when a tie becomes too long and creates an error.

When speeding up music, which may be the case most of the time, you do not have to concern yourself with this problem.

UP SCALE/DOWN SCALE

Suppose you would like all the notes of the song to be a little higher up the scale. This is easily accomplished with the FREQUENCY MULTIPLIER—the variable "FM". By changing the FM from the default of 1 to something less than one such as .9 or .8 or .7 etc., all notes will climb up the scale in exact relationship to each other. You can make all notes lower in pitch by increasing the FM from 1 to a higher number (1.1 or 1.2 or 1.4, etc.). If all your notes are above middle C (108) then you are pretty safe going as high as FM = 2. But be careful here too that no result of (F * FM) exceeds 255. If it does, no big deal, your program will produce an error, alerting you. Then all you have to do is to decrease the FM value till the program plays correctly.

A RAY OF SOUND

You will notice that in our previous programs (See Listings 6 and 7 of Part 2 and Listings 7 and 8 of Part 3) we were reading

contd.

our "F"s and "D"s (Frequencies and Durations) directly from our DATA statements to play our music. While this is a convenient method of doing it, it does impose a limitation. Suppose you have 8 songs contained in DATA statements (as you do in Listing 10 Part 3) and you wanted to play all the songs independently of each other. For example, play song 3 by itself. You can't, as it is set up, call for an individual song. If you did a RESTORE and tried, data from the first song, not the third, would be read first. What to do? Use arrays.

If the necessary F and D information were contained in arrays you could then, at your leisure, call any song or sound, whenever you wanted too, and as many times as you wanted from the array. This is an important concept in an educational program where you may want one sound for correct answers, another sound for incorrect answers, another sound for screen changes, still another for category changes, etc.

The array procedure is relatively simple:

DIMENSION arrays for each song or sound.
READ DATA into the arrays.
PLAY the song/sound from the information contained in the arrays.

The following program takes the data for the eight songs that we established in Listing 10 Part 3 (with some slight modifications) and places each song into a separate array. When we ask for a certain song to be played, the song is loaded into a holding array and the holding array is used to supply the necessary information to the subroutine Universal Player. I have used the short songs (from Listing 10 Part 3) to give you an idea how this could work. When typing the listing, please remember that I am using DOS 3.3. ProDOS users may have to make some adjustments.

```
NEW
  1    REM MULTI SONG PLAYER
  10   TEXT : HOME :D$ =  CHR$ (4)
  20   PRINT "WORKING"
  30   PRINT D$;"BLOAD SOUND DRIVER"
  40   DL = 50: REM MAXIMUM DIMENSION
       LENGTH OF LONGEST SONG + AT LEAST 2
  50   DIM SO(DL): REM HOLDING AREA
  60   DIM S1(DL),S2(DL),S3(DL),S4(DL),S5(DL),
       S6(DL),S7(DL), S8(DL): REM SONG
       DIMENSIONS
  70   REM **SONG TITLES**
  80   S1$ = "GIVE MY REGARDS..."
  90   S2$ = "MICHAEL ROW THE BOAT..."
  100  S3$ = "HELLO MY BABY"
  110  S4$ = "GENTLE ON MY MIND"
  120  S5$ = "FRENSESI"
  130  S6$ = "BILL BAILEY"
  140  S7$ = "THE LOOK OF LOVE"
  150  S8$ = "MISTY"
  160  GOSUB 5010: REM PUTS SONG INTO
       HOLDING ARRAY
  170  FOR X = 1 TO DL:S1(X) = SO(X): NEXT X: REM
       PUTS HOLDING ARRAY INTO SONG ARRAY
  180  GOSUB 5010: FOR X = 1 TO DL:S2(X) = SO(X):
       NEXT X
  190  GOSUB 5010: FOR X = 1 TO DL:S3(X) = SO(X):
       NEXT X
  200  GOSUB 5010: FOR X = 1 TO DL:S4(X) = SO(X):
       NEXT X
  210  GOSUB 5010: FOR X = 1 TO DL:S5(X) = SO(X):
       NEXT X
  220  GOSUB 5010: FOR X = 1 TO DL:S6(X) = SO(X):
       NEXT X
  230  GOSUB 5010: FOR X = 1 TO DL:S7(X) = SO(X):
       NEXT X
  240  GOSUB 5010: FOR X = 1 TO DL:S8(X) = SO(X):
       NEXT X
  250  ONERR  GOTO 260: REM NO LETTERS
       ALLOWED
  260  GOSUB 6010: REM TO PRINT MENU
  270  IF N > 8 OR N < 1 THEN 260: REM LIMITING
       TO 8 SELECTIONS HERE
  280  HOME : PRINT "PLAYING...."
  290  ON N GOTO 340,360,380,400,420,440,460,480
  300  REM **********************
  310  REM SCREEN/ARRAY TO HOLDING
  320  REM THEN TO PLAYER SUB
  330  REM **********************
  340  VTAB 12: HTAB (20 -  LEN (S1$) / 2): PRINT S1$
  350  FOR X = 1 TO DL:SO(X) = S1(X): NEXT X:
       GOSUB 7010: GOTO 260
  360  VTAB 12: HTAB (20 -  LEN (S2$) / 2): PRINT S2$
  370  FOR X = 1 TO DL:SO(X) = S2(X): NEXT X:
       GOSUB 7010: GOTO 260
  380  VTAB 12: HTAB (20 -  LEN (S3$) / 2): PRINT S3$
  390  FOR X = 1 TO DL:SO(X) = S3(X): NEXT X:
       GOSUB 7010: GOTO 260
  400  VTAB 12: HTAB (20 -  LEN (S4$) / 2): PRINT S4$
  410  FOR X = 1 TO DL:SO(X) = S4(X): NEXT X:
       GOSUB 7010: GOTO 260
  420  VTAB 12: HTAB (20 -  LEN (S5$) / 2): PRINT S5$
  430  FOR X = 1 TO DL:SO(X) = S5(X): NEXT X:
GOSUB 7010: GOTO 260
  440  VTAB 12: HTAB (20 -  LEN (S6$) / 2): PRINT S6$
  450  FOR X = 1 TO DL:SO(X) = S6(X): NEXT X:
       GOSUB 7010: GOTO 260
  460  VTAB 12: HTAB (20 -  LEN (S7$) / 2): PRINT S7$
  470  FOR X = 1 TO DL:SO(X) = S7(X): NEXT X:
       GOSUB 7010: GOTO 260
  480  VTAB 12: HTAB (20 -  LEN (S8$) / 2): PRINT S8$
  490  FOR X = 1 TO DL:SO(X) = S8(X): NEXT X:
       GOSUB 7010: GOTO 260
  500  END
  1000 REM DATA SONG VARIOUS
  1020 REM GIVE MY REGARDS...
  1025 DATA .9, 1: REM THE FM AND DM
       MULTIPLIERS
  1030 DATA 108, 64, 96, 127, 86, 64, 80, 127, 72, 127,
       80, 255, 86, 192, 0, 0
  1040 REM MICHAEL ROW THE BOAT
  1045 DATA 2, 1
  1050 DATA 108, 64, 86, 64, 72, 64, 86, 64, 72, 64, 64,
       64, 72, 127, 86, 64, 72, 64, 64, 255, 72, 127, 0, 0
  1060 REM HELLO MY BABY
```

contd.

```
1065 DATA 1.5, 1
1070 DATA 54, 64, 48, 127, 54, 64, 48, 127, 54, 127,
     64, 64, 60, 127, 64, 64, 60, 127, 64, 127, 72, 64,
     64, 127, 72, 64, 64, 127, 72, 127, 96, 255, 0, 0
1080 REM GENTLE ON MY MIND
1085 DATA 1, 1
1090 DATA 72, 64, 72, 64, 72, 64, 72, 64, 86, 64, 72,
     64, 72, 64, 72, 64, 86, 64, 72, 64, 72, 64, 72, 64,
     64, 64, 72, 64, 86, 64, 96, 64, 108, 64, 96, 255,
     0, 0
1100 REM FRENESI
1105 DATA 2, 1.5
1110 DATA 72, 64, 64, 32, 54, 32, 48, 32, 43, 32, 48,
     32, 54, 32, 48, 64, 48, 64, 36, 127, 43, 64, 48, 32,
     43, 32, 48, 32, 54, 32, 64, 32, 54, 32, 48, 64, 48,
     64, 36, 127, 0, 0
1120 REM BILL BAILEY
1125 DATA 1, 1
1130 DATA 108, 64, 96, 64, 80, 64, 64, 64, 68, 64, 64,
     64, 54, 64, 1, 64, 108, 64, 96, 54, 80, 64, 64,
     255, 0, 0
1140 REM THE LOOK OF LOVE
1145 DATA 2, 1.2
1150 DATA 127, 64, 96, 192, 64, 64, 72, 192, 80, 64,
     86, 192, 96, 64, 72, 192, 0, 0
1160 REM MISTY
1165 DATA 1.5, 1.3
1170 DATA 54, 32, 64, 32, 86, 192, 108, 32, 96, 32,
     90, 32, 48, 32, 48, 32, 48, 32, 48, 32, 54, 32, 64,
     32, 80, 32, 96, 64, 0, 0
5000 REM ******************
5001 REM SUB LOADS VALUES INTO
5002 REM HOLDING AREA. SET DL
5003 REM IN BODY OF PROGRAM.
5004 REM ******************
5010 FOR X = 1 TO DL STEP 2
5020 READ SO(X),SO(X + 1)
5030 IF SO(X) = 0 AND SO(X + 1) = 0 THEN X = DL
5040 NEXT : RETURN
6000 REM ******************
6001 REM SONG MENU
6002 REM ******************
6010 HOME
6020 PRINT "PLEASE SELECT A SONG TO HEAR"
6030 VTAB 7
6040 PRINT "1) ";S1$
6050 PRINT "2) ";S2$
6060 PRINT "3) ";S3$
6070 PRINT "4) ";S4$
6080 PRINT "5) ";S5$
6090 PRINT "6) ";S6$
6100 PRINT "7) ";S7$
6110 PRINT "8) ";S8$
6120 VTAB 22: PRINT "SELECT 1-8 ";: GET N:
     PRINT N: RETURN
7000 REM ********************
7001 REM SUB UNIVERSAL PLAYER
7002 REM ********************
7003 REM DL REPRESENTS LENGTH
7004 REM OF SONG DIMENSION. SET
7005 REM IT IN THE MAIN BODY OF
7006 REM THE PROGRAM
7007 REM
7010 FM = SO(1):DM = SO(2): REM ALWAYS THE
     FIRST TWO VALUES IN THE ARRAY. THESE
     ARE THE F AND D MULTIPLIERS.
7020 FOR X = 3 TO DL - 1 STEP 2
7030 IF SO(X) = 0 AND SO(X + 1) = 0 THEN X =
     DL - 1: GOTO 7070
7040 POKE 768,SO(X) * FM: IF SO(X) = 1 THEN
     POKE 768,1: REM PROTECTS SILENCE (1)
     FROM BEING EFFECTED BY THE FM
     MULTIPLIER.
7050 POKE 769,SO(X + 1) * DM
7060 CALL 770
7070 NEXT X: RETURN
SAVE MULTI SONG PLAYER
```

---------- **(Listing 12)** ---------

Here are some comments about Listing 12. Line 40 sets the DL, the maximum dimension length of the longest song plus an extra 2 (to allow for the FM and the DM). I have used the value 50 but I could have used a slightly smaller number in this case since the songs were short. If you have long songs you would have to use a larger number. Line 50 creates the holding dimension. It will be used several times for loading each song array with data it obtains from the DATA statements, and later it is used to recapture the data from the song arrays and send it to the Universal Player subroutine. Line 60 dimensions the song arrays. Song titles are stringed in lines 70 - 150. Lines 160 to 240 transfers the holding array into each song array. Notice how similar they are. For ease of programming you can use a line editor such as G.P.L.E, duplicate and change line numbers and array identifications quickly. Lines 300 to 490 prints song names on screen, transfers the song array to the holding array, goes to the playing subroutine and then returns to the screen menu. These lines are also candidates for quick entry using a line editor since they are so similar.

Lines 1000 to 1170 contain the music DATA statements. You will find them similar to the DATA statements in Listing 10 Part 3. NOTE: To save programming time, you can, using your RENUMBER & HOLD and & MERGE capability, quickly move your previous typed listing to this program. There are a couple of differences however. Two numbers representing the FM and DM (Frequency and Duration multipliers) are inserted at the beginning of each song data package. This will be a MUST for future packages. Each song package will now end with a 0, 0 at the end. There is a test for the 0, 0 in the Universal Player subroutine. Also I have removed the "1, 255" at the end of each song as there will be no need for a rest delay here.

Our first subroutine starts at 5000. It reads the DATA statements into the holding array and returns when it encounters the 0, 0. The subroutine that starts at 6000 prints the screen menu for subsequent selections. The Universal Player subroutine that starts at 7000, reads the FM and DM first, plays each note from the holding array, starting at the third entry, (multiplied by the

contd. on pg 31

APPLE II HI-RES GRAPHICS TO TYPEWRITER ART: The LHGR140 Program

by Allan M. Bloom, PhD CDP

An Apple user with a letter quality printer does not have to go through life without art's civilizing influence. Back in the dark ages, computer jocks used to do some serious civilizing with nothing fancier than a 1403 line printer. A picture was created with characters that a typewriter could print. A lot of that "typewriter graphics" art was pretty primitive, especially the stuff people punched into cards themselves. (Cards? Hoo boy, am I dating myself!) Much better were the "digitizing" programs that scanned a real picture. In the early 70's (there I go dating myself again) lots of shopping malls had little stands where you and your sweetie could get scanned by a video camera and get a line printer "photo" of yourselves in a few minutes.

A lot of bulletin boards used to stock digitized works of art that could be downloaded for printing on a non-graphics printer. The late and lamented ARTSIG on CompuServe was like that. ARTSIG also had the public domain program LHGR that makes the wealth of Apple II Hi-Res images available as "typewriter graphics" art works. LHGR did not tell who wrote it, so I can not properly thank or reference him or her.

LHGR digitizes a 33-sector DOS 3.3 Hi-Res binary graphics file into a 140-column by 96 row "typewriter graphics" DOS text file. Vanilla LHGR output, however, makes an awkward picture. LHGR's output is in two parts, 96 lines of the first 79 columns of the picture followed by another 96 lines of the rightmost 61 columns. It is a major bore to re-create the full sized picture with the more common Apple editors. It is rather more of a bore to print a full sized 140-column picture on an 80-column printer. Or even on a 132-column printer. Fear not, gentle reader. I offer a solution.

The LHGR140 program is a modified LHGR—modified in two important ways. First, it will output an entire digitized Hi-Res file at once, not in two parts. Second, it allows you to "crop" a picture to fit your particular display device. You may select any part of the 140-column full width picture (by width and start position) as your "typewriter graphics" text file.

LHGR140, like its parent LHGR, is an Applesoft BASIC program (with some machine language code) that executes on any machine in the Apple II family. It also runs on an Apple /// in emulation. LHGR140 gives you the following screen:

```
A:  LHGR140: CONVERT HI-RES SCREEN
    TO LINE PRINTER ART (AMB 07/87
B:  NAME OF HI-RES FILE:
    LOADING filename
C:  NAME OF TEXT OUTPUT FILE:
D:  PICTURE IS 140 COLUMNS WIDE.
    SHALL I CROP IT? ('Y' OR 'N'):
D1: ENTER DESIRED WIDTH (1 TO 140);
D2: START COLUMN (1 TO xxx)?
E:  STANDBY
    DONE
```

A: These two lines identify the program, its function, the author, and the revision date.

B: Enter the name of the Hi-Res picture file. It will take a few seconds to load the binary file into memory.

C: Enter the name of the output digitized "typewriter graphics" file.

D: Type "N" and press RETURN if you want the full 140-column picture. Enter "Y" if you only want part of the picture.

D1: Enter the width of the cropped picture. Use "79" for console screen display or for printing on an 80-column printer. A number less than "1" or greater than "140" returns you to message D1.

D2: Enter the start column for the picture. The program computes the rightmost point ("xxx") you can start for a given width. Use "1" for the leftmost part, or "xxx" for the rightmost part, or any number in between. A number less than 1 or greater than "xxx" returns you to message D2.

E: The STANDBY is a dumb message meaning "I'm writing the text file." When you see DONE, the program has finished.

Life is rather simpler if you copy the Hi-Res file to be digitized onto the LHGR140 boot disk. Be careful about disk space. A full digitized picture takes some 57 sectors of the disk. A 79-column picture takes the same space as the original binary file.

LHGR140 comes as an ASCII text file named LHGR140.TEXT that looks like this:

contd. on pg 32

I Love Apple Music contd. from pg 30

proper FM and DM) through our old friend the sound driver, with a CALL 770. You will notice that in line 7040 I have added a test to ensure that a rest (where we use the number "1"), always remains a rest and cannot be effected by a FM multiplication. When 0, 0 is encountered, the song is through and the subroutine returns to the menu.

I really encourage you to try this one out. It could be the basis for your upcoming multi-song program which I am sure you will write some day.

I didn't have space to get to Text File Music or the Alternate Sound Driver this time, but they will be covered in the next installment. Coming up: No Sound Driver Sounds, Commercial Programs, Outside Speakers. And More....

```
CALL-151
4000: 20 73 40 A9 60 85 FF A9
4008: 00 85 FE A9 20 85 E6 AD
4010: E6 40 85 E0 AD E7 40 85
4018: E1 AD E4 40 85 E2 A9 00
4020: A8 91 FE 20 9E 40 20 8E
4028: 40 F0 05 A9 01 20 97 40
4030: E6 E2 20 9E 40 20 8E 40
4038: F0 05 A9 04 20 97 40 E6
4040: E0 20 9E 40 20 8E 40 F0
4048: 05 A9 08 20 97 40 C6 E2
4050: 20 9E 40 20 8E 40 F0 05
4058: A9 02 20 97 40 A0 00 B1
4060: FE AA BD D4 40 91 FE E6
4068: FE D0 02 E6 FF 20 A8 40
4070: 90 AC 60 A9 00 8D E4 40
4078: 8D E6 40 8D E7 40 A9 18
4080: 8D E8 40 A9 01 8D E9 40
4088: A9 C0 8D E5 40 60 A4 E5
4090: B1 26 25 30 29 7F 60 A0
4098: 00 11 FE 91 FE 60 A6 E0
40A0: A4 E1 A5 E2 20 11 F4 60
40A8: E6 E0 D0 02 E6 E1 A5 E1
40B0: CD E9 40 90 1D A5 E0 CD
40B8: E8 40 90 16 AD E6 40 85
40C0: E0 AD E7 40 85 E1 E6 E2
40C8: E6 E2 A5 E2 CD E5 40 90
40D0: 01 60 18 60 A0 27 27 A2
40D8: AC 5B AF C6 AC 5C DD B7
40E0: ED CC DD C0 A0 C3 D9 8A
40E8: A0 8B B4 00
D43CG
BSAVE LPD,A$4000,L$EB
FP
1000  HIMEM: 8192
1010  HOME
1014  PRINT "CONVERT HI-RES"
1015  PRINT "TO LINE PRINTER"
1020  D$ =  CHR$(4): SP = 160
1030  PRINT D$;"BLOAD LPD,D1"
1035  PRINT
1040  INPUT "HIRES FILE:";FI$
1045  PRINT
1050  PRINT "LOADING ";FI$
1055  PRINT
1060  PRINT D$;"BLOAD";FI$;
       ",A$2000"
  SAVE  LHGR140
1070  CALL 16384
1080  INPUT "NAME OF TEXT OUTFILE: ";FI$
1090  PRINT
1100  PRINT "PICTURE IS 140 COLS WIDE."
1101  INPUT "SHALL I CROP IT? (Y OR N):"
       ;A1$
1102  IF A1$ = "Y" THEN GOTO 1130
1104  IF A1$ = "N" THEN GOTO 1120
1106  GOTO 1090
1120  W = 139
1122  S = 0
1129  GOTO 1200
1130  PRINT
1132  INPUT "ENTER WIDTH (1 to 140):";W
1134  IF W < 1 THEN GOTO 1130
1136  IF W > 140 THEN GOTO 1130
1138  X = 140 - W + 1
1140  PRINT
1142  PRINT "START COLUMN (1 TO ";X;")";
1143  INPUT S
1144  IF S < 1 THEN GOTO 1140
1146  IF S > X THEN GOTO 1140
1148  W = W + S - 2
1150  S = S - 1
1200  PRINT
1201  PRINT "STANDBY"
1202  PRINT D$;"OPEN";FI$
1203  PRINT D$;"DELETE";FI$
1210  PRINT D$;"OPEN";FI$
1220  PRINT D$;"WRITE";FI$
1230  H = 0:HH = 139
1240  FOR J = 24576 TO  PEEK (254) +
       256 *  PEEK (255) - 1 STEP 140
1250  H0 = HH
1260  FOR K = HH TO H STEP  - 1
1270  IF  (PEEK(J+K) <> SP) OR (K=H)
       THEN H0 = K:K = H
1280  NEXT
1281  H8 = H
1282  H9 = H0
1285  IF H0 > W THEN H9 = W
1287  IF H  < S THEN H8 = S
1290  FOR K = H8 TO H9
1300  PRINT  CHR$ ( PEEK (J + K));
1310  NEXT : PRINT
1320  NEXT
1350  PRINT D$;"CLOSE";FI$: PRINT "DONE."
```

contd.

Let The FCC Know contd. from pg 3

meeting, to which everyone is invited.

In the meantime, and in any event, Washington Apple Pi members are encouraged to contact the FCC commissioners directly, as well as the chairmen of the Congressional committees with oversight over the FCC, to make their views (pro or con) known. Letters should refer to:

CC Docket No. 87-215

Amendment of Part 69 of the Commission's Rules Relating to Enhanced Service Providers

All letters should give your name and address and be signed in black ink.

Write the FCC Commissioners—Dennis Patrick, James H. Quello, Patricia Diaz Dennis and Mimi Dawson—at:

Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

Write the Congressional committee chairmen with oversight responsibility at:

Senator Daniel Inouye, Chairman
Senate Subcommittee on Communications
SH-227 Hart Building
Washington, DC 20510

and

The Honorable Ed Markey, Chairman
House Telecommun. and Finance Subcommittee
B-331 Rayburn Building
Washington, DC 20515

You may also want to write your own Senators and Representatives at:

United States Senate
Washington, D.C. 20510

or

U.S. House of Representatives
Washington, DC 20515

EXAMPLE

Roger Wagner's "Printographer" program comes with some sample Hi-Res graphic images. This is how LHGR140 digitizes the rightmost part of the RAVEN Hi-Res file on the "Printographer" disk:

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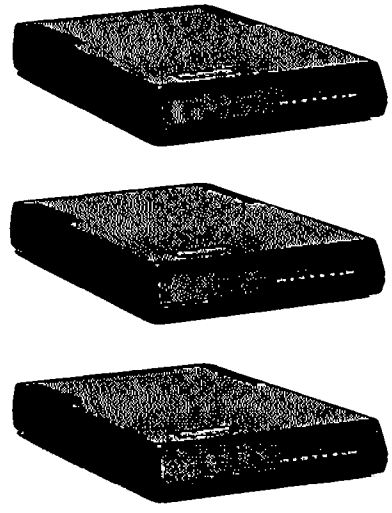

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2400 bps 2400bps 2400 bps 2400 bps 2400 bps 2400 bps

BEST OF THE APPLE ITEMS FROM THE TCS

by Lou Pastura

APPLEWORKS TRICKS

FROM BILL HUGHES ON 6/19

Is there any way to 'hide' the contents of a cell or column in AppleWorks? I have used THE Spreadsheet from Call-A.P.P.L.E. that has this capability. Also, is there any way to set up a template so that if I enter a label in one cell it will be entered automatically in another cell? Can AppleWorks 2.0, or any add-on programs such as Pinpoint or MacroWorks give me the ability to do either of these?

FROM J. EVANS JENNINGS ON 06/19

You can hide the contents of all labels in a column by inserting a single blank space in front of the text entries you want to hide (using a quotation mark to begin the entry) and reducing the column width to one space. The same general idea can be used to hide text in a single cell, just put a number of spaces in front of the label equal to the width of the cell.

FROM RICHARD ROWELL ON 06/21

Your suggestion of using leading spaces to hide cell contents is just the kind of tip that makes this board so valuable. Thanks. SuperMacroWorks can be used to get the contents of a cell and place them somewhere else via its <read> command, however the instructions are usually very spreadsheet-specific.

SPELLING BEE

FROM SKIP MORGRIDGE ON 06/29

What are some opinions and reasons concerning the best spelling checker software to use with AppleWorks? I've used several including Sensible Speller, Pinpoint Speller, Pinpoint Document Checker, Haba Spell It, et al. Even when I load them into my 1 meg ramcard along with the document being checked, I find that some are painfully slow and cumbersome. Which is the fastest?

FROM DAN HUGHES ON 06/29

I have Pinpoint Speller and it is excruciating slow even with the dictionary in /Ram5 on a IIGS. I use Mousewrite and its speller doesn't beep over every word—it is very rapid and accurate. The only complaint I have about it is that you have to mark a mispelled word that is not on the correction list and then go back to it via a search and find the character afterwards, instead of immediately correcting it.

FROM DAVE HARVEY ON 06/30

I've been very satisfied with Sensible Speller for a number of reasons. I can load the program and dictionary onto my RAM card for speed. It comes up with suggestions for replacing the word that are correct 99% of the time. You can change the word right in the document while checking (no need to go back to the word processor except for printing it out.) With an accelerator card it speeds up even faster. As far as speed goes, a lot depends on how big a dictionary you have. I use an 80,000 word dictionary.

FROM KIM BRENNAN ON 06/30

Skip, I've got Pinpoint's Document Checker and it is real fast—running from a hard disk. It is a stand alone spell checker and can work on plain text files too. I've used Pinpoint's Spelling Checker but it was definitely ridiculously slow. The Document Checker has several nifty features... When you've added a word to its dictionary it recognizes it right away. In addition should you say that a word is correct BUT decide not to add it to the dictionary it will ignore that word (during the current checking). It keeps the most frequently accessed (i.e., checked) words in a Ram cache, so it can actually speed up while checking a long document. It is really so easy to use and so fast that it is used for only VERY short periods. I like it.

FROM EDWARD DOMBEK ON 06/30

I use PP's Spelling Checker all the time and it IS slow. The only way to really make any spelling checker faster is with a speed up card while it is in RAM. Hey Kim, how much faster is it on a GS?

FROM KIM BRENNAN ON 07/01

The Spelling Checker is still slow, even on a GS. BUT the DOCUMENT Checker is extremely fast! They use the same dictionary files (or rather they can—they don't have to). The Spelling Checker requires Pinpoint but The Document Checker does not.

DDT FOR APPLEWORKS AND PRODOS

FROM DAVE HARVEY ON 07/26

Maybe you've already heard of this bug, but I hadn't. In AppleWorks version 2.0 only, you can't put more than 80 files in a subdirectory. AW will crash when trying to read it.

FIX:

In BASIC type BLOAD SEG.M1,T0,L2,A$300,B$1428A
Now type POKE 768,48
POKE 769,129
BSAVE SEG.M1,T0,L2,A$300,B$1428A

After this patch, you can have up to 129 files in your subdirectories. Above info taken from Vol 2, no. 4 of AppleWorks EXCLUSIVE REFERENCE.

FROM DALE SMITH ON 06/21

ProDOS 8 v1.4 was released Apr 17, 1987. I've had a brief look at the areas which had bugs that were patched by the PATCH.PRODOS program which originated in Australia and was modified several times by Glen Bredon to cover additional bugs. In v1.4 one finds Apple has at last adopted all of the patches from the PATCH.PRODOS program, except that the MLIACTV bug is not fixed in this release. Thus you still need to run the program.

3.5 FORMATTING TRICK

FROM DAVID TODD ON 06/21

Found a neat way to format a number of 3.5 disks at a sitting.

contd.

Format one disk with Copy 2+ and call it /DATA or whatever. Boot up DiversiCopy 3.5 and hit M for Mass Production. On default DiversiCopy will format and copy only the blocks with valid data. With a blank disk this takes under 50 seconds per disk including insertion and removal. Just hit "A" for Automatic and feed it when it beeps.

GS SOFTWARE: WOWS AND WOES

FROM DAN HUGHES ON 07/05

I bought Writer's Choice Elite this weekend, and much to my surprise, it is a superb program. It's put out by Activision and sells for $64 at Diskcovery. It is superior to Multiscribe.GS in several ways, and in the most important way of all—it works! You can have 16 files on the desktop; there are about 25 fonts; and a nice little touch—the program tells you how many characters you have left and warns you if you are running short of memory. I copied the new system software to my Multiscribe disk and I thought I had solved the problem of losing files. I cut and pasted a file together of 12 pages and still had mouse control—I could add to it and save it, but when I opened up a second file, it went flying. The new version should be out soon, but I am seriously thinking of returning mine. My only gripe with Writer's Choice is that it is copy protected, but a mitigating circumstance is that you can make a back up disk by copying all files separately to another disk and then use the master disk as a "key" disk when called for at the beginning of the session. Another great thing is that you can use Paintworks Plus files to add art to your word processing document. That and using several different fonts, really eat up memory fast. I checked once with four short files and a pic on desktop and I was down to 692,000 characters! Better have a 1 meg card for this one. I am quite pleased with this word processor. It's everything Multiscribe is supposed to be, if it only worked!

FROM JAMES FRISON ON 07/06

I can only second your comments on Multiscribe GS. My version crashes in numerous ways and is almost useless unless you save after every keystroke. Multiscribe says they will send Version 2.0 for free to purchasers of early versions but 2.0 has been in the stores for weeks and no mail from Multiscribe has appeared at my door. Like you, if 2.0 doesn't work, it is going back.

FROM DAN HUGHES ON 07/07

Good news for Multiscribe.GS users, I think. I finally got a copy of the lastest system software and ran my Multiscribe program from the new disk and guess what—it seems to be working. I have mouse control. I loaded a short file and then a longer (12K) file, cut and pasted it to the short file and got about a 14K file and then loaded the 12K file on top. No problems. Now, I have both Multiscribe and Writer's Choice working OK, not too mention Appleworks and MouseWrite. That'll do me for a while, I guess, until the Desk Top Publishing programs start coming out for the IIGS.

GS GAMES

FROM JAMES FRISON ON 07/13

I haven't seen any comments on this game here so I thought I'd leave some comments for what it is worth. Shanghai is a game for the GS from Activision based on the Chinese game Mah Jongg. The concept is simple but skill and luck are required in order to win. You start with a pyramid of 144 tiles and you must remove matching pairs. Only tiles which are not covered by other tiles or tiles which have no tiles to the left and/or right may be removed. The object is to remove all the tiles. Analytic skills and patience are rewarded (usually). The game makes good use of the GS graphics capabilities and can be played entirely with the mouse. While simple to play, the game can be very addictive. Recommended.

FROM CORY MCNUTT ON 07/14

Just got Accolade's GS version of Mean 18 Golf the other day. The graphics are beautiful and the sound effects, what little there are, are very realistic. You have a choice of three courses, and you can practice both driving and putting. Up to four people can play. You can also design your own holes or an entire course with the architect feature. Individual games can be saved and returned to later. Also features a scorecard, overhead view, and will show you the path that all of your shots have taken so far during a hole. It is on one disk (3.5) and requires 512K. The program lists for $44.95. I recommend it for all of you frustrated golfers!

FROM DAN HUGHES ON 07/16

Just picked up Mean 18 Golf today, and it looks great. It has super graphics and you can have 1-4 players shoot a game of golf at any one of three courses: Pebble Beach, St. Andrews and another, which I can't remember off hand. You make your shots by clicking the mouse to start your stroke, clicking again to indicate how hard you want to hit the ball and clicking a third time for accurate direction. It's loads of fun. The sounds include a golf ball flying by your head and another nice touch—when you miss a short putt, the crowd goes, "Aww." Get this one for sure.

EGGHEADS DISCUSS SAME!

FROM DAN HUGHES ON 07/08

Found a new software store called Egghead Discount Software, which is located right across Rt. 50 from Seven Corners in the Willston Shopping Center. They have a nice selection of stuff for the Apple II family along with tons of stuff for IBM and the Mac. Their prices seem somewhat lower than the other area stores too. I talked to one of the disk-jockeys and he said they have only been open about 6 weeks. Currently they close at 7 pm. Check it out.

FROM JAMES FRISON ON 07/15

Based on a prior message, I found out about the new Egghead Software store in 7 Corners. I checked it out today and am happy to report that they have a good selection of software and very good prices. Check it out if you have the cash.

FROM DAN HUGHES ON 07/16

Made a trip out to Egghead software in Va. today and found out that the Washington area could, finally, have the makings of a software price war. I talked to the assistant manager and he asked me if I had any questions on the store or its policies, and I said, "Oh, do you have different policies than the other local software outlets?" He said, "Well, we have a 2-week return for any reason

contd.

policy." And I said: "Well, that's no big deal, B. Dalton has a return anytime policy." Then he said: "We have a beat any price policy." And I asked him about it, and this is for real. Egghead will beat the price of any retail software store in the country, including mail order houses that have a retail outlet. This is amazing. I told the guy I had seen Mean 18 advertised for $25 in an A+ ad from Programs Plus in Connecticut and I also said they have a retail outlet (I have been there). He agreed to reduce the Egghead $33.99 price to $24 to beat PPlus. Incredible. Anyway, he said that he would do it for anybody who could prove that another store had a lower price for something—magazine ad, telephone number, etc. This all bodes very well for local software purchasers. I told the guy that if word got out that he was following such a beat any price policy, he would be swamped.

FROM PAUL SCHLOSSER ON 07/23
I stopped in Eggheads, and everything everybody says is true! The salesmen are very helpful, will open ANY software package for your trial in the store, and they offer a no questions asked return policy—as well as a policy of beating any advertised price by a software retailer with a retail outlet (can't be strictly mail-order).

FROM PAUL KELBAUGH ON 07/25
Thanks to superb directions (oh that Lewis and Clark had it so good), I found Egghead Software. A few comments in the good news/bad news mode: GOOD NEWS: I introduced myself as a Pi member and the saleman (Bob) said "Oh yes, we hope to do a lot of business with your folks. I understand your meetings are held right down the road!" (SCORE: 10 points for recognition) GOOD NEWS: I asked if it was true they (Egghead) would meet any published retail price. Answer: Yes (SCORE: 20 points for procedure) GOOD NEWS: I asked if that included Programs Plus in Connecticut. Answer: "Since we are a natiowide chain, if they have a retail store, we will match AND knock off another dollar" (SCORE: 30 points for being ready to battle the enemy) GOOD NEWS: I looked around the store and it was bright, clean and the salespersons seemed capable of understanding the programs in stock. ALso, he offered to demo ANY program in the store. No obligation, (SCORE: 40 points for customer service).

Egghead has a lot going for it. Now the BAD NEWS. I entered the store with a list of SIX software programs for the Apple II (mostly GS specific) I was prepared to buy, on the spot, greenback dollars. How did Egghead do (or better yet, how did I do)? MOUSETALK: Salesman hadn't heard of it, didn't have it in stock and had to look it up in the Egghead order book to see if it exists. SOFTSWITCH by Roger Wagner Pubs: Salesman hadn't heard of it, didn't have it in stock and most importantly, as far as the Egghead order book is concerned, the program does not exist. WRITERS CHOICE ELITE: Salesman knew OF it but not about it, didn't have it in stock. Would order for delivery in about a week. MEAN 18 GOLF: Salesman knew about this one. Knew there was an Apple II version. Out of stock. Willing to order for delivery in a week. DELUXE DRAW: Salesman never heard of it. Not in stock, not a stock item and the Egghead Bible has never heard of it. PROTERM Comm program: Salesman had never heard of it, not in stock and the Egghead Order book does not list it as an item ever available from Egghead, anywhere. Conclusion: Great concept, nice store, friendly sales help. Don't know beans about selling Apple II programs to cash customers. I'll go back in about six weeks and see how they do again. I think they will sell a lot of IBM and MSDOS programs.

FROM WALT MOSSBERG ON 07/26
Well, Egghead software is as good as its word when it comes to their price guarantee! Yesterday I went into their Rockville store and bought MicroLeague baseball for a price that was 27% BELOW their already-discounted regular price. And they were cheerful about it! Details follow. ML Baseball lists for $39.95. Egghead's price is $32.99, a few dollars less than Crown. But Programs Plus advertises it for $25, and since Programs Plus isn't just a mail-order house, but has a retail store in Connecticut, it counts against the Egghead price-beater policy. So I showed them the PP ad in the new mag I had with me (I'd just bought it in Clinton next door) and they sold me MicroLeague Baseball for $1 less than the PP price, or $24. I like that store! Good luck to Egghead.

FROM JAMES FRISON ON 07/26
At the VA store, when the salesperson could not answer some questions that I had about DeluxePaint II, he looked up Electronic Arts' number and called long distance (not an 800 number) and let me speak to them. Needless to say, I bought the program and I definitely will return.

NEW MOUSEKETEER

FROM JAMES FRISON ON 07/10
I broke my left arm earlier this week and have discovered two good things from this painful event:

1) Typing one handed solves the TCS editor word-wrap problem. No characters are dropped when typing with one hand.

2) I have been a fan of the mouse-based interface ever since I first encountered it on a Mac at work. I have enjoyed it even more since getting a GS. But now, I am overjoyed at what a mouse and one-hand can do. Now, if only I could type with the mouse...

PRINTRIX—A NEW WINNER!

FROM TOM O'HAGAN ON 07/03
I received my copy of PRINTRIX two days ago and I LOVE it. It is a typesetting program for the IIc, IIE (enhanced), and IIGS that will read AppleWorks files, ASCII files and several other word processing files. You imbed control codes when you type your text, including graphics. You can use hi-res, printshop type and Fontrix graphics converted to ProDOS. It also supports over 60 printers and comes with 43 fonts and 25 pieces of clip art. All Fontrix fonts (after conversion to ProDOS) are usable. The manual is very well done and has a tutorial and sample files on disk that, if you spent 2-3 hours with, you can be up and running without too much trouble. There seem to be some minor path search problems where the program gets confused when searching for files during the print process. I talked with Rod Nelson, the author, at Data Transforms and he said he was working on it. This problem does not stop the program from working and is just a minor inconvenience for now. All fonts and art work are loadable into RAM where things work much faster and from the

contd.

little I have played with it, Printrix also seems less bothered by path names using /ram. The non-discounted price from Data Transforms is $65 + $2 shipping. It seems to be well worth it.

MORE ON CENTRAL POINT CONTROLLER

FROM PAUL KELBAUGH ON 06/05

This is an update on the Central Point Universal Disk Controller Card. Those who bought the CPoint UDC last summer discovered that while the card was at least a good idea, it was 3/8" too long for the shorter case of a IIGS when it came time to upgrade. That left two options: (1) upgrade the IIe with a IIGS motherboard and it would fit fine, or (2) cut 3/8" off the front of the card. Actually, believe it or not, Mike at CPoint said I could do this if I had a table mounted router. He explained there was a risk of chipping the board and interrupting the etching but that that was what they had been doing at CPoint. Then I was told if I didn't want to do it myself, I could send the UDC board back to CPoint with a copy of an invoice in my name for a IIGS CPU (to establish "need" and filter out the IIe folks) and they would modify it for me at no charge. I waited a few weeks and called back to confirm this and was told that policy was no longer in effect because the earlier UDC cards also needed a ROM change in order to work on the IIGS.

The CURRENT (as of 5 June 1987) Central Point upgrade/swap-out procedure for older Universal Disk Controller cards is as follows: 1. Call (503)244-5782 and explain you are returning a CPoint UDC. Ask for a RETURN AUTHORIZATION NUMBER. 2. Ship Card only (no cables) to CP, 9700 S.W. Capitol Hwy, #100, Portland, OR 97219 by UPS or Registered mail. 3. Include a receipt showing your name proving you have purchased a IIGS CPU. 4. Enclose a check for $25.00 to CPoint and a note with your name and address explaining this is the IIe->IIGS card swap. 5. Write in LARGE NUMBERS your return authorization number on the outside of package. This is VERY IMPORTANT to them. 6. They will send you a NEW card with new ROM and the disk cables GLUED to the ports with SILICON CAULKING (seems a lot of folks hooked the cables up off center and blew the cards). There is NO REASON to cut away the silicon UNLESS you are trying to hook up an older 20 pin Disk II. You can still hook up a 20 pin disk drive, BUT CUTTING AWAY THE SILICON VOIDS YOUR WARRANTY. 7. Unlike the older cards, the new return packages now provide a user registration card and registration number for future reference as to whether you might need updates in the future.

They also include a free copy of the latest version of CopyII+ to take the edge off the $25 fee (Mine was 7.4 even though I hear 7.5 is out). 8. Yes, the newer cards are just like the old cards, but 5/16" has been cut from the front nose of the card. All else is the same. For the record, I marked my old card with indelible marker when I sent it in and I did NOT get the same card back. I suspect they are shaving the fronts of the cards, swapping the ROM chips, siliconing new disk connector cables and sending them right back out again. 9. Fits perfectly in the IIGS and works fine. I'm now running the Apple 3.5 drive out of the IIGS disk drive port on the back and the UDC (Chinon 800) matched CPoint 3.5 drive and a Shugart/Apple Disk II off the UDC card in slot 6 I urge anyone else with the UDC card to arrange for the swap. Takes about two weeks for the turn-around.

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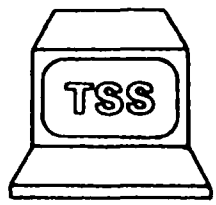

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STOCK SIG NEWS
by Andrew D. Thompson

Stock SIG members continued to beat the summer heat by enjoying WAP's air conditioned ambience while discussing the mysteries of the stock market.

1. Mutual Fund Sub-Group Report

Discussion of mutual funds ranged across four interests: members' methods for selecting sector fund; actual funds members were in; the four-year presidential cycle for investing; general market conditions.

A. Harley Wilbur explained his use of an oscillator which measures the shifts in a 4-day and 18-day moving averages of the major Fidelity Select funds. As of June 19, Energy Service, Broadcast, Leisure and Retailing lead his performance index. Among non-Fidelity-select funds Wilbur tracked, the leaders on his performance index were: Columbia Growth, 20th Century Select, Fidelity Magellan and Fidelity OTC, respectively.

B. Other participants favored Select Gold, Utilities, Software and Computers. Outside the Fidelity Select family, some members favored the Evergreen Total Return, Mutual Shares and Lindler Funds.

C. Jack Upper presented an historical chart of the Dow's movements and described the "presidential cycle" approach to investing. That theory affirms that the year following the mid-point of each president's four year term of office "is usually a reliably fine year for the market." The most recent mid-points, 1982 and 1986, Upper said, both have illustrated dramatic rises in the stock market. According to this theory, the most recent rise in the Dow has benefited from the dynamics of this cycle, but from here on out over the next six months or so, it's less clear that the positive advances of this cycle will continue. "From here on, it's frothy."

D. The June Sub-Group meeting concluded with discussion of the projections of market gurus whose diverse opinions spanned the spectrum. There was some concern raised that if the Japanese stock market declines seriously, then Japanese institutions may begin pulling their funds out of U.S. stock market as well. Future Mutual Fund Sub-Group meetings will take place on the fourth Tuesday of each month, 8 p.m., in the WAP office.

2. Market Trend Forecasts

The July Stock SIG meeting then turned its attention to an overview of trend forecasters. Market timer Merriman, editor of Mutual Fund Forecaster, was reported to have bearishly advised his clients to be out of mutual funds and into cash. On the similarly cautious side, Joe Granville continued to urge his clients to buy a selected list of low priced stocks with the rationale they had greater upside than downside potential. Granville viewed gold stocks very favorably for the summer months. Mark Liebovit, noted for his volume reversal theory, on July 8 said that he expected the stock market to continue to rise during the months to come. Seemingly in agreement with Liebovit, Peter Hackstedde, editor of Bullish Concensus, reported that in early July the bullish advisors declined but slightly from 56% to 55%, which percentage is far from typical of market tops.

Stock SIG participant Troy Kline reported he was currently bullishly long on the market but this may be short lived if the numbers of new issues coming to market increases "probably in the fall." Longer term, perhaps in the spring or summer of 1988, Kline said, the broader international senario could prove highly problematic. Some unexpected political crisis stemming from trade imbalance in a developed nation such as Japan, Hong Kong or the Netherlands, could cause a collapse of financial markets akin to an "international house of cards," Kline speculated. "When the DOW falls 200 points in one day, then you'll know it'll all be over."

John Van Horn reported information gathered at an investors' seminar sponsored by brokerage firm Smith Barney. VanHorn described their market analysis as more optimistic even than Bob Prechter. However, that firm distinguished between "capital stocks" such as the steels, tractors and auto stocks which they favored, and the "consumer stocks" such as tobacco which they advised should be shunned, VanHorn said.

3. Cycles Revisited

Two WAP members shared their insights concerning computer assisted analysis of stock market cycles.

A. John Van Horn uses the methodology of mathematical addition of the contribution of each identified cycle to a trend line as developed by R.C. Wood, former head of the Stock SIG. Van Horn uses Fourier analysis (through the sixth harmonic) of very long data bases. This technique determines cycles of intermediate to very long trends of the DJI, S & P 500, and individual securities. This method generates a buy or sell signal by combining the trend analysis of the S & P 500 and of an individual security and comparing that combination with a fundamental evaluation which for Van Horn is the Value Line. When they agree, purchase is indicatedVan Horn reported the following three projections using three different time periods and their respective S & P 500 index data:

Span of Projection: 65 days

Peak on	8/03/87 at 314.5
Valley on	8/15/87 at 304
Peak on	9/15/87 at 317.5
Valley on	9/30/87 at 302.5

Span of Projection: 65 weeks

Peak on	7/31/87 at 313
Valley on	1/01/88 at 295
Peak on	4/15/88 at 324
Valley on	6/10/88 at 302

Span of Projection: 35 months

Peak on	7/31/87 at 300
Valley on	11/13/87 at 290
Peak on	7/15/88 at 314
Valley on	2/17/90 at 290
Peak on	5/25/90 at 350

When Van Horn used DJI data over 218 months, the following projection resulted.

Span of Projection: 35 months

Peak on	7/31/87 at 2390
Valley on	11/13/87 at 2515
Peak on	7/15/88 at 2515
Valley on	2/18/90 at 2250
Peak on	5/25/90 at 2830

Van Horn expressed less confidence than usual in these

results, especially in the short term forecasts.

B. Irv Lowen shared results of his most recent analyses which, contrary to traditional cycle analysis, concluded it was more accurate to examine individual cycles than their mathematical combination which compounds the error factors contributed by the individual cycles. "The idea of adding sine waves is erroneous," he said. Lowen's primary interest is in the action of the market over the next several days or, at most, a few weeks.

Lowen, using a combination of digital band pass filter and the third harmonic Fourier analysis, found dominant 16 day and 27 day cycles. His approach is to be in the market when both cycles are moving up, on the side line if the cycles are not moving in the same direction, and, possibly selling short if both cycles are moving down. Given the last 16 day cycle low occurred on July 1, if the 16 day cycle were an inflexibly accurate predictor, which it is a question, the next peak would be July 14 and the following valley would be expected on approximately July 23. The 27 day cycle projected a peak on approximately July 27. Lowen said these projections were not rigid and should be revised frequently as time progressed.

4. Miscellaneous Business

Stock SIG Co-chair Ron Grognet announced that since he and Ben Fogle have served a full year in office, the group should consider taking time during the September meeting to voice nominations and elect new officers.

The July meeting concluded with a discussion of several market related questions raised by various participants and by Grognet entertaining members' suggestions concerning Stock SIG's agenda for future meetings, always on the second Thursday of the month.

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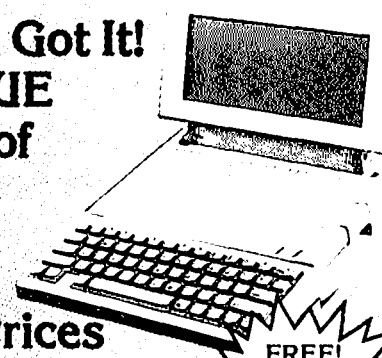

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A NEW EXHIBIT AND ITS RIBBON-CUTTERS

by Rusty Romaine

On July 1, 1987, a new exhibit was opened at The National Archives. The exhibit is entitled "WOULD YOU HAVE SIGNED THE CONSTITUTION?". It features an Apple IIGS with Scholastic Software.

The Scholastic program for the Apple IIGS is an interactive one. It is mouse driven and has background music. Its cursor is a star. There is a help screen that allows the neophyte computer operator to learn how to interact with this program through the mouse.

The program starts off by telling you that you are a delegate to a convention in Philadelphia. Your task will be to revise the "Articles of Confederation", in order to make the existing government more effective. (Could this be a hint of things to come?) The program then asks you five "yes/no" questions. Each question comes with some background information that will allow you to understand the questions and problems that faced each of the delegates in June of 1787. As you enter your answers your journal keeps track of your decisions. At the end you are asked if you would have signed the Constitution, based on your journal of decisions.

To give credit where credit is due: The software was designed and written by Jeffrey Siegal. Linda Gottfried was the art director and artist. The programming was done by Interactive Picture Systems, Inc. The Apple IIGS was supplied by our favorite computer manufacturer. Present at the ribbon-cutting ceremony and premier demonstration were Activist Archivist Frank G. Burke, Apple Chief Operating Officer Del Yocam, and Scholastic Exective Committee Chairman Sidney P. Marland, Jr.

But the real stars were the ribbon-cutters! They were the winners of the "Apple Computer Clubs International" awards for 1987. Winners came from New York, Texas, Virginia and Maryland. Projects involved a mathematical study of numerical analysis, a Spanish language project, and a study of Assateague Island. Today, they were working again—opening a new exhibit to the public!

The majority of the ribbon-cutters represented the "Country Apple Computer Club" from Worcester Country School of Berlin, Maryland. These 72 children (grades 4 thru 6) were directed by Mrs. Merle M. Marsh in a study of Assateague Island. They had won the "Community Service Award" for their project. (Dr. Marsh won the second "Hall of Fame" honor ever awarded for her work). They also received another award from the National Park Service's director, Mr. Bill Mott, for their outstanding work.

Their project was a study of effects of beach errosion on Assateague Island. Their Apple II was used for storing their data and producing their reports. They worked with the National Park Service's Assateague National Seashore station to produce this study. Many of the field trips were made during the winter months—B R R R ! On one of these trips they planted sand grass to prevent the sand from shifting. I understand that it was so cold that many of the adults who were supervising them stayed in the bus—ah, dedication. A Macintosh, a Laserwriter and an Imagewritter were then used to create posters, newspapers, and letters about the erosion problem. This information was then distributed to politicians and the public to inform them about impending threats to Assateague Island.

They also studied the wild ponies of Assateague Island. They created a "pony" data base on their Apple II—cataloging each of the wild ponies. A baby name book was used to give each of the horses a different name. The animals were then tracked over a period of time. This is the first time that such a study has been done of these animals! Graphs and chart were produced on a Macintosh using MacChart. Future studies of the ponies will be based on their initial studies of them.

If you wish to meet some of the "Country Apple Computer Club" members, I understand that they will be at the "Apple Fest" at the Maryland Science Center, Baltimore's Inner Harbor. This event will be held at the end of August 1987. Some of their work will be on display at the Maryland Science Center, as well as on Assateague Island. Either is a real winner!

Fed SIG NEWS

by Dan Adkins

The Washington Apple Pi Federal Special Interest Group has developed a structure to aid members working with the federal government. Several members have volunteered to provide liaison functions within their agency and for other tasks. Jerry Walz has volunteered to be the SysOp for the WAP Fed SIG board and has also given demonstrations to other feds on how Macs are used in a legal office. Steve Crawford and Charles Redmond are working on an interview with a high Apple official. On September 9th the Fed SIG will have a session at the Capital Microcomputer Users Group Forum at the Sheraton Washington Hotel which is near the Metro Zoo stop. The Fed SIG session will be a report of how Macs are currently being used in the federal government and how they got there. The session will be between 2:30 to 4 PM in the Warren room.

During October there will be a Fed SIG meeting in Reston at the Apple Federal Government Office.

The Fed SIG's mailing list is handled differently from other Apple Pi lists. It is shared directly with Apple so that we can get mailings on new product descriptions. Also Apple may establish a newsletter for the federal market. If you wish to be on the WAP Fed SIG mailing list just leave your name, address, telephone numbers, and agency/company name at 202 822-8052.

We still need volunteers to aid in special meetings and as agency liaisons. Please leave your name at the above number.

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TELECOM SIG NEWS
by Dave Harvey

The Telecom SIG meeting was held after the regular WAP meeting on July 25, 1987 and was conducted by Allan Levy. About 15 members were in attendance.

This meeting was held just after everyone had seen a excellent presentation on the Telecommunications System of WAP and on some of the terminal programs available for the Apple II series of computers, so there was some general discussion on the presentation.

The next discussion was on modems and how their prices have gone down drastically over the past year or so. In answer to a question about ownership of modems, everyone present had a modem but some still had 300 baud and were thinking about going to a higher baud rate. We then discussed what WAP has available under the group purchase plan. The two modems currently available are the Capetronics and Practical Peripherals. Both are external modems, fully Hayes compatible, and are available in either 1200 or 2400. Practical Peripherals is made in the U.S.A.

Next we discussed existing terminal programs that are starting to be modified to work with the Apple IIGS. ProTerm is now compatible with the GS, as well as MouseTalk, ASCII Express Professional, and Point To Point. Upgrades are available for all of these programs if the user has an old version.

Questions arose concerning a good terminal program to start out with. One program recommended for serious consideration was ProTERM because of its automatic building of sign-on macros. A user can sign on to a system and the program will learn this procedure so that sign-on can be done automatically the next time. The macros that are used are not as powerful as are available in some of the other programs but they at least let the user start out fast without very much learning required. It does have a nice readable manual as compared to the AEPRO manual which is over 300 pages. However, an AEPRO Help manual is now available at bookstores. It's small, almost booklet size, and is called ASCII EXPRESS CONDENSED. AEPRO has the most sophisticated macros but it is hard to learn because it is so powerful. All programs now support the GS port.

Quite a few cables are required for connecting an external modem, each different depending on what's on the other end. Some cables might look the same but they turn out to be different, e.g., the cable going from the Apple IIGS port to an external modem looks a lot like the cable going from the printer port to a printer but is not the same. Apple User Group Connection has distributed to all Apple User Groups a Cable Reference Card which has a list of all cables that Apple makes along with their serial numbers. This card is a great help to someone who plans to hook up an Apple computer to an external device. As another example, a modem cable will not work if tried on a Imagewriter I, but a Imagewriter I cable will work with a modem.

Some of the public domain programs available from WAP were highly recommended. One is DCOM 3.3 available in the Disketeria as disk 503. Another is Comm-Term on disk 808.

Another terminal program mentioned was TALK IS CHEAP. This is a shareware program that's available for downloading on the TCS. If you like the program and decide to use it, the author, Don Elton, requests that you send him $30. The author has his own BBS in Columbia, SC and users can call his system to receive updates. His system (803-776-3936), runs under new software called ProLine written by Morgan Davis. The simplest description of this software is that it's a networked electronic-mail and conferencing system. ProLine was designed after the structure of a UNIX computer. A description of the system will be uploaded to the TCS for anyone that is interested.

A new online service called Quantum Link is now available. In the past this service was only for Commodore Computers but they have now expanded to include Apple as well. Rates are lower for this new system but there is a $10 minimum usage per month, like The Source.

We also discussed PC PURSUIT as a means for calling BBS's throughout the country. This service, at a cost of $25 per month, lets users call BBS's in 25 cities throughout the United States. There is no limit on the amount of time used or the number of calls made. The user is limited to non-prime time, which is evenings during the week and on weekends. One disadvantage of this service, as discussed on some BBS's, is that at times the effective baud rate is lower than that being sent due to the overhead of the system (e.g. 1200 to about 700). AT&T also provides a service, called Reach Out America, which allows you to make unlimited out of state calls for $9 per month for the first hour and about $7 for each additional hour during the late evening hours on weekdays and day and night on weekends. Advantages of this system over PC Pursuit are that there is no reduction in actual baud rate and voice calls can be made as well.

We next discussed the ARPA network. This system was started by Defense Advanced Research Project Agency. This is an online system run by the Defense Department and is used by companies and Universities doing Research and Development for the US. Available on this system are lots of information and news about the Apple. A news feed from ARPA called INFO-APPLE is available on most of the ProLine Systems throughout the country.

Retuning to modems, someone mentioned MMP error correcting modems. These modems have firmware built into them that correct transmission errors when used with other MMP modems. There are various levels of implementation of MMP protocols, and when buying a modem, support levels should be questioned. One participant reported that he found these modems to have problems when communicating with other non-MMP modems. In his particular case, the MMP modem locked up when calling a BBS that used a non-MMP modem.

The meeting adjoined at 2:00 pm.

THE NEW MEMBER REFERENCE BOOK HAS SOMETHING FOR EVERYONE!

by Tom Warrick

Washington Apple Pi is proud to announce that the July 1987 edition of the ***Member Reference Book*** is now available. If you joined the Pi and got a **rain check** for this edition, it has been mailed to you. Otherwise, the cost is only $2.00 if you pick up a copy at the office or at a Pi meeting, or you can mail a check for $3.00 to

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and a copy will be mailed to you.

The Member Reference Book has something for everyone, even long-time Pi members. It has been thoroughly revised and re-written since the last edition. Contents include:

- A *welcome* to newcomers, including a detailed list of all of Washington Apple Pi's many activities and services. You may not know of the many things Washington Apple Pi has to offer you.
- A summary of the regularly scheduled Apple II and Macintosh *tutorials*.
- *General information* about the Pi's general meetings, the Board of Directors' meetings, and the Pi office.
- A detailed series of articles on the WAP *Telecommunications System*, which everyone is encouraged to get and read before you sign on the "TCS." Included are a *beginner's guide* to the TCS, an *overview* of the TCS with a listing of all the boards on all the conferences of the system a single-page *"quick card"* summary of the commands available to you when you are using the TCS, and a *comprehensive guide* to the TCS. This section alone makes the July 1987 Member Reference Book a worthwhile investment for everyone who uses the Telecommunications System.
- A brief *computer communications tutorial*—essential for the novice to enable him or her to understand what is perhaps the most arcane aspect of using microcomputers.
- Titles of books currently available in the WAP *reading library*, one of the finest collections of books and magazines on computer subjects (particularly Apple II and Macintosh subjects) outside of the Library of Congress—and far more accessible!
- A short description of Washington Apple Pi's many *Special Interest Groups* (SIGs) and "Slices," the extensions of Washington Apple Pi in Frederick and Annapolis, Maryland.
- A description of the *types of computers* in the Washington Apple Pi computer family.
- A short explanation of *"public-domain software."*
- *Copy-protected software* and Washington Apple Pi's policy against *software piracy*.
- A description of WAP's *group purchase* program.
- A brief *history* of Washington Apple Pi and a breakdown of WAP's membership.
- The official *bylaws* of Washington Apple Pi, Ltd.
- Coping with *"techno-speak,"* a short article I wrote to encourage everyone not to be intimidated when people bandy about acronyms and computer jargon at Apple Pi meetings.
- An extensive *glossary of computer terms*, so that you can learn the acronyms and computer jargon for use at Apple Pi meetings!

Authors contributing to the Member Reference Book include Walton Francis, George Kinal, Richard Langston, David Morganstein, Robert C. Platt, Leon H. Raesly, Eric Rall, Andrew D. Thompson, Bernie Urban, Gena Urban, Tom Warrick, Richard S. Wasserstrom and Robert Wood. The editors were Bernie Urban, Gena Urban and Tom Warrick.

VOLUNTEERS NEEDED

1. We need someone to spend about three hours reorganizing our library. This requires alphabetizing the user group newsletters and the reference books. If you are interested, you might even make suggestions on new purchases. Contact the office for a convenient time to come by.

2. It would help all those who can not attend our monthly meetings if someone could take minutes. If you can do this every other meeting, we can find two people to help out. Please call Bob Platt if you are interested.

3. TCS Sysops. We can alway use more Sysops now that our TCS has expanded to eight lines. Leave a message for Lee, the Wizop.

4. Hot line volunteers. Our telephone hot-line serves many members. We are always in need of new talent for recent products. If you can help with any of the following programs, call David Morganstein to get you name added to the list.

GS - Word Perfect
GS - Deluxe Paint
Mac - Adobe Illustrator

5. We can use additional Apple tutorial instructors. In particular we can use an AppleWorks expert. Call Bob Platt.

6. Can you host an Apple Tea ? These are informal social events held in members homes. You do not have to be knowledgeable in your computer or its software. WAP can provide an expert to discuss just about any topic. The advantage of the tea is you can learn something you always wanted to know, right in your own living room! Call Amy Billingsley.

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The Frederick Apple Core meets on the second Saturday of each month in the large conference room of the Frederick Library at 110 E. Patrick Street, Frederick, MD. Meetings begin at 9:30 AM and normally last until 11:30. Programs are scheduled for both the Macintosh and the Apple II and computers of both types are provided.

If you have problems or questions concerning any program or application, you are encouraged to bring the program along and assistance will be provided. We also have extensive software libraries for both families of Apple computers as well as blank disks.

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Thanks to John Gregg for his contribution to the FAC column this month. John is a mature (conservative?) man of the cloth who has discovered what his kids have known for some time—it is possible to have fun with a computer, even if you're the serious type.

FAC Upcoming Programs:

Sept. 12 - Word Processing for the IIGS; Graphic Writer and Word 3.0 for the Mac

Oct. 10 - IIgs Word Processors - new products

- Macprogram - to be determined.

THE ULTIMA HOOK

by John Gregg, Frederick Apple Core

I use my Apple II for word processing and other important stuff. AppleWorks, modified by Super MacroWorks, is my bag. Games are OK, for my kids, but it is only occasionally that I will lower myself to a game, and then only something suitably sophisticated like one of Infocom's text adventures—certainly never anything with pictures. (Ed. Note: Look out, here comes Ron Not So Kool!)

A couple of months ago, representatives of the WAP Gamesig came to a Frederick slice meeting to convince us that we should be spending more money on games and therefore, correspondingly less on all the serious foolishness.

The enthusiastic presentation convinced me to give Fantasy Role Playing a try. I decided to avoid Wizardry because it smacks of Dungeons and Dragons, which I keep telling my kids will rot their brains. Also, I was afraid it might be too complicated for me, and Ultima I was cheaper (price seems to be a major consideration when I consider buying a game, especially one with pictures!).

Ultima I—the new version. I can't say how it compares with the old version, because I don't know. The game is fun, challenging, and possibly adidctive. I don't know whether I'm hooked, but I'm spending a lot more time playing than I had ever planned.

I've created a character and she is doing quite well, I think. Maybe that's an advantage to not having a whole lot of instructions and hints—you can think you're doing great, because you don't know any better. The exploration of possibilities is exciting. Each time I play, I seem to get a new insight, or a new trick I want to try. Since there are 8 possible character types: human, elf, dwarf, or bobbit, and male or female, plus 4 different roles: thief, wizard, fighter, or cleric, and each character has a variety of traits such as strength, charisma, etc., then the possibilities seem to be endless. Even if I succeed with my current character and kill the evil wizard (that's the goal of the game), there are still other types of characters who may go about it entirely differently.

I don't know how Ultima I compares with other fantasy role playing games—I've never played any. I do know that it's fun, and I intend to continue plugging away until I become an expert. I have had enough success in the game, even though I haven't found the wizard yet, that I'm not at all frustrated; if anything, I'm more interested than ever. If you haven't tried this branch of game playing, I recommend it. It's an interesting escape from the word processor, and a challenge at the same time.

Now that I've discovered that pictures are not necessarily only for nerds and geeks, I think I'll give Epyx's "Submarine Battle Simulator" a try, if only they would hurry up and come out with the Apple II version.

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MicroPhone gives you the means to create infinitely elaborate macro (automated) routines with infinite simplicity. Its powerful script language is written in plain English, and it also features a recording mode that watches, saves, and repeats what you do. So no programming skills are required.

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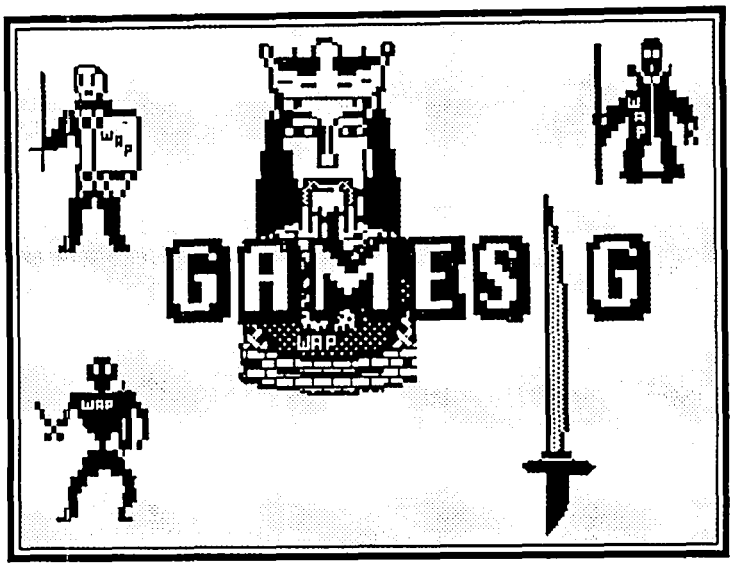
GAMESIG NEWS
by Thomas Johnston



Due to publishing constraints this article predates the regular GameSIG meeting. But just because it hasn't happened yet doesn't mean I can't tell you about it.

Ron Wartow told the assembled of the fantastic lineup he has organized for August 22nd, when GameSIG will host the main WAP meeting. Hopefully you are sitting at that meeting now and reading this. If not, sorry you missed it. We will have stellar guests from Sir-Tech of WIZARDRY fame; Origin Systems, who publish OGRE and the ULTIMA series; Icom Simulations designers of SHADOWGATE; and other important guests to demonstrate and discuss their gaming ware.

Ron gave a very exciting "Ron Wartow" report on new software. Some very important fantasy role playing games are about to be released. See his accompanying article. More at the WAP meeting.

Lame duck Chairman Thomas Johnston announced his forced retirement due to imminent nuptials. Nominations for next month's elections were discussed.

As usual, after many demos of new software, discussion of who is stuck where in what game, and public gossip of a certain member's personal life, the meeting erupted into general chaos and was adjourned.

Remember this meeting has not actually occurred yet. I give this a 79.5% chance that it is a correct forecast.

The following software was distributed for review:

OGRE for the Mac (Origin Systems, Mac): a strategy game fought on a nuclear battlefield;

221 BAKER STREET (Datasoft, Apple //): detective mystery;

THE GUILD OF THIEVES (Rainbird, Mac, Apple //)

THE ETERNAL DAGGER (SSI, Apple //): sequel to Wizard's Crown, a wilderness-based fantasy role playing adventure.

WIZARDRY IV—THE RETURN OF WERDNA:
A Review by Ronald Wartow ©1987

(Ronald Wartow spent 150+ hours beta testing THE RETURN OF WERDNA, and was the first tester to complete the game. Because of this experience, he now rests permanently, but comfortably, in the Adventurer's Inn. Friends can visit. Hours vary. Call first.)

Before beginning, permit me a short stroll down memory lane. The success and popularity of the fantasy role-playing WIZARDRY series paralleled the success and popularity of Apple Computer. But since early-middle 1983, when Apple introduced the //e and the third WIZARDRY scenario was released, there had been no new Wizardry, and only one release in the other popular fantasy computer gaming series, the Ultimas (IV in the fall of 1985). (Macintosh WIZARDRY and the two scenarios released for the IBM PC were not new.) This dearth from the first widely-circulated and popular role-playing systems prompted others to "fill the void". In those years, we saw a slew of fantasy games, like the three Phantasies, the two Bard's Tales, and, most recently, Might and Magic. The reviews and even some packaging made patent references to and comparisons of those games to WIZARDRY, and The Bard's Tales even provided for transfer of WIZARDRY characters. Still, no new WIZARDRY. Until now!

THE RETURN OF WERDNA is an intriguing role-reversal from prior Wizardries. This mirror dungeon was designed by Roe R. Adams, III, who holds 40 first-solve gaming titles, was Reviews Editor for Softalk, and adventure game editors for Computer Gaming World and Computer Entertainment. He played an integral part in the design of Ultima IV, and did additional design work for Bard's Tale I, and authored the new main WIZARDRY, the third WIZARDRY, and the Ultimas III and IV manuals. Programming was the work of Robert Woodhead, WIZARDRY's co-creator, who has given the world's computer gamers millions of hours of teeth-gnashing pleasure through the WIZARDRY series and other games.

C'mon Ron! Tell us about the game! OK. OK. OK.

Prostrate on a cold stone bier at the bottom of a ruin converted into a prison-dungeon, lies your new alter ego, Werdna, in a deep trance. The heroic destruction of Werdna and the loss of the magical amulet occurred in the first WIZARDRY scenario, Proving Grounds of the Mad Overlord. Werdna's body and spirit were indestructible, so Trebor and his followers, including Hawkwind, placed the entranced body at the bottom of a heavily guarded and trapped, horrific nightmare of a place. (For you history buffs, Hawkwind of Skara Brae has been Adams' gaming persona for many years. I recall his early '80's Softline article describing the WIZARDRY Proving Grounds plot through the eyes of Hawkwind and his team.)

Clambering down from the bier, you note that this tiny 2X2

contd.

room has no doors. You are alone, weak, naked, defenseless, and lack magical powers. A guard takes exception to your movements and unmercifully attacks and coldcocks you with one swift swordthrust. You awake again on the bier. Stepping into a corner of the room, you are now slightly strengthened and have recruited some allies. Suddenly, another guard attacks, but this time you successfully defeat your adversary. Your wizened face reveals the triumphant gloat of this success, but your triumph is shortlived, as you realize THERE ARE NO DOORS!

So begins THE RETURN OF WERDNA, the first expert level scenario, which is both stand-alone and stand-out. From the compelling start, you begin what will be a 100-150 hour, puzzle-filled, mind-bending, philosophical, multiple-ending joyride of a game. At its heart, THE RETURN OF WERDNA is a WIZARDRY, but this circumstance only scratches the surface. This WIZARDRY is fresh as a daisy, employing interface, visual and maze-layout techniques that I have never seen in a game of this type.

In a monument to truth-in-packaging, Sir-tech bills the game as a very difficult expert level scenario for experienced WIZARDRY players only, warning that novices will become easily frustrated. First-timers are advised to play the first scenario before playing any other WIZARDRY scenario. In a superb litotes, the manual notes that the first scenario's manual would be very handy to have along. Sir-tech will sell you that manual if you insist on playing this game first.

Take their word for it. This is not hype or a clever ploy to dare or to lure any gamer into buying the program. In fact, one of the puzzles requires that you have completed the first scenario if you have any hope of solving it. The game is clearly dedicated to and designed for experts. I agree with their assessment, subject to my comments below. (Don't you just love the way lawyers obfuscate?) Sir-tech is sponsoring a contest to reward the person who can finish in the least number of keystrokes. (Bidding for my maps and game notes starts at $10,000!)

THE RETURN OF WERDNA manual dramatically describes the whole story of the Mad Overlord, Trebor, Werdna, now you, and the powerful amulet. Other than that, and a few game mechanics, you are on your own.

The game sports the familiar 3-D maze and employs the windowing technique introduced in the third WIZARDRY. Almost the entire command structure features single keypresses requiring no carriage returns. Since you are Werdna, a historical pre-rolled character, the familiar WIZARDRY routines like character creation, and weapon/armor/item purchase are absent.

THE RETURN OF WERDNA abounds with special events, a radical departure from prior scenarios. These generously sprinkled specials present the gamer with background, extraordinary items, puzzles, and encounters with some rather peculiar "personae." Several noteworthy attributes hallmark the specials—dynamic prose, interesting philosophical overtones, wry and bizarre humor, and exotic esoterica. As I recall, there are more puzzles on the first few levels than in all the other Wizardries combined. So much for hack-and-slash? Yes and no, for combat does play a very important role in the game.

Rather than facing roving bands of "5 Bubbly Slimes", your prison guards are several hundred "real" characters submitted to Sir-tech over the years from WIZARDRY players. The often hysterical and punny names of these characters contribute to the game's charm. These characters are each unique. If you kill one in a band or wandering alone, the character stays dead. Only restoring one of the eight save games in the maze (Cheers heard from around the gaming world.) or going up or down a maze level resets these individuals.

Guess where the roving bands went? Yes, all those monsters you loved to hate, you will now learn to love. All the (expletive deleted) level draining spell-casting s.o.b.'s from the prior scenarios have become your buddies. You do not control their combat and spellcasting strategies, just your own, but the program handles this well and fairly, and you have enough to think about.

Your new role and your new "friends" is a situation that takes some getting used to. After all, Werdna was one of the most despicable and evil wizards ever to walk or teleport across the face of "fantasy" earth. Perhaps, given the current situation, you will come to feel that Werdna was misunderstood? This is the heart of the game. Many different paths and approaches can be taken to attain your goal of escaping and regaining the amulet.

Graphically, the players (now your enemies) are handsomely color-drawn, as each class is depicted in striking style. As you progress, from squaring off against novice mages, for example, up to more advanced spellcasters, the graphic changes to reflect the new level of adversary. There are more than triple the number of graphics from any prior WIZARDRY, and the combat screen shows the first four members of the party you are facing. Occasional and very effective graphic views of the game's key locations are also encountered.

What would a WIZARDRY be without mapping? The maze levels are deliberately progressive in mapping difficulty. What awaits you as you progress higher and higher to escape your hellish prison is a formidable challenge. The familiar teleportation squares and spinners are mere child's play compared to what you will face on some of the levels. It is rumored that there are 10 levels, including the oft-whispered-about interlocking cube, a fiendish multi-level "funhouse." All the levels have a distinct pattern and mapping twist that evoke powerful mental images and contribute to solving them. Each level has an ominous name that will burn in your memory for a long time to come. In case you get overconfident on entering a new maze level, the program menacingly reminds you that it is "Summoning the Guardians, Laying Out the Patrol Areas, and Setting the Traps."

What makes THE RETURN OF WERDNA so special is the designer's careful balancing of the key game elements—combat, mapping, puzzles, and decisions required of the player at several points in the game. No one element dominates the other. All are important, and all complement each other. Even the method of doling out hints blends with the other elements. (Yes, hints in a WIZARDRY. You will need all the help you can get!) Because there are so many layered and hidden paths in the game, I expect that, even if a player finishes the game, he/she/it may never find all the alternate endings.

Other than this, I will be no more specific, for that would truly spoil the constant stream of discovery and surprise. But, mindful of the packaging's warning about the expertise required to play, I recommend that playing and completing the first scenario should be the minimum experience before tackling THE RETURN OF WERDNA. Who is an expert anyway? Viewed another way, an intermediate could clearly handle the game at its

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Return of Werdna contd. from pg 47

lower levels and progress from playing the upper levels to become an expert. Let's not forget Sir-tech's 7-day-a-week Hotline service for help and the vast network of gamers who will be playing also.

Here are some tips. Have a good dictionary handy, browse some old comic books, brush up on your mythology, see "Monty Python and the Holy Grail," and map in pencil. A personal note in concluding. There's nothing like a WIZARDRY. Enjoy!

PASCAL NEWS
by Robert C. Platt

PIG, the Pascal Interest Group, will next meet on Thursday, Sept. 17 at 8 p.m. at the WAP Office.

This month, I'm going to share a number of late-breaking technical items. If this stuff seems cryptic, bring your copy of the Journal to our next PIG meeting for a free translation.

P-System on the IIgs. I spoke with Eli Willner, President of Pecan Software. Pecan's p-System for the IIgs is now shipping. The lastest version is IV.2.2 v 1.1a. It features a full 65816 assembler and includes a ProDOS Filer utility which moves files between ProDOS and p-System "virtual volumes." It supports some gs graphics and sound tools. Later versions will eventually support all gs ROM tools.

Stride Fair/USUS Meeting. About 300 people attended the USUS meeting held in conjunction with the Lake Tahoe Stride Fair. The meeting featured presentations on real time process control using the p-System and concurrent processing. Stride introduced its new Model 600 which features a 16 MHz 68020 cpu.

Modula-2. Pecan is still waiting for MODUS to standardize the Modula-2 language. If they don't reach a decision soon, Pecan will probably implement Wirth's changes to Modula-2 indicated in the Third Edition of his book. (These include eliminating EXPORT statements in DEFINITION MODULES.) The current version of Pecan's Modula-2 compiler is version "ja".

Pecan's Future Directions. Pecan has opened an office in Europe and reports a resurgence of interest in the p-System there.

A 32-bit version of the p-System is now running on 68000 machines. This eliminates the 16-bit p-System's current 64K limitation on the data area addressed by a program. The 32-bit system uses actual hardware addresses, which makes glue routines to ROM calls much easier. A 32-bit p-System for 80386 machines is in progress. The 32-bit p-System will have source code compatibility with the 16-bit system, and Pecan is considering either writing a conversion utility for 16-bit code files or writing a 16-bit p-System emulator to run under the 32-bit system.

Pecan expects to ship a c compiler by February 1988 for both the 16 and 32-bit p-Systems. This will allow Pascal, BASIC, Modula-2, Fortran and c routines to all link together. Pecan is working on a multiuser p-System for AT class machines. It will support several users through a variety of "dumb" terminals. The p-System will include facilities for record and file locking.

Pecan is working on a new UNIX-hosted p-System. The present system is available on only 68000 machines, but the new one will offer wider support and more functionality. A new Netops unit will provide a consistent interface from p-System programs to whatever network hosts machines are attached.

Menus Toolkits. Tom Swan (717-627-1991) is offering a $40 alternative to Apple's Card File and Desktop Toolkits. Apple's products are available through APDA and allow your Pascal programs to have an AppleWorks style user interface. Swan is selling a "Menu and Windows Toolkit" which adds pull-down menus and pop-up windows to Apple Pascal 1.2 or 1.3 programs. It includes five units, examples, a manual, two disks and all source code. Swan's product runs on enhanced Apple //e, //c and IIgs.

Mac Picture Formats Changed. In a prior column, I explained how the Mac ROM encodes a series of QuickDraw calls in a "picture" format. Pascal programs can then read through a picture and combine actions with various display elements. (See January 1987 WAP Journal.) With the introduction of the 256K ROM's in the Mac SE and Mac II, Apple is introducing a new "version 2 PICT format." (Sort of like a movie sequel.) For backwards compatibility, System 4.1 supports RAM patches that allow PICT 2 files to be displayed on earlier versions of the Mac.

PICT 2 format has several advantages: better color support and pictures are allowed to exceed 32K in length with automatic spooling from disk. PICT 2 format differs from PICT 1 by using 2 byte opcodes which are aligned on word boundaries, using a 30 byte header instead of the old 2 byte header. One neat trick is that the version number for PICT 2 files is $02FF. If the old ROM's attempt to display a PICT 2 file, the $FF is interpreted as an end-of-picture opcode, and a call to DrawPicture(handle,r) will display nothing.

See Mac Tech Notes Nos. 21, 27, 120 and 154 for further details.

PROGRAM INTERFACE (PI-SIG) NEWS
by Robert Golden

A new member of our group opened the meeting at the Office with a brilliant color slide show of images downloaded from one of the large telecommunications services. We then listed and ran programs in TML Pascal designed to illustrate different ways a mathematical expression could be solved in Pascal utilizing the Apple IIgs. Some worked and some "bombed out". It became apparent that either the programming requirements were not being strictly followed or there were bugs in the language used. We began to appreciate the programming difference between integers and real numbers.

Ray Hobbs provided, for each present, many pages of TML Pascal programs to illustrate programming techniques and how to handle single routines. Using this information as a reference, he gave a tutorial covering several short programs and also fielded questions as we followed along.

Due to the coming Labor Day holiday, we tentatively planned our next meeting to follow the August WAP meeting, August 22, at my home, 1811 Sanford Road, Silver Spring, MD at about 1 PM.

SOFTWARE INDUSTRY: ITS ECONOMIC STRUCTURE

Part 1 by Joseph A. Hasson

I Introduction

The U.S. computer software industry, with multibillion dollar sales revenues, is the only high-tech industry which has not been seriously confronted by foreign competition. However, this leadership position is not assured as several nations—developed and developing—have programs for promoting indigenous industries which can eventually challenge U.S. hegemony. In addition, considerable piracy of U.S. computer software has been occurring. While reliable data are difficult to obtain, estimates run in the neighborhood of $130 million per annum. With the expanded use of computers worldwide, piracy has been increasing at a rapid rate. The most flagrant abusers appear to be Brazil, Taiwan, Singapore and South Korea. A more extensive examination of this piracy problem will require a separate study. Against this background, it was clear that in 1983, the U.S. software industry was dominant with sales revenues of $18 billion, or 70 percent of the world market. These sales were ten times those of France or Japan, our nearest rivals. In 1985 U.S. sales revenues had increased to $21 billion. By 1987, the world market for software is expected to be about $55 billion, an increase of about 114 percent in four years. The U.S. share in this market will be about $41 billion, or 74.5 percent of the total. Revenues—world-wide and U.S.—are summarized as follows:

Year	World (bns./$)	U.S.	U.S. Share (%)
1981	10.3	7.3	70.0
1983	25.7	18.0	70.0
1985	30.0	21.5	71.7
1987	55.0	41.0	74.5

The U.S. Department of Commerce has a data breakdown of the world-wide revenues of leading U.S. computer companies. Not all of them offer software/services. (Available figures do not show software and services separately.) Of 21 U.S. computer companies for which data are available, twelve obtain some portion of their revenues from software/services. In 1976, these twelve companies obtained 22.2 percent of their revenues from software; by 1986 that proportion had increased to 36.1 percent. In 1981, the following is a list of companies with their total world-wide revenues, revenues from software/services, and the ratio between the two:

Company	Total Revenues	Software/ Services	Ratio (%)
IBM	24,480	4,480	18.3
Control Data	2,893	1,154	39.9
NCR	3,071	1,029	33.5
Digital	3,587	911	25.4
Burroughs	2,668	838	31.4
Honeywell	1,775	835	47.0
TRW	815	725	89.0
Sperry	2,781	695	25.0
Computer Sci	625	625	100.0
ADP	613	613	100.0
General Electric	670	570	85.1
Hewlitt-Packard	1,725	545	31.6
Total	43,703	13,020	29.79

In the 1960's and 1970's, software and services represented an increasing proportion of the costs of data processing. These factors can play a determining role in the technological and commercial success of computer products. They can also influence the international competitive position of computers—software and hardware.

The strong competitive position of the U.S. software industry is attributed to several dominant factors: (1) the preeminence of U.S. computer hardware, based on its technological superiority, aggressive marketing and extensive distribution capabilities; (2) the character of entrepeneurship which has demonstrated its innovative superiority; and (3) the size and sophistication of the U.S. market. To maintain its competitive superiority, the industry will have to rely on continued research and development, the quality and productivity of the labor resource required for software production, and on socio-political factors, including the legal protection of software in and continued access to foreign markets. This legal protection will require international agreements to prevent counterfeiting of American products. The struggle for software leadership at the international level has intensified. Cooperation with foreign governments will be an important factor. This cooperation can determine the position of U.S. software in foreign markets and the competition in the home market from foreign producers. Maintenance of a strong competitive position of the American software industry in international markets will depend not only on anti-counterfeiting agreements but also on products which are high quality and error-free. Products produced and marketed will have to meet specific application needs of their users; they will have to be expressed in widely used or standardized languages. Companies and countries that emerge as leaders in the future will have to retain sufficient flexibility to create new concepts translatable into new products.

II The Software Industry

A. Structure of Industry.

We have noted that the software industry has increased dramatically in recent years. Predictions are for future growth rates of from 25 to 50 percent per annum. We have used the expression "software industry" without providing a definition or description of the industry's composition. This delineation can be approached from several different points of view.

(A) Generically, two broad classes are (i) systems software which controls or manages the resources of a computer system, including operating systems, translators, utilities, compilers, etc. and (ii) applications software, a collection of subroutines designed to perform particular tasks. The latter may be cross-industry, e.g. Lotus 1-2-3, VisiCalc, accounting-payroll, word processing packages—or industry specific packages—banking, finance, health care, real estate, etc.

(B) Software may be viewed from the perspective of mode of delivery to final users. Software breaks down into three categories: (i) packaged; (ii) custom; and (iii) integrated systems.

contd.

Packaged software consists of a standard package used directly by a wide range of users. It is usually sold off-the-shelf at pre-stated or standard prices. In 1981, sales of packaged software constituted 52 percent of total U.S. software revenues; by 1985 it had increased to 63 percent and generated $14 billion for U.S. companies—65.1 percent of total revenues. The rapid expansion of this segment of the industry is attributed to increased usage of the microcomputer.

Custom software is tailored specifically to meet particular users' needs. It may be developed on either the users' or suppliers' premises. There is an agreed contract price. In 1985, it generated $4.5 billion revenues for U.S. firms, 14 percent of their total software revenues. This branch of the industry is being displaced by packaged software. This displacement is occurring for a number of reasons including high costs and time lags between development and installation for profitable use,

Integrated systems software is sold by systems integration firms. These acquire computer hardware from outside suppliers, add their own software and, then, sell a complete system to users. Revenues from this source were about $3.0 billion, or 14 percent of total software revenues.

Among these several software types, packaged software has several advantages. First, it is available off-the-shelf. It thereby avoids the costly lead time associated with custom software. Second, its cost can be precisely determined. Cost is the price one pays for it on purchase. Real cost will depend on the efficiency with which the software is employed by the user. Custom software often has hidden costs. There may be overruns because of inaccurate estimates and higher maintenance costs. Third, the cost of developing software packages can be spread over a large volume produced and sold. Per unit costs decline as that volume increases. This is not the case with custom software. Fourth, packaged software comes with extensive documentation. Improvements in documentation are essential for broad consumer acceptance. Fifth, packaged software is usually tested extensively so that its performance will achieve a higher reliability level. Sixth, considerable competition exists in the production and distribution of packaged software. This competition can lead to economies of scale and other benefits that accrue to the user.

Most packaged software is applications software (as opposed to systems software). In addition to characteristics of packaged software already noted, other features of such software are should be mentioned. Technically, software is leased or licensed rather than sold. Software may be designed for use with particular types of computer systems and not with others. Updates can be anticipated and may be available at some incremental cost. (The availability of Appleworks 2.0 represents such an example. It represents an improvement of earlier versions. It was made available to holders of these at a small incremental cost.) According to one taxonomy, packaged software in the applications category may be classified by broad class of usage: (i) budget/project management; (ii) financial management; (iii) payroll; (iv) personnel; (v) supply/logistics/inventory control; (vi) library/reference; (vii) office automation; and (viii) mathematical/statistical.

The status of the industry in 1985 by its generic composition can be summarized revenue-wise as follows:

	bns/$	percent
Packaged	14.0	65.1
Customs	4.5	20.9
Integrated	8.0	14.0
Total	21.5	100.0

Given these market shares, the economics of each of these software types will differ. Each of these software classes implicitly represents user requirements. Software examined from these perspectives implies assessing the demand side of the market.

(C) On the other side of the market, we perceive three major types of software suppliers. These are (i) computer manufacturers, (ii) independent software suppliers, and (iii) system integrators or turnkey system suppliers. The first group is made up of a few large firms. Some are multinational in scope, with a broad range of information equipment and systems. The second and third groups number in the thousands and are comprised of relatively small firms that derive revenues from software and computer services. The rapid growth of the industry has led to a number of additional subgroups of suppliers. Each has sought to find a place in the market. These include computer stores at the retail level, software brokers, software houses, and users' groups. Brokers serve as liaison between customers and software suppliers. Software houses maintain large computer programming staffs. These develop customized software and off-the-shelf software packages. User groups, comprised of microcomputer owners, meet periodically, exchange information, may publish a bulletin or magazine; its members may produce software often distributed through the user group. A breakdown of sales revenues, in billions of dollars, in 1985 among these three software supplier classes, is as follows:

	$/bns.	percent
Manufacturers	8.6	40
Independents	8.6	40
Integrators	4.3	20
Total	21.5	100

(D) Finally, software can be analyzed in terms of the computer system for which it is developed: high-end or supercomputers; medium sized computers; and personal computers. If the focus is solely on packaged software, the following breakdown is allocated among these alternative computer systems:

Computer Type	1984 (bn/$)	1985
Large scale	3.33	4.00
Medium & small scale	5.83	7.00
Personal	2.19	3.00
Total	11.35	14.00

We noted that U.S. software dominates world markets. In 1981, the world-wide software market accounted for $10.3 billion. The U.S. share was 70 percent, or about $7.2 billion. By 1983 the U.S. share was 70 percent and amounted to $18.0 billion out of a total market of $25.7 billion. The market, projected for $55.0 billion in 1987, will have a U.S. share of 75 percent, or $41.0 billion. The U.S. industry obtains more than 20 percent of revenues from exports, broken down between packaged software ($4.2 billion), customs software ($.68 billon) and integrated systems software ($.36 billion). Finally, as of 1983, the U.S. software industry was comprised of 4,340 companies: 1,348

contd.

provided professional services; 1,879 produced software; 1,113 provided integrated services.

A technological relationship between inputs required to produce a final product is a production function. It reflects the state-of-the-art for producing a good and establishes a basis for determining its cost of production. The concept is introduced to make a point about the competitive prospects likely to confront the U.S. software industry in years ahead. This industry may meet its stiffest competition because the skilled labor required (an input) to produce software (output) may be more productive in other countries than in the United States. Thus far, the demand and supply sides of the software industry have been considered separately. Together they lead to a market which is considered in the next section.

III Economics of Software Industry

The "market" for software can be defined according to the following characteristics, singly or in combination:

(i) the size of the computer system;
(ii) generic types of software required; and
(iii) in the applications class, the distinction between cross-industry and industry specific.

Analysis of the economics of the software industry is complicated by

(i) the wide diversity of products,
(ii) the multiplicity of suppliers, and
(iii) the large number of markets.

A full accounting of the numerous interrelationships among these different elements, suggests that assessing the economic ramifications of the software industry can be involved. If the wide range of software characteristics is combined with the multiplicity of hardware available and the variety of user requirements, the intricate structure of the market is exposed. This intricate structure makes an economic analysis highly complex.

Software can be provided for either the low- or high-end of the market. Low-end software for the personal computer is characterized by high unit volume, short product life cycles and low costs of development. High-end software for larger machines is produced in low unit volume, has a long product life cycle and high development costs. Because of these contrasting qualities, outlays for low-end software can be treated as an operating expense by users and costs of high-end software can be treated as capital expenditures, amortizable over the estimated economically useful life of the software. Costs of software are affected by a number of factors, including

(i) the world-wide shortage of programmers which pushes up their wages and salaries and
(ii) the relatively low rate of increase in programmer productivity.

These can signficantly affect the long-term competitive position of the U.S. software industry. It is estimated that Japanese programmers produce an average 2,000 lines of code per month with an error rate about 0.1 that of programmers in the United States who turn out an estimated 300 lines of code. The range of prices for low-end software varies. It can be purchased for as little as $30 and up to $500-$600 per program; high-end software costs $60,000 and up and require maintenance fees of up to $100,000 per year. Low end software has a relatively high rate of obsolescence.

On average, the relative importance of key cost factors for software is estimated as follows:

	Percent
Research and Development	15
Manufacturing	15
Marketing]	
Administration]	35
and Management-]	
Other Overhead	20
Profits	15
Total	100

Software production for personal computers is labor-intensive, requiring high priced programmers. Growth of the industry has received impetus from a fall in the real prices of software packages, improvement in quality, greater performance reliability and enforcement of higher production standards. (Real price is the relationship between the money price of a software package and some measure of inflation.) Most growth has been in packaged software which yields about 50 percent of total industry revenues. Growth of packaged software is attributed to the expanded use of personal computers. Demand from medium scale systems dominates the revenue picture. The segment of the industry producing software for personal computers finds it difficult to make a profit although its long-range prospects are regarded as excellent. Enhanced dangers of software piracy seriously encroach on the profits of software producers. In Taiwan, about 15,000 units of the ten most popular U.S. software programs are sold each month; only 1,000 units represent sales of legitimate products. At an estimated $200 sales price per unit, about $2.8 million of lost revenues are experienced per month solely in Taiwan. Coping with the piracy issue requires patent or copyright laws. Technically, protection of software is feasible but at a cost. We observed earlier that major manufacturers of hardware are important suppliers of software. The early majors—Apple, Tandy, IBM—have a large base of users, remain attractive to consumers and are likely to hold on to their dominant positions. Outside this range, firms will fall behind unless they successfully broaden their software base.

World-wide sales of software increased from negligible levels in 1964 to about $200 million in 1979; between 1979 and 1986, a phenomenal increase in revenues to about $40 billion occurred. There are several ways to evaluate the growth of this industry: by type of supplier; equipment employed; and by class of software. Conceptually, then, a three-dimensional matrix or logic tree can be constructed to yield the feasible combinations of supplier-equipment-software. These combinations would provide insight into approaches required for an economic analysis of the markets involved. The following classification and categories is suggestive of what may be required.

By Type of Supplier:
* Systems integrators
* Computer manufacturers
* Independent suppliers

By Type of Equipment:
* High end
* Medium Scale
* Low end

By Type of Software:
* Systems
* Applications

contd.

During this phenomenal growth period, expansion of the industry in the United States has been more rapid than in the rest of the world. Employment in the industry in the United States stood at about 225,000 in 1982, a three-fold increase over 1979. By 1985, the number of programmers stood at about 508,000. This excludes systems analysts and self-employed computer specialists. The number of firms increased by 50 percent over the same period to about 4,340 in 1985.

Two inferences can be drawn from these changes. First, the average size of the software-producing firm has increased. Second, while the number of smaller firms proliferated, there has been greater concentration in the industry—by almost any criterion—employees per firm; sales revenues; etc. Increased concentration can result from economies of scale, market imperfections; control over patents or copyrights, mergers and acquisitions, etc. Growth in the industry has also resulted in an increase in types and variety of software packages available. This reflects the creativity and ingenuity of programmers, the needs of the market or requirements of users, the role and impact of advertising and marketing, the efforts among software producers to differentiate their products from those of close competitors. An estimated 50,000 software packages are currently available in the market; new ones are being added at the rate of 200 per month. This expansion, abetted by lower prices, enhanced performance levels and increases in productivity both in the home and workplace. These changes have been facilitated by innovation and high levels of research and development. R&D in the software industry averaged about 11 percent of total sales in 1982 compared with 2.4 percent for all industries. Average profit margins (pre-tax) in software firms, 18.3 percent in 1982, down from 19.2 percent in 1981, compares with a profit margin of 7.4 percent in all Standard and Poor industries for the same year. These figures imply that resources are strongly attracted to this industry from others that may be declining and are less profitable. American industry in recent years has been strongly motivated by the prospects of profits in the short-term. An issue raised below is whether or not these short-term results are consistent with the prospective and longer-term developments that can affect the competitiveness of American software firms.

(To be continued next month.)

BOOK REVIEWS
by Robert C. Platt

This month, I'll review two technical books aimed at IIgs and Mac programmers.

"Apple IIgs Firmware Reference," by Apple Computer (1987 Addison Wesley $24.95) My principle complaint about this book is that Apple should have made this information available in a less expensive paperback form. This book corresponds to roughly half of the old Apple II Technical Reference Manuals. It includes all of the ROM routines for video output, keyboard and gameport input, the built-in serial port, the "smartport" used for attaching disk drives, the Mouse, and (heaven help us!) the "Apple DeskTop Bus Microcontroller." However, unlike prior Apple manuals, the book does not include an annotated ROM assembly language listing. The book does list each authorized entry point and document the parameters used for each routine. More importantly, the book documents which RAM locations (including "screen holes") are used by each routine! The book also covers the IIgs monitor.

Some of the useful highlights include an explanation of how the smartport assigns slot and drive numbers to a daisy chain of disk drives. Even more intriguing is how these assignments change when you designate the RAM disk as the "startup device." The IIgs interrupt handler is described as are the ROM calls to invoke the tool locator. However, the ROM tools themselves are documented in a separate (and expensive) *Apple IIgs Toolbox Reference.*

The book includes a number of helpful appendices which list: firmware entry points, entry vectors, softswitches, the Miniassembler op codes, control panel parameters, and memory assignments on the SE0 and SE1 banks.

In sum, this book is essential if you are going to do assembly language programming on the IIgs.

"How to Write Macintosh Software," by Scott Knaster (1986 Hayden Books/Howard W. Sams $27.95) This book approaches a emotionally upsetting subject with a breezy, entertaining style. The taboo subject is, of course, how to debug your Mac software after you thought that you were finished coding it.

Some sheltered programming environments, such as Microsoft's BASIC interpreter or Apple's Macintosh Pascal, provide built-in debugging tools which shield a programmer from the need to understand his program at a level of detail beyond the symbolic Pascal or BASIC language. However, to take full advantage of the Macintosh's power and user interface, programs must call the Mac's ROMs directly. Hence, programmers must rely upon separate *debugger* programs to help detect the source of various execution errors or bugs. This book explains the debugging process on the Mac, which is unusually complex due to the interactive nature of the Mac's user interface.

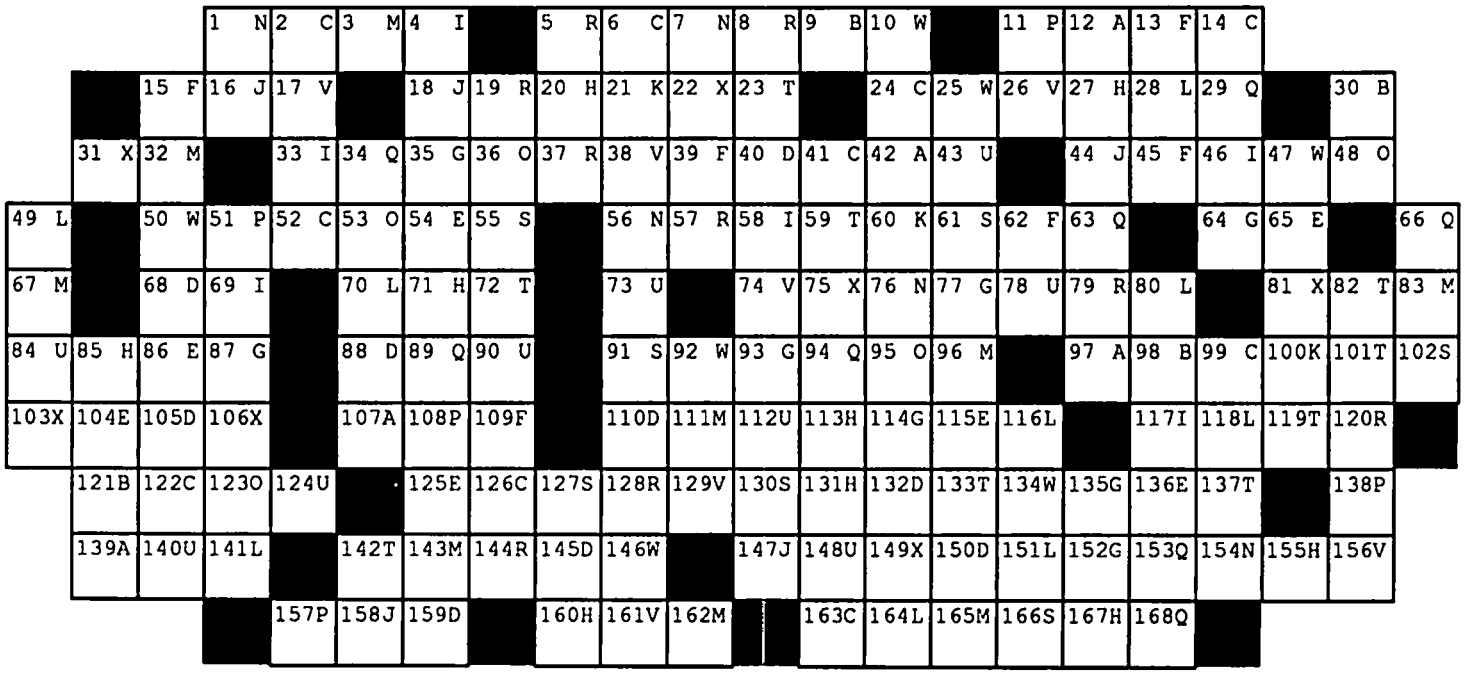
One important subject covered by Knaster's book which is not covered by earlier works including *Inside Macintosh Vol. 1-3* and *Macintosh Revealed* is the differences between the Mac and the Mac Plus. These differences are covered in each relevant chapter as well as in an 18-page appendix.

I enjoyed Knaster's writing style. It's witty and includes a number of "inside jokes." However, I could see how someone less attuned to Macintosh humor might find it distracting or irreverent. Knaster's examples and diagrams are very helpful. He walks you through a sample application, and more importantly, through a sample debugging session.

This book is essential if you want to understand how compilers on the Mac generate machine language code and how debuggers can be used to find the errors in your program. **Highly recommended.**

WAPACROSTIC
by Dana J. Schwartz

Using the Definitions, fill in Words. Transfer each letter into the corresponding square of the grid. The resulting quotation will read across. The first letters of the Words column spell out the Author's name and the Title of the work, reading down.



Definitions	Words
A. Flour mixture	97 42 12 107 139
B. Whip damage	121 98 9 30
C. By accusation	41 163 24 126 14 2 52 122 99 6
D. Smooth skinned peach	132 150 110 40 88 105 68 145 159
E. Special __	115 125 65 104 86 136 54
F. Wicker material	13 45 15 109 39 62
G. Hopeful	64 35 87 114 77 135 152 93
H. Fractional top	155 85 160 167 113 71 27 131 20
I. Jungle man	69 117 46 4 33 58
J. Distainful interjection	16 147 18 44 158
K. Wapiti	100 60 21
L. Erratically	70 164 49 118 80 151 116 28 141

Definitions	Words
M. Banish	83 96 67 165 111 162 143 3 32
N. Hindu prince	76 154 1 7 56
O. Mining support	95 123 53 48 36
P. __ Paste	138 51 108 157 11
Q. Caulking	34 94 153 168 29 66 89 63
R. Extremely	5 57 144 37 128 19 79 8 120
S. Waterproof cloth	102 130 91 55 166 61 127
T. __ deed	59 119 72 23 133 82 142 101 137
U. Deceitful	78 148 84 140 112 124 73 43 90
V. Skillfully created	38 26 161 74 129 17 156
W. Utterly	146 92 47 25 134 50 10
X. Visited malls	106 31 75 103 81 22 149

ANSWERS TO LAST MONTH'S WAP ACROSTIC

If you work these Acrostics, please contact the WAP office and let them know. I've gotten very little feedback and would like to know how may people actually get so far as to read the message contained herein.

Author: A Message
Work: to my Faithful Readers
Source: Dana Schwartz

Words

A. Attack	H. Epoch	O. Ichorous	V. Event
B. Manwise	I. Tiki	P. Twitched	W. Adopt
C. Eventful	J. Oilily	Q. Hewlett	X. Doable
D. Seashore	K. Motto	R. Foam	Y. Effect
E. Septa	L. Yodeled	S. Unwary	Z. Rencontre
F. Alkahest	M. Faking	T. Legend	a. Sapota
G. Gown	N. Awoken	U. Recycles	

Main WAP Meeting Sat., Oct. 24 = "ET, COME HOME!"

No, it's not about aliens. The "E" is for Education, and the "T" is for Training. It's the first ever EDUCATION & TRAINING EXTRAVAGANZA.

Our October show-and-tell is for parents, adult learners (if you're in Pi, you are one), teachers, trainers, school-age kids, those with concerns in special education, home-schoolers, and everyone else who just plain enjoys a fast-paced, APPLE-ied skills-&-knowledge-based presentation.(*)

- Choice-making resources & skills for Apple/Mac educational & training software
- Courses & even degrees you can take via computer
- Telecommunications educational & training forums
- Apples & Macs in special education (heart-warming)
- Apple/Mac assisted instructional administration
- Good & bad Apple/Mac educational programs - from the kids' as well as adults' perspective
- E/T software development resources (featuring a new local college course in Developing Educational Software for the Macintosh)

Organized by Patricia Kirby and Peter Combes of EDSIG, with assistance from local Apple dealers, software firms, and Apple Computer.

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* *Also welcome: games enthusiasts, who might cringe if they thought their passion for games had an educational content; software programmers and developers; proud grandparents & other relatives, through whose suggestions young family members work on Apples or Macs at home.*

CALLING ALL KIDS

by David Hakim

Apple Seeds is up and running with a whole new speed. If you are interested in computer programming and gaming for kids, call David Hakim at 301-649-1891 and come to the September meeting of the Pi. We will meet in the cafeteria at 9:00 AM. We will have demos and reviews of new programs that we have bought, and also ones that members have written. Topics will vary every month. At the September meeting, we will talk about a program to be written by the club members, how to call up bulletin boards, and how to get on the Apple Pi TCS.

"POSTSCRIPT" TO XPRESS AND GW 1.1 NOTES

by Jay Rohr

QUARK XPRESS ADDENDUM

Since my review of XPress in the last issue of the Journal, there were several peculiarities encountered in the application. Transferring PICT files from Cricket Draw did not work, whereas EPSF (Encapsulated PostScript Files) did—on screen. One problem: EPSF imported into XPress will not print. Additionally, the graphic in CD must be converted into a PostScript file first, before exporting.

No need to worry about inserting the x-y coordinates line in the PostScript generated file: it doesn't work either. Nor can XPress read the current version of Microsoft Word 3.0, and the screen tells you so. There are no fixed spaces in XPress except the Option/Space which is the equivalent of an "en" space. Two Option/Spaces therefore theoretically give one an "em" space. Thin spaces do not exist.

In order for the printout to be correct in the second tutorial (instead of chopping off letters), make sure the "Tiling" feature is turned off. In a phone conversation with Doug Jolly, Quark technical support, he said that version 1.1 of XPress will fix the Cricket Draw routines, the acceptance of Word 3.0 files, and several other minor bugs within the program. Version 1.1 will also be produced with a revised manual.

Working with boxes and frames in XPress is not as intuitive as one would like, although tremendous control with frames, sizes and thicknesses is available for the user. It takes some practice getting used to the "children" and "parent" concept, but is ultimately worth the effort. PageMaker could spoil you in this regard, but in PM you have less control.

GRAPHIC WORKS 1.1

Speaking of manuals, everyone who owns the 1.1 upgrade to Graphic Works must have called the producers of the program (Mindscape). The technical support department was acutely aware that their present ComicWorks and GraphicWorks manuals were unclear, and even poor in parts. Their new manual will be out in August. Current owners of 1.1 should call Mindscape to check on availability in August (312-480-7667).

Before I could finish describing my experiences in going through the second tutorial in GW1.1, the lady on the other end of the line interrupted, and described to me everything that was wrong with the description in their manual. This will be explained momentarily.

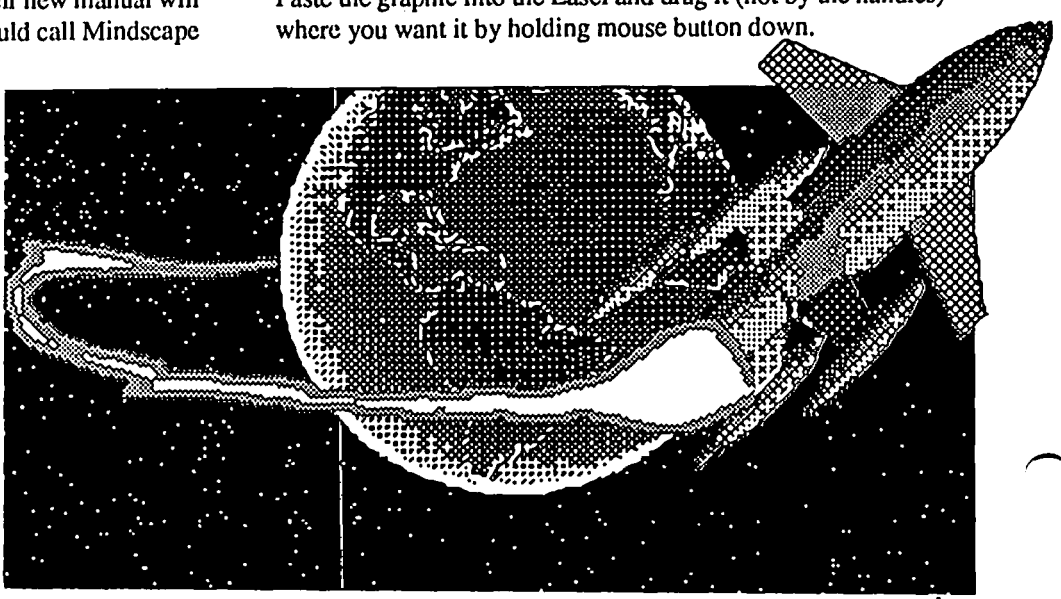
First, GW 1.1 is NOT a good program; it is an **EXCELLENT** program—a vast, vastly-improved one over the first. It should receive rave reviews. If it doesn't, then someone is missing the boat. Because it is far superior to the first Comic/GraphicWorks (same program), I believe the flood of calls they have received are from users who really want this program to work well for them, not because it is bad, but because it is so good. Particularly the QuickDraw Primitives, the ability to change Bit Map Resolution for LaserWriter output, and the ability to import TIFF (Tagged Image Format File) files from high resolution scanners.

Although a tricky program right now because of the unclear documentation and the sparse notes that come with the new version, it becomes addictive (and FUN, FUN, FUN) for anyone who wishes to produce high resolution graphics without the jaggies and stair-stepping. When going into 288 dots per inch resolution on a 512K or 512KE, however, you might run out of memory fast. This may force you to work on smaller sections of files, and then piece them together later. The manual doesn't tell you this. I've had much more success using a Mac+.

GW notes advise using only multiples of 72 dpi: thus 144 dpi will give better LaserWriter printout, and the 288 dpi will give optimum printout, rather than 300 dpi (which prints slower because it is NOT a multiple of 72 dpi). At printout, GW 1.1 wisely has a check-on/off feature called Automatic 96% scaling, which should definitely be used for bit-mapped printouts for better resolution. The programmers were certainly conscientious and aware of these printout differences, and incorporated this valuable feature in their application.

Despite some of the complexities within the program in manipulating text and graphics which, hopefully, the new manual will explain in more detail with the help of an index, it is heavily feature-laden for the user's benefit. The famous air brush tool is a delight, and both the tool palettes and menus have been simplified.

To return to the tutorial and the old manual, most of the steps you take are true to the point of the Browse Window. When importing a file from the Browse Window (whether Graphic/ComicWorks graphic, FullPaint or MacPaint), CLOSE the Browse file once the graphic has been copied to the Clipboard. Paste the graphic into the Easel and drag it (not by the handles) where you want it by holding mouse button down.



contd.

Once in position, and without de-selecting it, go to INK in the Windows Menu and choose MATTE. THIS IS THE KEY. Matte lays the current graphic over the graphic underneath. Click outside the Easel and Window to see the results. Beautiful. Ink becomes a very important consideration. Note that Transparency affects ONLY the screen and you, the operator, so that you can see through different easels for placement of objects. It has no bearing or effect on print out, and you cannot use Transparency once in the High Resolution mode.

The use of Object/bit-mapped and High-Res objects in GW 1.1 doesn't matter: this is no mean accomplishment. Use any of these at will. You can use either LaserWriter fonts or bit-mapped fonts in their specified sizes for best print out, including the well-designed Comic, Commando and Crypt fonts within the GW System File. Under the Styles Menu, there is Left, Right, and Center justification, but, unfortunately, no Justified copy mode. If using the LaserWriter for print out, DE-SELECT bit-mapped printing. Although it is faster, it's not worth the display it gives compared to what this program is capable of producing.

When making new Panels or Easels in which to place text and graphics, the Default is a panel with a rule around it. To get rid of an unwanted rule, click on the panel and then click on the dotted line rule weight in the palette. This is the No-Rule symbol.

The balloons in which to lay your text are pure fun. To create dialog pointers, select the dialog box, click in the palette with the pointed balloon. Additional handles will appear on the dialog box, and from these, one is able to create the pointers.

NEW SYSTEM/FINDER

Doing work on the Mac 512KE, MacPlus, MacSE, and disregarding most of what I've read and tried, I'll make things very simple. Use the 4.1 System File and the 5.5 Finder versions IF you can. Particularly if you interact with the Macs above and a hard disk in which these are installed. And if you want the fonts to come out looking slicker, re-install all your LaserWriter fonts with the new Font/DA mover 3.5. From scratch.

Be wary of using the GENERAL file on the MacSE, temporarily. Apple is working on a new bug-free version which should be released in August. The new System is huge, and will slow down work on a 512E tremendously because it uses so much memory. (512K, use old versions of System and Finder files.)

If transferring files from 512KE to MacPlus or SE, watch for shifts in your type using some programs (GraphicWorks 1.1, for example); you may have to make some minor adjustments for placement. Typing in PageMaker 2.0 and using the new System and Finder on a 512KE is enormously slow. PageMaker generates pure PostScript rapport with the LaserWriter. If you type 120 words a minute (I do), then be prepared to become a tortoise, or you'll find letters dropped from words, and even whole words missing in your copy. Additionally, your PM file will bomb on you because it runs out of the memory-hog PM has become. The key is to interrupt your work and keep saving your file as you progress. ReadySetGo3, MacPublisher, Quark XPress, and all the other programs (except Excel) work very well with the new system and the 512KE.

The plan, escpecially when working with other Mac equipment and the LaserWriter, is to keep ALL System files the same so that they are compatible. Deviation from this means nothing but trouble. And keeping more than one System Folder on a hard disk is purely and simply disastrous! I find that I have to constantly check the hard disks of clients for this—and it rarely fails: there, tucked away in some obscure folder, is another System File. If that makes any sense to you, it makes even less sense to me, especially after repeatedly warning them.

DISK EXPRESS

Version 1.1 is out. Get it to UN-fragment your hard disks and floppies. Disk Express is an INVALUABLE tool. This is a MUST tool for those who want their hard disks to work at optimum performance levels. It's like oil for your car engine.

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

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MacNovice Column

by Ralph J. Begleiter

Not Very Mac-ish

Despite all the efforts of Apple, and the now widely-acclaimed value of software for the Macintosh which adheres to a single, consistent format, MacNovices may well have noticed that there are already a few programs which don't stick to the rules. They're not very "Mac-ish" in some respects.

This isn't a minor annoyance. MacNovices, who often haven't had any computer experience before, have come to expect a certain "friendliness" about the software they see on their Macintosh screen. A certain ease of use, familiarity and quick learning curve which has by now become one of the Mac's hallmarks.

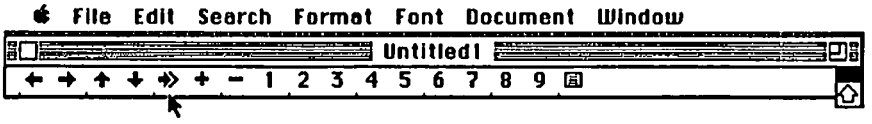
But let's not kid ourselves. No matter how much we spend on software for the Mac, some programmers just aren't paying attention to all the details which make a program easy to use and learn, and consistent with other software packages.

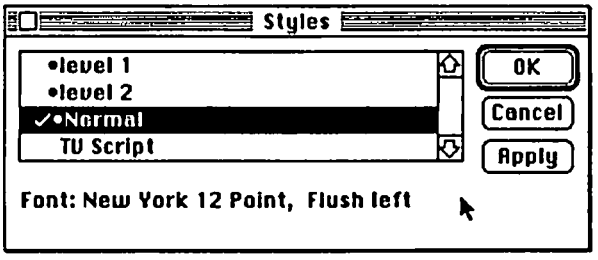
Perhaps the most glaring example is Microsoft's WORD. Sure, it's got more features than most word processors available for the Mac. But, if you've spent any time *using* WORD, you already know that it's not a very friendly, Mac-like program. Leaving aside the bizarre complexity of many of its commands, just look at the so-called "user interface," the graphic way the program presents itself to a MacNovice:

Compared to the simply-learned outlining commands and mouse movements of MORE, the WORD version of outlining is byzantine. Without reading the instructions, it'd be difficult to figure out how to use the outliner in this program. And Macintosh programs *should* be intuitive enough to engage the user without having to read all the fine print.

Notice, also, how WORD's "Styles" dialog box departs from the Macintosh convention of using the word "style" to refer to *typestyle*. Microsoft implemented a very useful feature (which probably should have been called something else) in a hard-to-understand way. Even after reading the instructions, it's difficult to figure out how to *use* the "styles" dialog box.

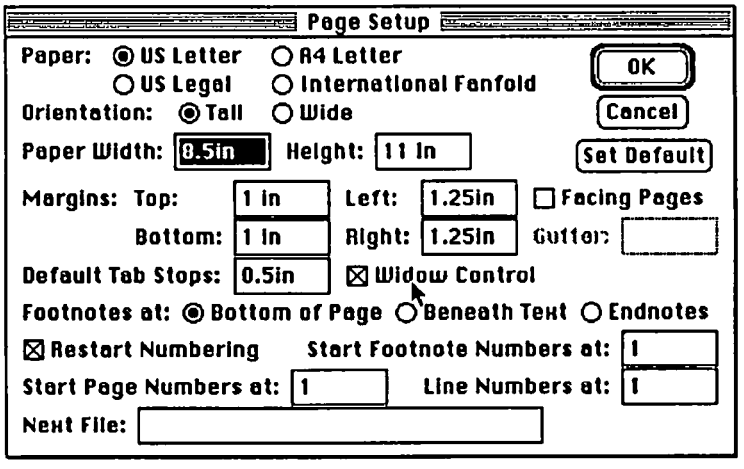
And take a gander at WORD's "Page Setup" dialog. Sure, WORD has features. But they're so crammed into the maze of boxes and buttons that it's intimidating! The names aren't intuitive. It might take several minutes just to figure out which buttons to click in this one dialog box! Remember, WORD isn't a cheap-and-dirty program. It costs several hundred dollars, and is touted as one of the best Macintosh word-processors available.





In WORD, the "Outlining" menu is a nightmare, compared to the breezy, intuitive outlining commands in MORE. The "Styles" dialog is a puzzlement, even after reading the instructions.

And "Page Setup" looks like something an IBM programmer might dream up. (Not to mention the questionable command for "Widow Control.")



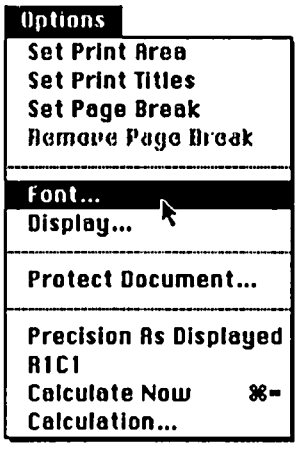
Not to pick on Microsoft, but similar criticisms are justified in EXCEL, among the best spreadsheets available for the Mac.

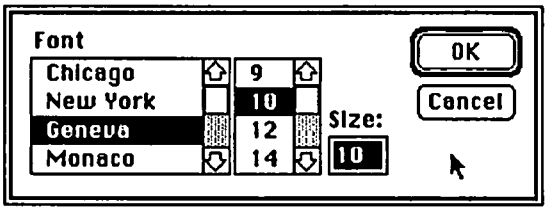
Notice, on the next page, that EXCEL's FONT menu differs sharply from most other Macintosh programs. Convenience and ease of learning is better served by sticking to the Macintosh conventions of having a FONT menu, from which fonts and sizes may be chosen. Same number of mouse movements. And a new user would pick it up quickly when switching from another program. (Remember, that's one of the banes of the IBM-compatible world: different programs use different commands to accomplish the same results.)

For some strange reason, the makers of MORE (Living Videotext) adopted the Microsoft method of displaying the font and style choices. Too bad, because it's equally inconsistent with the Macintosh standard, and it detracts from MORE's outstanding ease of use. Interestingly, even Microsoft changed its mind about the font and style menus, returning to the original Mac standard when it issued the integrated program called WORKS.

By the way, notice the SORT menu dialog box from EXCEL.

contd.

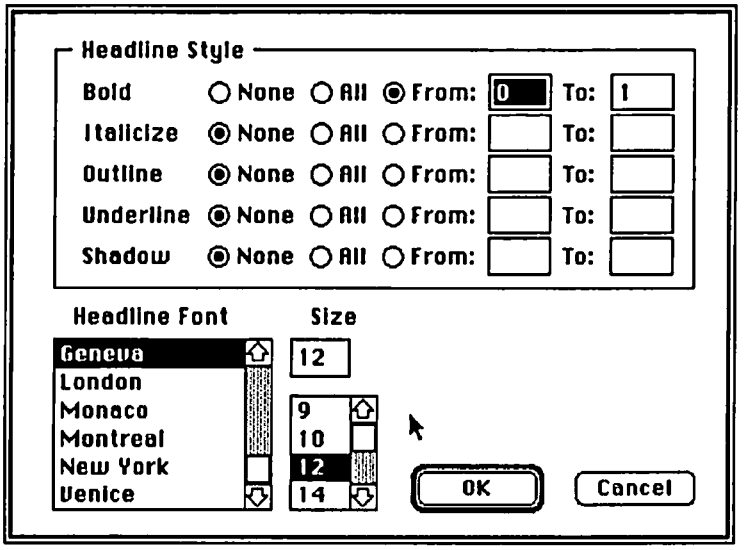




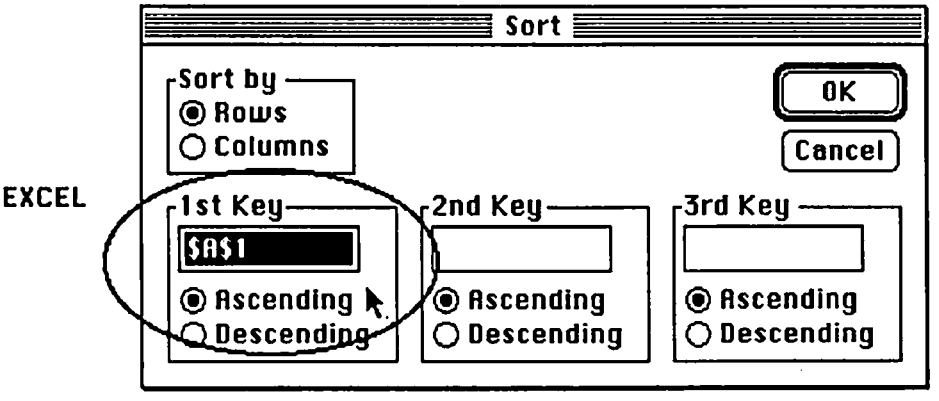
EXCEL

Font menus in EXCEL deviate markedly from the Macintosh standard (despite Excel's outstanding other qualities.) This was corrected in the firm's later product, WORKS.

Ironically, MORE picked up the un-Mac-like font menu format from EXCEL. It should be corrected.



MORE



EXCEL

Excel's SORT command is arcane. And the program doesn't "remember" its sorting instructions from one moment to the next.

Is *that* intuitive? What does "A1" mean? Where do the dollar signs come from? Why are they there? How should anyone know, without recalling from the manual that this is an arcane coding which sets the column and row to sort? And, incidentally, why doesn't EXCEL automatically assume the user wants to sort the spreadsheet area which he has already designated as the DATA area when creating the database? Why is it necessary to *re-define* the sort area every time a new sort is required?

The makers of FILEMAKER PLUS have solved that problem in a Mac-ish way. FILEMAKER's dialog box includes graphic depictions of "ascending" and "descending" and the sort order *remains designated until changed by the user*, whenever the file is opened to that document.

Back to MORE again. For all its features, this program has managed to include some doozy dialog boxes. See the PRINT OPTIONS box on the next page:

Although most Mac programs include their PRINT commands under the standard FILE menu at the left of the screen, MORE has this one tucked away in a menu at the far *right*. And if you're a MacNovice, you'll have trouble figuring out what all those choices are supposed to mean without reading the instructions. What's "full justification?" (Turns out, full justification isn't "full." It only affects so-called "documents" hidden under headlines... not the headlines themselves in your "document.")

And it's wonderful to have all those choices of "headline labels." But why not make it obvious in the dialog box what they'll look like when printed? Just include a few icons, or illustrative labels.

Speaking of icons, they would be a great help to the novice user of MORE in a menu such as the WINDOW menu:

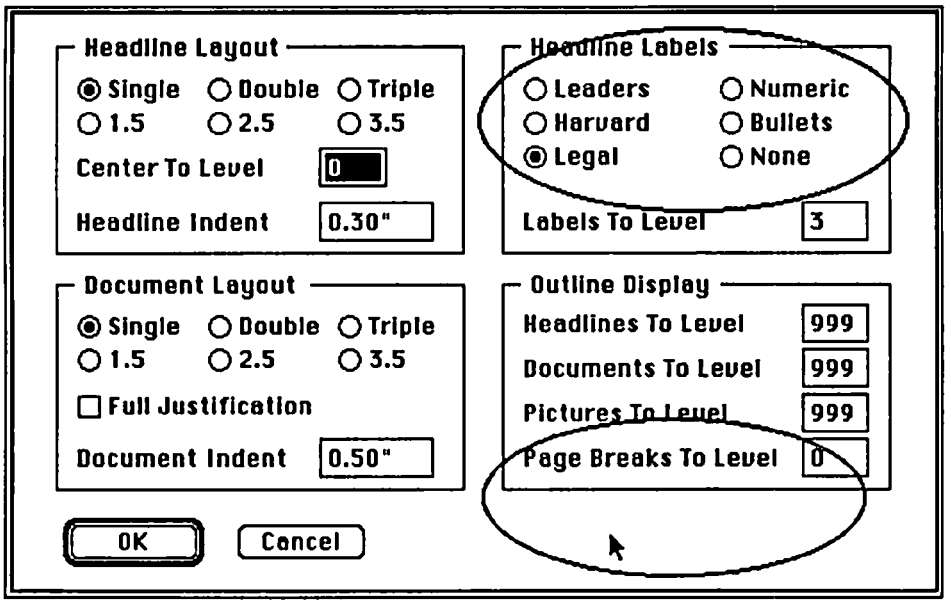
Not that it's so hard to experiment. But making the commands *intuitive* is what the Macintosh user interface is supposed to be all about. Make it simple. Make it *obvious*.

And, finally, despite the implementation in more and more Macintosh applications of a command called "PREVIEW," there are some which need it badly and don't have it. MORE is a good example. Page breaks are impossible to set in any truly useful way. That's really inexcusable on the Mac. But the problem is compounded by the fact that it's impossible to PREVIEW a printing job before it goes to the printer. Page breaks don't appear anywhere on the screen. It's a sore-thumb violation of the Mac's what-you-see-is-what-you-get theory.

MORE isn't the only culprit on this score. WORD is notoriously difficult to preview, and some WORD formats (such as side-by-side columns) are especially difficult to preview.

Making Macintosh programs conform to a consistent, intuitive appearance on the screen isn't easy. Some programs have done it well. Others, even the most expensive, leave a lot to be desired from the point of view of a novice who doesn't care to memorize different commands for each of the programs being used.

contd.

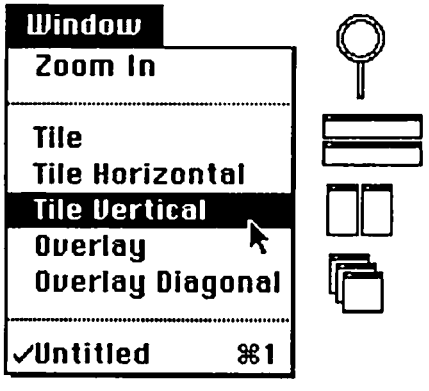


For all its easy Mac-like features, MORE's "Print Options" menu is a maze of un-intuitive choices. Strangely, the "Print Options" dialog command isn't even located in the FILE menu, where the PRINT command and PAGE SETUP commands are usually found.

Among the most glaring examples of un-Mac-like "features" of MORE is its PAGE BREAKS command. Page breaks don't appear anywhere on MORE's screen, and can't be previewed before printing.

And why not display the Headline Labels graphically, instead of describing them in terms which are hard to recall from the instructions? What's wrong with:

○ Leaders	- +	○ Numeric	1,2,3
○ Harvard	A a	○ Bullets	•
◉ Legal	1.1, 1.2	○ None	



MORE's "window" menu is a great feature, but its commands are not intuitive. Tiny icons in the menu would help.

DOES -2 X -2 = 4?

A Tale of Spreadsheets and Pocket Calculators

by Jim Little

Recently as I looked thru the Excel™ book *"Excel in Business"* by Douglas Cobb I noticed that it describes exchange of data or templates between Lotus 1-2-3™ and Excel. It noted that importing was easier than exporting since Excel has a more powerful instuction set. Then the Caveat! Lotus 1-2-3 uses a different operator precedence than Excel. One result is that if a cell containing the value -2 is raised to the second or any even power the answer is -4 or -16 or whatever. Excel, Multiplan™ on the Mac, and The Spreadsheet™ on the Apple][, on the other hand give the positive answer of 4, 16 or whatever. The reason is 1-2-3 evaluates this expression: $-(2)^2=-4$, while the others do this: $(-2)^2=4$. Please note that this is the only one that I checked; there are others mentioned in the book.

This got me thinking, a dangerous preoccupation. What about my trusty little Sharp 506p calculator. Lo and behold: $-2^2=4$. A quick test of the latest addition to the stable, a Casio fx7000g: $-2^2=-4$. My trusty HP45 of course gives: $-2^2=4$. Q.E.D.

The whole thing depends on which operator goes first. The trouble is that the "-" sign is treated as an operator that is applied after the exponentiation operation. Putting it bluntly, a value in a cell of a spreadsheet should be that value, and not a number with an operator in front. Note also that: -2 X -2=4 in all the above instances so that 2 X 2=4, -2 X -2=4, but $-2^2=4$ or -4 depending on the hardware or software used! The final result in 1-2-3 may produce undesired answers. A negative number raised to a non-integer power is not defined in the field of real numbers. Example - $2^{1.414}\approx-2.6647\ldots$ in 1-2-3 or Casio 7000, but an error in Excel or the others mentioned above. The moral of the story is, check to be sure that input produces desired output.

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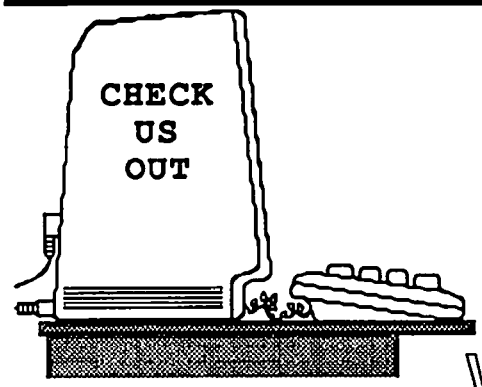

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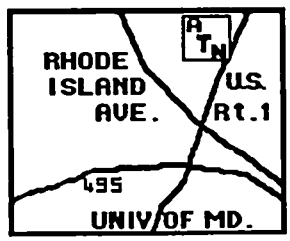


MC VISA

STORE HOURS
Mon-Sat 10-6

Softviews by David Morganstein

This month we look at two revised products. First, **InBox** version 2.0, an AppleTalk message system. Its authors, Think Technologies, have made a major change which permits the product to run without the need to dedicate a Mac as the administrator. This function can now run in the background. Think has several excellent Mac products such as Lightspeed C and Lightspeed Pascal and LaserSpeed, a laser spooler. Second, we look at **McMax**, a dBase clone which allows you to read dBase data files and run dBase programs that have been ported to your Mac. This product was bought by Nantucket who distributes Clipper, a dBase compiler, and is making its entrance into the Mac market with McMax. Nantucket has completely rewritten the documentation, a complaint of the predecessor product dMacIII, and fixed a number of annoying bugs in the dMacIII.

InBox. Think Technologies has updated their AppleTalk message system which allows you to send and receive memos, phone messages and file enclosures between networked Macs. The first version required a dedicated Mac which could not be used for any other purpose. Version 2.0 offers the choice of dedicating a Mac, or having InBox run in the background, allowing the machine to be used. One unique aspect of the system is that the mail is sent to and stored on a single Mac, allowing mail to be sent to someone whose machine is off. When the receiver of the mail boots up at a later time, they will be notified that mail is awaiting them.

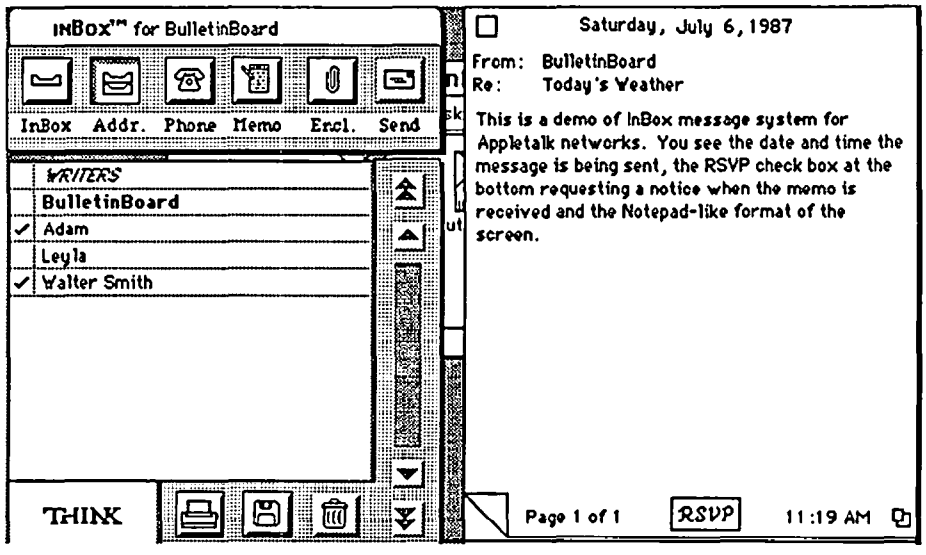
InBox operates as a desk accessory, making it easy to use and permitting you to send/examine mail without having to quit your current application. When mail is awaiting you, you can be notified by either (or both) a visual or an audible notice. If you are using your Mac when a message arrives, you will hear a beep, and see a message dancing across the menu bar. If you return to a Mac after mail has been sent to you, you will see the word Think beneath the Apple to remind you of unopened mail. Optionally, the audible and visual reminders can repeat periodically when unopened mail remains.

Installation. To install InBox on a network, you must select at least one Mac, preferably one equipped with a hard disk, to act as the Message Center. A volume on it (microdiskette or hard disk) will be used to store all messages and to communicate with senders and receivers. An Administrator's disk is used to set up the message center, give it a name, identify the mailboxes and attach passwords to them, if you desire. This station will perform routine maintenance such as backing up message files, changing the address list of participants or phone check boxes and compress files to save disk space using a special utility.

All other stations must have the InBox desk accessory installed in their system file in order to be notified of mail and to exchange information with the message center. These stations are serially numbered, so that individual InBox installer disks are needed for each station. No two stations with the same number can access InBox simultaneously.

What You Get. The package contains an administrator disk for configuring the message center station and the administrator's Mac. Three Personal Connection Installer disks are included to allow three other Macs access to the Message Center. Additional Installer disks can be obtained at a list price of $75 each. An extensive user's guide and administrator's manual are included. Both of these are easy to read and to follow. The User's Guide employs numerous clearly labelled screen shots showing you what to do and what each option means. A short Administrator's Notes includes updates to the Administrator's Manual. A 13 page Compatibility Reference manual describes InBox use with a Laserwriter equipped network and issues around the MiniFinder and Hard Disk upgrading.

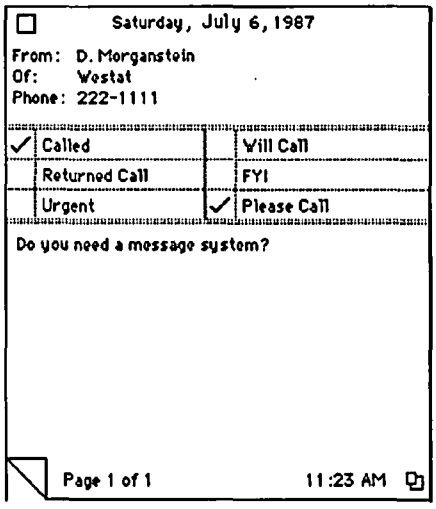
Using InBox. When you select the InBox desk accessory, you are greeted with a window that lets you: examine your message list (InBox), select people to receive your messages (Addr.), create a phone message (Phone) or memo (Memo), select a file to be enclosed along with the Memo (Encl.), or send a message (Send). In the screen below, Addr. was selected to list the names and Memo was selected to create a note.



contd.

The message list shows mail in chronological order displaying various footnotes such as RSVP, reminders you have sent yourself, or an indicator that an item has not yet been read. As you can see above, the message and address lists use a "realistic" slider and forward/reverse buttons to scroll vertically through the message titles or names. While this may be "cuter" than the usual Mac elevator box, I would have preferred the standard display. Opening either a blank memo or received message you will see a display similar to the Notepad which indicates the sender's name, when it was sent, or if an enclosed file accompanies it (indicated by a paper clip, denoting enclosure). These memos can contain multiple pages. At the bottom left of the screen you see how messages can be trashed, sent to the printer or stored on a disk. These three operations can be performed in individual messages or simultaneously on a group of messages designated either by clicking on individual names or on all traffic from a single day. Again, Think has changed the standard Mac interface in that items are not dragged to the trash, they are selected and then the trash icon is clicked.

Telephone message forms can be reconfigured by the Administrator. The standard form looks like this:



InBox offers several advanced features, as well. After reading an incoming item, you can select Reply from the InBox menu and issue an immediate response. A received item can be forwarded to another member of the InBox network. You can create a Routing List of various people which can be used to send messages to specific collections of people. Your mail can be read from another Mac, so long as you remember your Password!

Gotchas. I have encountered some small problems with version 2. Nothing big enough to worry about, but you might want to know about them. Most of these problems only affect the Adminstrator Mac. Initially I set up InBox to run in the background of a 1Meg Mac plus. All the Macs on our network have a lot of memory resident software that use up much of the 1Meg—things like Autoblack, Tops, laser spooling software, Mac In Use (to track usage by project number). The persons using the Administrator Mac found they couldn't open InBox when they were running Word or Excel. InBox gave a message indicating there was not enough RAM. In addition, several "strange" things began to happen. The RAM cache button disappeared from the Control Panel and the minifinder window used to negotiate through folder lost the button at the top which lets you select a folder. (If you clicked in the right place, you could still pull-down the folder list). When the Administrator is not running, things return to their usual comfortable self.

Think Technology responded to a description of these conditions by saying that the Administrator machine needs a lot of memory—not much help. We moved the Administrator to an SE with 2.5 Megs of RAM. We have no problem opening InBox within Word or Excel now but the other two problems remain. What is also disturbing to the users of the Administrator machine, when you click on a file stored on a diskette, and launch a program, upon entering the program you will get a message saying, "Can't find the file." You can issue the usual Open command, negotiate through the volumes and folders to find it and then open it just fine! It can't be just a memory problem (not with 2.5Megs of RAM available...).

Another small problem. We tried to distribute a desk accessory to everyone on the network by attaching it to a memo. The DA arrived accompanied by the appropriate icon and appeared to be fine. People installed it in their system but then discovered that the DA was not working properly. So far, we have not figured out what went wrong but it certainly did not appear to be transmitted intact.

Summary. InBox offers a unique and very workable solution to message exchanges among network members (secretaries in our office love it!). It has the ability to store messages and notify users of their mail even if their equipment is not on at the time the memo was sent. In addition, it can provide feedback to the sender that their mail was received. Files can be sent along with the messages.

Think Technologies offers a technical support phone number but it is not an (800) line.

I have not had a chance to try out InterMail, a competing product. I suspect the minor problems we have encountered can be resolved easily once Think puts its mind to it. Think Technologies, Inc., 420 Bedford St., Lexington, MA. 02173. Phone (617) 863-5595. Price $295 for the three-pack start kit, $95 for additional stations.

McMax. While the release of Ashton Tate's long awaited dBase for the Mac continues to be delayed, Nantucket (developers of the dBase compiler for MS-DOS) is offering dBase compatibility to Mac owners. Their product, originally marketed by Format Software as dMacIII, is a somewhat Mac-like clone of dBase. It offers direct access to dBase files and programs on your Mac. I have moved a 300K database and several programs to the Mac and found them to run many times faster on the Mac than on the PC! If you need to run dBase programs accessing dBase data bases, you will want to know about McMax.

Nantucket has added several enhancements which will assist program developers. McMax comes with a run-time package. This can be given away to purchasers of your McMax application free of charge with no royalty to Nantucket. You can program alert boxes and help menus to facilitate the use of your program.

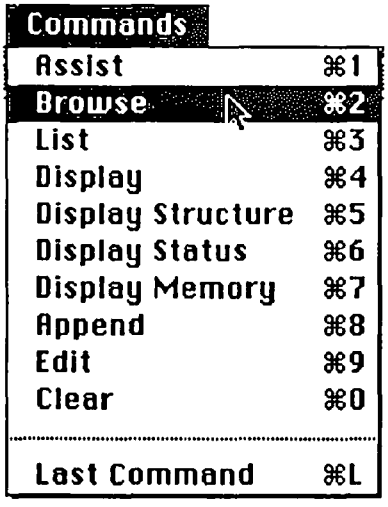
This review is written assuming you are familiar with dBase and that you have need to work with dBase files and programs in a Mac. If you are not limited to this alternative, I suggest you consider other, easier to use though almost as powerful, database packages before making your selection. dBase III+, although somewhat more friendly than early incarnations, is very much a command language system. It is extremely powerful. However, a package such as 4th Dimension or Omnis 3 on the Mac will better serve most users than spending the effort to master the more powerful though difficult to learn and use dBase. If you need dBase, you may want to examine Ashton-Tate's program,

contd.

expected to be released in the fourth quarter after almost a year's delay, to see if it is an easy-to-use alternative. dBase for the Mac is reported to feature a graphics data type allowing you to store and retrieve pictures; however, it is reported not to use existing dBase programs.

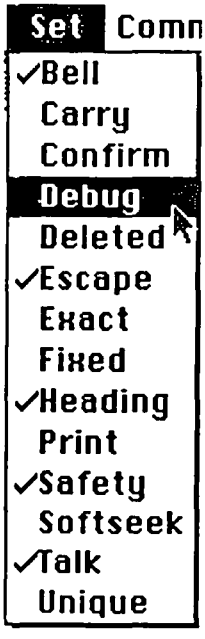
McMax supports all of the dBase file types (database, index, memo, label form, report form, format, program, memory) as well as all of the variable types (character, numerical, logical, date, and memo). Almost all of these can be ported directly into the Mac from other systems. Index and memory files, however, must be re-created while running McMax, a relatively simple step which can be performed easily with McMax commands.

Due to the Mac interface, McMax on the Mac is easier to use than dBase II or III. (dBase III+, the newest version, has incorporated some of the pull-down menu ease.) Most of McMax's commonly used interactive commands are accessible from a menu. When a file is in use, the following commands can be issued:



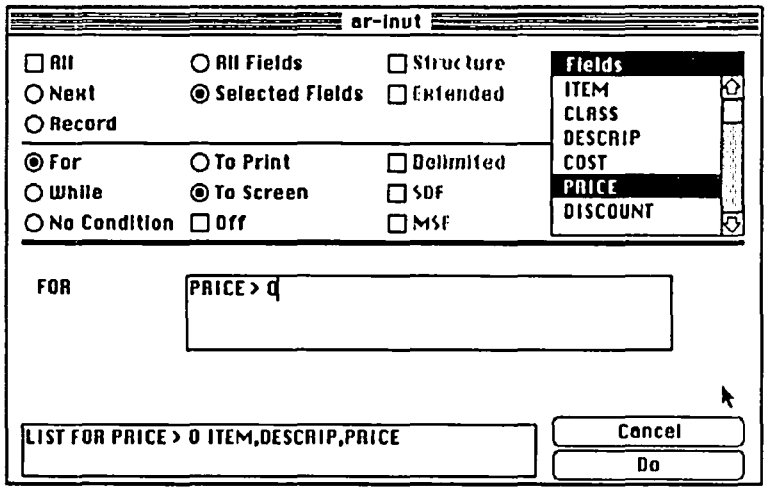
If you enter an incorrect command, McMax displays a window which allows you to edit the command line and retry the request. Errors in entering commands can be easily corrected using standard Mac text editing by pointing, selecting and clicking. One pull-down menu option is "Last Command" which (as you can guess) causes the last command given to be reissued.

The dBase environment is defined by a series of SET commands. Their status can be determined using the DISPLAY STATUS command. In McMax a pull-down menu allows you to quickly observe or change the status of these conditions.



You can enter and exit the McMax editor very quickly as you create and modify program files. I find the standard dBase editor awkward by comparison. Since both McMax and dBase editors have a very limited capacity (McMax is limited to 32K of code while dBase offers a meager 4K), you will need to use an editor with greater capacity for larger programming tasks. McMax can be run under Switcher, permitting you to use an editor such as Apple's Edit (supplied with the McMax disk) in a separate but instantly available memory partition.

The major difficulty with a command language system, is remembering the names of the commands, their syntax, and the names of the database variables. To facilitate this, McMax offers its version of the dBase ASSIST command. Most McMax commands can be entered directly from the Assist menu. It contains lists of commands and of variable names. Assembling a McMax command is as easy as clicking on menu options. In the Assist window shown below, I have selected the List command, clicked on a couple of variables I wanted (ITEM, DESCRIP and PRICE) and selected the FOR option to limit the listed records to only those meeting the FOR restriction, in this case PRICE > 0. The McMax command appearing at the bottom of the window could be entered directly from the keyboard, but the Assist option greatly speeds up the process and reduces errors caused by mistyping.



One feature that McMax does not provide which would simplify operation is remembering screens for review by reverse scrolling. This capability is provided in terminal packages like MacTerminal and Red Ryder and in the Systat statistics package. It is particularly valuable in a command language system where results scroll off the top of the screen. A report consisting of selected fields for selected records, for example, could be reviewed after it is been completed. Your only option in McMax is to stop the listing with a command key or to send the list to the printer. If you miss the ouput, you must re-issue the command.

The MODIFY STRUCTURE command is used to change the definition of a file, the field names, lengths or types. The following window appears for that purpose. In dBase you move through this kind of display, item by item, using the tab key. In McMax, you can click on the field you wish to change and then modify it.

Fieldname	Type	Len	Dec
ITEM	C	6	0
CLASS	C	1	0
DESCRIP	C	25	0
COST	N	6	2
PRICE	N	6	2
DISCOUNT	N	6	3
ONHAND	N	5	0
ONORDER	N	5	0
ORDERPT	N	5	0
ORDERQTY	N	5	0
LAST_RCVD	D	8	0
PCS_RCVD	C	5	0
ALOC	N	5	0
YTDQTY	N	6	0
SUPPLIER	C	6	0
CODE	C	1	0
SEQ	N	5	2
LDATE	C	8	0
DATE	C	8	0
UPARTNO	C	8	0

Fieldname	Type	Len	Dec
PACKING	C	3	0
SUGG	N	7	3
VEND1_NAME	C	12	0
VEND1_DZ	N	6	2
VEND1_EA	N	7	3
VEND2_NAME	C	12	0
VEND2_DZ	N	6	2

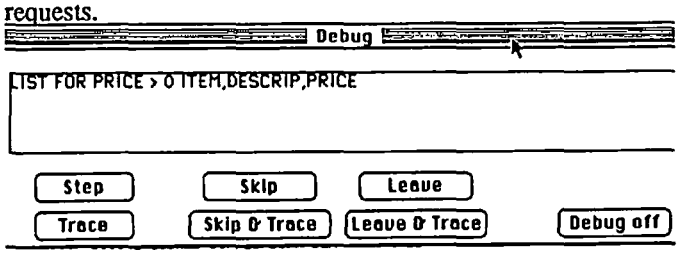
Compatibility with dBase. A major concern to a dBase user considering McMax is the use of existing database files and programs. dBase has other types of files (memory, index, reports, etc.) most of which can be directly converted. Only index and memory files do not translate; however, this represents no great problem since databases can be re-indexed and memory files re-generated. Nantucket has seen to it that program files require no special attention. Move them to the Mac in any convenient fashion (using Tops for example) and then enter the McMax editor and load in the file. When the McMax editor saves the file, it will modify the files icon to look like a McMax program file. For larger programs that won't fit into the McMax editor, use any SetFile utility to change the file type if you want the cute McMax icon. Data files created in dBase can be read just as simply. (It's predecessor, dMacIII, had an awkward conversion process and naming convention, both of which have been eliminated.)

Differences Between McMax and dBase. A major difference is in file capacity. McMax allows for files as large as 32 Megs, assuming you have a hard disk of this size. A file can contain 16 million records, each of which can be 32K in size. dBase III can handle a billion records per file each of which is a maximum 4K in length. A McMax record can have up to 2000 fields of a maximum of 255 characters for character data or 63 places for numeric data. A dBase III can handle a maximum of 128 fields per record. Up to 10 files can be open at once. According to Nantucket, the McMax index files are more efficient and take up less space than the dBase equivalent.

McMax comes with a free run-time package which allows you to develop applications which can be sold to those not having McMax. Nantucket makes this run-time package available at no royalty cost to the developer. They want you to buy and use Nantucket to create dBase applications!

To assist applications developers, Nantucket has added the ability to create alert boxes, and to program the cursor and the list and save boxes. Nantucket has added a number of features found in their MSDOS product Clipper. Among these are saving and restoring screens.

Debugging. McMax offers an easy to use debugger. By selecting the Debug switch, a window appears which allows you to step or trace your way through a program. As you can see, the current command is displayed. The results of the command can be seen behind the debug window in the main display window. Clicking STEP takes you through the program one step at a time. Clicking TRACE causes the program to execute continuously while displaying each command. SKIP allows you to execute an entire DO...WHILE loop without having to step through each line. LEAVE allows you to complete the loop once you have begun single stepping within it. The debug window can be moved behind the main display to allow you to respond to input requests.



Support. The thick 1" manual will teach you all you need to know to operate McMax. It contains a 133 page tutorial on using dBase. The reference section is about 300 pages long and documents every command and function. These descriptions explain what each command or function does and how to use, including examples. There is a section on transferring files between MS-DOS systems and your Mac. There is a Table of Contents and an index that contains most of the entries you will need when looking up topics.

Another thing Nantucket offers by way of support is on-screen help. A scrolling display, like the following, is available by clicking on your choice of a command word selected from an alphabetized list of all commands. This help function is programmable so you can change it to meet the needs of your specific application. In addition, the standard help is context sensitive, changing according to where you are in the program.

```
COPY TO <file> [<area>] [FIELDS <fields>]
 [FOR/WHILE <condition>]
 [SDF/MSF/DELIMITED
 [WITH blank/<delimiter>]]

Dialogue        : Copying of database files
Program         : Copying of database files

Using COPY database files can be either completely or partially copied.
The current file will be copied. Destination is the file that is identified
in the command. If this file does not exist, it will be created. If the
destination file exists, it is overwritten (!), all records that were in this
file will be erased. Then the new data will be entered.

Using COPY even those records marked for deletion will be copied unless COPY
is used in connection with a FOR/WHILE condition or after a SET DELETED ON. The
deletion marks remain unaffected. When the option FIELDS <fields> is used, the
fields that should be transferred to the new file can be indicated.
```

The standard level of technical support is 90 days during which time technical questions will be answered (on a non-800) number. After this, additional assistance can be obtained for a fee of $90 per year. This buys you unlimited technical questions, a quarterly newsletter and a free subscription to a Nantucket bulletin board on the Source.

Gotchas. There are a few aspects of McMax you should know about. First, the McMax editor only handles program files of about 32K of text. This is adequate for many problems but not for all. The editor does not contain search or replace options. Fortunately, McMax works with Switcher and Nantucket includes the excellent Apple editor, Edit, in their package. By running McMax with a text processor like Edit in a second Switcher partition, you can quickly make changes to the largest of programs, then return to McMax to try them out.

McMax does not support mixed fonts in its output. Of course, only monospaced fonts like Monaco and Courier are needed to assure that output lines up within designated columns. To obtain a hard copy, you use the SET PRINT ON command. After activation of this option, all output goes to the printer as well as the screen. You must designate your printer type by selecting Imagewriter or Laserwriter in a special McMax window. It is not clear to me why this is needed, since McMax should operate adequately using the standard Chooser DA to make this decision. In addition, I had some trouble printing with the SuperMac spooler. This spooler is very robust and has had no troubles with any other program.

Summary. Do you need McMax? If you have to shuttle

contd. on pg 72

MACINTOSH BITS AND BYTES

by Lynn R. Trusal

Kinetics and Alisa Systems Macintosh Solutions

Kinetics, Inc., is located in Walnut Creek, CA (415) 947-0998 and is the leading company producing Macintosh connections to the VAX world via Ethernet. EtherSC is the first product providing a direct connection from the SCSI port of the Macintosh Plus to thin-wire Ethernet. Another product is FastPath that permits the connection of an entire AppleTalk network to an Ethernet network. It can also function to bridge separate AppleTalk networks along an Ethernet backbone. A second-generation FastPath supports multiple AppleTalk devices including Macintoshes, LaserWriters and PCs as well as multiple network protocols. Software solutions to support UNIX, DEC VAX/VMS, and TCP/IP are available from Kinetics or third party vendors. FastPath costs $2,500 and EtherSC is $1250. Both are reasonable for the business environment that they will be used in.

I mentioned in a previous Journal article a product called AlisaTalk by Alisa Systems of Pasadena, CA (818) 792-9474. I now have additional information on this product. AlisaTalk is a software application for the VAX/VMS consisting of AppleTalk network support, a file server, and a print spooler for the Macintosh. AlisaTalk software resides on the VAX and provides a LaserWriter spooler and transparent file server to Macintoshes connected to AppleTalk. The file server portion provides transparent file access to files located on the VAX/VMS system. Macintosh users see the VAX as one or more volumes that they may mount on their desk tops. VMS users see the volumes as VMS directories, containing individual files. Files on the VAX may be accessed by all attached Macintosh users and backed up by the usual VMS procedures. The AlisaTalk print spooler speeds the process of printing to a LaserWriter by receiving PostScript data at high speed from many users at once. It then sends the data to the LaserWriter for printing as fast as the LaserWriter can accept it. On the Macintosh the spooler appears identical to a real LaserWriter.

Alisa Systems has recently given access to the 400-line-per-minute DEC Print Server 40 by adding support for this DEC printer to its AlisaTalk Mac-to-VAX network package. This will permit Macintosh users to communicate from an AppleTalk LAN to a VAX/VMS system through an Ethernet bridge and print documents on a PrintServer 40. Alisa will soon begin shipping its Alisa/Terminal package, a DECnet/AppleTalk virtual terminal system that emulates DEC and Tektronix terminals.

Nice Try But No Cigar, InfoWorld!

I think it's ironic that I have been seeing more Macintosh related articles in PC Week than in InfoWorld. PC Week is a weekly IBM and MS-DOS related publication that does not cover all makes of microcomputer like InfoWorld, but there is consistently more Macintosh news in PC Week than in InfoWorld. In the February 17, 1987 issue of PC Week, there were several articles about the current and future products that will link Macintoshes and MS-DOS computers in office environments. I got the distinct impression that the IBM world was starting to awake to the increased importance of the Mac in the business world and was taking it seriously for the first time. One of the articles by Mr. Paul Bonner was entitled, "Can Apple's Newfound Solutions DEC IBM?" One of the more interesting bits of information in the article is quoted as follows: "In any case, recent product offerings from Apple and a variety of third-party manufacturers make it clear that there is no longer any question of whether a Mac can take part in a networked corporate information environment. Rather, the question is whether it can or will soon be able to do so better than an IBM PC, and whether Apple, like Digital Equipment Corporation, can steal a significant portion of IBM's market share by contrasting the slickness of its communications solutions against IBM's stumbling efforts to link the disparate architectures that make up the IBM product line." The article also contained information about the new Macintosh line. It pointed out that the new Macintosh II will be the first general-purpose microcomputer to incorporate a full 32-bit architecture. Evidently current 80386 based PCs use a 32-bit motherboard and perhaps system RAM, but generally accept only 16-bit expansion boards. Mr. Bonner further points out that the entire Macintosh line has a major architectural advantage over the 8088/80286 and 80386 based machines. The Macintosh memory architecture always allowed 4M bytes of memory, even when the original Macintosh didn't have it. The IBM PC product line is built around a 1M-byte limitation. This is not true of the new IBM System 2.

Mr. Bonner also quotes John Sculley talking about AppleTalk. Sculley says it is a mistake to confuse the AppleTalk network with the cable it presently uses. He says that AppleTalk is not a cable but a full-fledged seven-layer network protocol that conforms closely to the OSI (Open Systems Interconnection) network reference model. Ethernet adapters for the new open Macs will allow the AppleTalk network to be used over high-speed-network cabling systems. When AppleTalk is used on that system, it will perform at a rate of 10M-bytes or the curent Ethernet speed.

The April issue of Business Software contained two articles on the Macintosh II and its integration into the PC World. One was a comparison of the Mac II to the Compaq DeskPro 386. I think we will be seeing more and more positive articles about the Macintosh in the coming months and much of it may be in the MS-DOS literature.

Nice Try, MacWeek and You Do Get the Cigar!

A new publication has hit the streets and its called MacWeek. It is published by Patch Communications of Titusville, FL and if you already subscribe to one of the Macintosh magazines you may have gotten several free copies already. It is designed like PC Week (not as extensive) and is billed as a Workstation Newsweekly but seems to have much general Macintosh news. Patch Communications says that they will give out so many free subscriptions and after that it is $75 a year. I don't know anyone

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who pays for PC Week and it may be the same story with MacWeek. Since the news weekly contains advertisement and advertisement rates are based on total copies in circulation, it is in Patch Communications interest to get as many subscriptions as possible to increase advertising rates. Nevertheless, fill in the form and mail it early if you want to get your free copy of this all Macintosh news weekly.

Another new entry into the Macintosh only market is Macintosh Today, recently advertised in Mac World. It is another free Macintosh Publication if you meet the publishers qualifications for receiving a subscription. There is no harm in trying to get a free subscription.

KroyKolor—Adding Color to Printer /Copier Output

A relatively new product on the market is the KroyKolor system for adding color to LaserWriter or photocopier output. No it's not a color laser printer, but a means of adding laminated color to the toner portions of printer or photocopier output. Color sheets comes in a multitude of colors in matte, metallic or gloss pastel finish. A sheet of the desired color ($0.50) is placed on top of the printer output and put through the Kroy processor ($999). Color sticks to all areas of the output that print toner is attached to. Multiple color may be added by placing different color sheets over portions of the output before putting it through the processor. Kroy says the process works with the LaserWriter, HP LaserJet and most dot-matrix printers.

Kroy is not a fly by night outfit. They have been in the business for 27 years and are the world's largest manufacture of strip lettering systems. Until color laser printers are available at reasonable prices, this approach may have to do!

PostScript Gets Some Competitors

In a past article, I discussed three major page-descriptive languages competing for the market. Interpress by Xerox and DDL by Imagen were PostScript's (Adobe) major competitors. Now several other languages have surfaced which are not trying to set new standards but which want to piggy back on the success of PostScript. NewScript by Barry and Associates (Mountain View, CA), and CCS-page from Control C Software of Portland, Oregon are two examples. Both are examples of PostScript compatible languages being developed by companies eager to cash in on the success of PostScript. Another approach is being used by Phoenix Technologies (Norwood, MA) which is developing a yet to be announced printer controller board that will use Phoenix's own implementation of PostScript. Eventually Phoenix will also include its own version of DDL and Interpress on its controller board for placement in either the printer or the computer itself. Phoenix Technology is the company that made the rapid growth of IBM compatible clones possible by development of a non-copyright infringement BIOS (basic input/output system) for IBM compatibles.

The bottom line is that these companies hope to license their compatible languages to laser printer manufacturers at significant reductions compared to PostScript. PostScript is estimated to add at least $1,000 to the cost of such printers. That is no small change when you are trying to compete in the peripheral computer products market.

Adobe published PostScript specifications in its largely successful effort to get PostScript adopted as the standard page-descriptive language, but its PostScript interpreter algorithm is still priority. This algorithm allows a large font to be scaled to a small size or vice versa and still look good. It is not necessary to retain in memory actual fonts for all point sizes since the interpreter can produce the desired size by scaling up or down from a known standard. Third-party developers of new compatible languages will have to develop their own means of doing the same function.

Not everyone believes that it will be an easy task to develop truly compatible PostScript competitors. Charles Bigelow, a professor of digital typography at Stanford University said, "if you send a PostScript file to a compatible device, the width between the characters may be different. The lines in the page may not justify or fit into the same space, resulting in a PageMaker file that looks different."

IBM has recently adopted PostScript for its new desk-top publishing laser printer but it has opted to place the PostScript board in the computer and not in the printer. This approach evidently speeds up the process of translating computer commands into PostScript prior to printing. If this is successful, it might also be adopted by vendors of Macintosh II add-on boards. (Source - PC Week, April 14, 1987). The major disadvantage is that all computers wishing to print on the network would need the language card versus having just one in the printer itself.

The possibility of competitors to PostScript may have been responsible for the recent drop in Adobe Systems stock from a high of 58 to a more recent 33. It might be a very good buying opportunity if it has not already shot back up. My money is on Adobe's long term prospects.

New Products

Network Specialists (San Fransisco, CA, 415-467-8411) recently announced the "Stretch Screen" 19"- add-on monitor for the Macintosh. They have now announced the "Baby Stretch" which is a 15" portrait-oriented monitor. It has a 720 x 900 pixel resolution, a 90 dpi pixel density, a 58 MHz pixel rate , a refresh rate of 60 MHz and a non-interlace screen. In addition, they also announced the "Stretch Projector" which they say allows the Macintosh screen to be projected onto a standard overhead projector. It apparently uses an LCD supertwist screen with a 640 x 400 pixel screen and can be installed in 10 minutes. Other details are sketchy. They have also gotten into the add on board market for the Macintosh by offering the "Jump 020" using a 68020 CPU, 2 or 4 M RAM, 68881 math co-processor and two minute installation with a clip-on design.

Adobe Systems and Varitype, a division of AM International, have announced the first 600 dots-per-inch PostScript equipped laser printer. It is rated at a speed of 10 pages a minute and used the new 68020 CPU found in the Macintosh II. The VT600 sounds very much like Apple's rumored "SwiftWriter" laser printer which should be announced late in 1987.

New MacPlot Version 3.0

Microspot has announced MacPlot version 3.0 which is marketed through CompServCo, in Slidell, LA. This version is a complete rewrite of earlier versions. Some of the new features are as follows: MacPlot is now a driver and does not require the

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use of clipboard or PICT files. Copy protection has been removed and a new manual is included with the upgrade. Page range, exact paper positioning, higher resolution plotting, support for QuickDraw color, separate pen speeds for each pen, X ON/ X OFF handshaking, multiple copies of the same plot, MacPlot hatching patterns or bit-mapped fill patterns and much more are included. More plotters have been added to the supported list but not all have been checked out as yet. New prices for the Professional version are $399 and $199 for the Standard version but existing owners can upgrade for $50. The upgrade includes a new disk, manual and all shipping charges in the U.S.

Hard Disk Utilities 2.0

FWB Software, Inc. of San Fransisco, CA has also announced an upgrade to their popular hard disk utilities. Version 2.0 has the copier and the patcher integrated into one program, all functions can be accessed by pull-down menus and the copier now supports 800K disks. Other new features include full support for HFS, additional patch files and provisions for user entered patches via the UPLang™ programming language. The cost of upgrading is $25 to all registered owners. If you own other patch disks, you may upgrade them for $5 so that they will be compatible with version 2.0. These patch disk include additional hard disk patches for programs not included in the original version of hard disk utilities. With more and more companies removing copy protection from their programs, there is less and less need for both hard disk utilities and Copy II Mac. The availability of such programs may have even been responsible for removal of copy protection from most software. Eventually, they may not be needed at all.

How does the Mac II price stack up?

The June issue of Byte Magazine contained a short price comparison of the Macintosh II with the IBM PS/2 Model 80-041. For $6,996 the Mac II comes with a 16-MHz 68020, 1 Meg of RAM, one 800K-byte floppy, a 40-megabyte hard disk, 5-open 32-bit slots, a keyboard, video card, 68881 coprocessor, system software, and a 13-inch color monitor. For the same $6995 the IBM Model 80-041 comes with a 16-MHZ 80386, 1 megabyte of RAM, 1.44 megabyte-floppy, a 44-megabyte hard disk, 3-open 32-bit slots, 4-open 16-bit slots, a keyboard and a video card. To get the rest of the Mac II features, the IBM has to add a 80387 math coprocessor ($795), a 12-inch color monitor ($685), and the OS/2 operating system ($325) without graphics and windowing. This brings the total cost of a comparable IBM system to $8,800 or $1,800 more than the Macintosh II.

Abaton Scanners

I have recently been interested in evaluating scanners for the Macintosh that are capable of scanning both graphics and text. This is an exciting new area that is just beginning to be tapped by a variety of manufactures. What follows is a description of the Abaton products based on literature sent to me by the company. I have used the Abaton scanners only once so the information provided here is based more on literature than personal experience. It is not intended to be a review of the products.

Abaton Technology Corp., Pleasanton, CA (415) 463-8822 has been marketing for over one year a graphic scanner called the Abaton 300. The product line has recently been expanded to include the Abaton 300 SF and 300 FB with ACR software that functions as an "optical character recognition" system. All Abaton products will interface with both MS-DOS computers and the Macintosh which will increase their utility in many offices.

The original Abaton Scan 300 scans a single page at one time, while the 300 SF can scan 10 to 30 pages automatically one after the other. The 330 FB model is a flat-bed scanner designed for scanning books, paste-up boards and fragile documents that must lay flat. The basic software for the scanners is called C-Scan and allows 5 pages to be scanned with cut and paste between pages. It is compatible with PageMaker, MacPaint, MacDraw, MacDraft and other programs and edits at 300 dots per inch.

The new ACR software permits scanning of text which may be entered into an appropriate word processing program. Abaton claims it can read over 120 fonts including mixed fonts on the same line and fonts as small as 6 point. It is also supposed to recognize bold and underlined characters. Some of the fonts that can be read include, courier, pica, elite, prestige pica, prestige elite, letter Gothic, and titan. I specifically asked about dot matrix which has always been a problem for optical character scanners and was told that it would read "letter quality dot matrix". It may have a problem with proportional text though. Naturally such a claim is important and needs to be tested and reviewed by one of the major Macintosh computer magazines. The Abaton representative stated that the error rate was about 5 characters per page. That may or may not be acceptable to some users, but considering the many fonts that it is able to read and the possibility of dot-matrix reading, the error rate is minor. Again this needs testing!

Abaton has also joined the ranks of companies that are offering means of exchanging data between the Macintosh and MS-DOS worlds. Their product is s 5.25" disk drive that reads and writes MS/PC DOS files between IBM and Macintosh at 57.6 bps without using both machines. It will also read CP/M programs and Unix and includes all the software and cables necessary for immediate hookup. Included is translation software that translates IBM and Macintosh formats for such programs as Lotus 1-2-3, Symphony, Framework, Jazz, Excel, WordStar, Volkswriter and MacWrite.

Pricing is as follows: Abaton Scan 300SF $1,895 (Mac or IBM), Scan 300 FB $2,295 (Mac or IBM), and Scan 300 $2,495 (Mac or IBM). The ACR text scanning software adds $700 to the above prices for each model, while the disk drive is $695.

Other companies such as LoDown are coming out with flat-bed scanners in the $1,500 range. I have been hearing rumors about great new developments in the OCR/scanner market and new breakthroughs can be expected by the end of 1987.

See the recent review of optical scanner in the July issue of MacWorld. Reviews of this nature help the average buyer make intelligent buying decisions. I think it is best to hold off such a purchase to later in the year since the capabilities are going up and the prices down.

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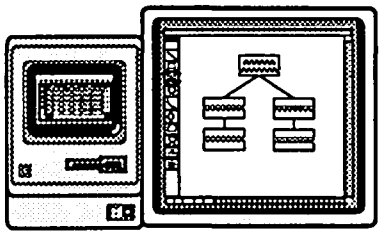


WorkStation Rental

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

Whats New At MacTography

MacTography and Century Software Merge

To allow Century Software do what they do best (produce PostScript Fonts) they have opened a West Cost division here at MacTography. We do all the order processing and shipping as well as first line technical support. As a result of this merger we now have the entire line of Century Software fonts in stock. We handle dealer as well as end user sales.

OCR From New Image Technology

The wait is almost over

Come in and see the new OCR software from New Image Technology. A Demonstration disk is now available. The software is expected to be ready in the early part of September.

Pricing was not available at press.
Call for more information

Also New From New Image Technology

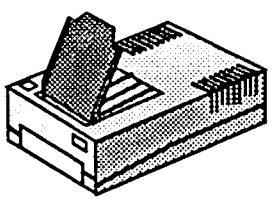
...Flat Bed Scanner...

New Image Technology will shortly be shipping their new Flat Bed Scanner. The scanner will work with their current interface and software. Come in for a demonstration of this new product from the innovative people at NIT.

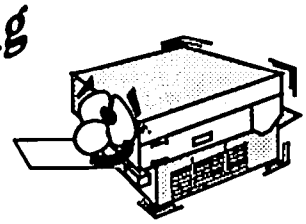
Pricing was not available at press.
Call for more information

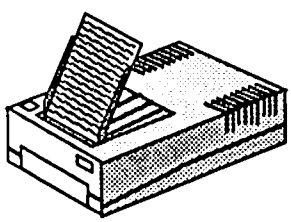
Scanning Service and Sales

• MacScan • PC Scan Plus
• LaserMagic

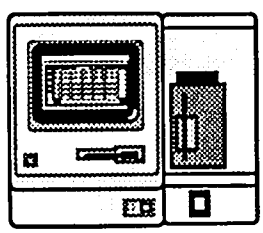


LaserPrinting Service





OCR Service
PC Scan Plus (Dest)
MacScan (NIT)



IBM to Mac File Transfer

MACMONEY™ Part 2: New Version Information

by Chuck Sicard

I first wrote about "Home Accounting with MacMoney" in the WAP Journal, June 1987 issue. This is a follow up article. Survivor Software Ltd. (S.S. Ltd) has sent their first newsletter to MacMoney registered owners. Here is what it tells us to expect for next two update versions.

Registered MacMoney owners are entitled to receive version 2.03 now at no charge, if they return their original disk by mail. For faster service and a $7.50 charged to a MC or Visa account, a registered owner can order this upgrade by telephone (213-338-0155).

The following are the eleven changes in this 2.03 version, (six changes were fixes and five changes were new features) per the newsletter, with my comments in parentheses.

Fixes (2.03):

1. A patch to allow LaserWriter 4.0 to work with MacMoney (great, if you have access to a LaserWriter; this should blow away a loan officer).

2. All line graphs have been changed so they do not drop to zero at the end of the data (this ends a nuisance).

3. Standard reports using data systems which are outside the fiscal year will display year end figures (this fixes an end of the year problem, if you have more than one year of data).

4. Custom transaction activity reports where the subtotals go across to a new page will completely print. (I didn't know about this problem.)

5. The check register will update properly when you add transactions with the register open. This was an intermittent problem (my check register always updated properly when open).

6. The "Non-zero only" option on custom financial report has been removed because it gave erroneous totals. S. S. Ltd is reworking the concept. (I never used this option; good thing I never found wrong totals, I'd been sick.)

New Features (2.03):

1. A summary button which will give subtotals only, without the transaction detail, has been added on the custom transaction activity report. (As they said in the newsletter, this is great for a disbursement summary report on a bank account.)

2. Additional sort criteria have been added on the custom transaction activity report. (Sounds good, but I will wait to see it in action).

3. A reset button which will restore the last set selections has been added on some reports. (Excellent—now a report can be previewed on the screen and then printed without going through choosing the selections again, if this works as I think does.)

4. Custom transaction activity report will show multiple pages on the screen. (Apparently, huge reports will load groups of 8-10 pages at a time, depending on memory available. This sounds like it would serve business needs more than home finance purposes).

5. When the custom transaction activity report is printed to a file, checks, withdrawals, and payments appear as negative numbers. If you used a spreadsheet or database you will need to reevaluate your templates.

Meanwhile, for this fall they have announced a much more important new version of MacMoney with very significant enhancements based on suggestions and comments by users. I'm delighted to tell you that cash flow problems mentioned in my June 87 article are being fully addressed (see item six below) in this version. There will be a fee of something less than $25 for this upgrade for registered owners, unless you purchased the program after August 1, 1987 in which case it will be free. This release is the version that you must have because in addition to the changes in version 2.03 the following changes are expected; and these are important improvements.

Here are the features we are told to expect in the Fall version (think December), again with my comments:

1. Credit card reconciliation (very good).

2. Automatic register update for both source categories during fund transfers. (One person telephoned me about this "difficulty" so it must have troubled many. If this isn't clear don't concern yourself.)

3. Weekly options on automatics to handle items such as weekly paychecks (excellent, a badly needed feature).

4. A register sort option allowing entry (default), date or check number order. (This was first requested by Bonnie Walker, in the MacUser, May 87 MacMoney review.)

5. A bank account activity report with running balances (an excellent addition, especially if one is having trouble reconciling the bank account and who doesn't?).

6. A cash flow report based on expenditures and deposits, not just comparing expenses and income type category balances. (Hurray! This alone makes MacMoney worth the upgrade price. You can now see clearly ahead financially.).

7. A preferences option to allow you to set a few more things your way, such as, clearing the ID Code from transaction to transaction, or starting the transaction with the Date field or the Name field (not critical, but it sounds like an improvement).

8. A memo line on the check body for account numbers (very good for those who are printing checks).

The good news is that an excellent software product is going to be made even better by a small software firm that must be listening to their users. S.S. Ltd. is planning a regular (twice a year) newsletter for owners with tips, questions and answers. They want to provide a continuous service.

Also S.S. Ltd. is proposing the establishment of a loose MacMoney user network. Each person interested in knowing of other registered MacMoney users would release their name to a directory and in turn would receive a copy of that directory, listing all other such persons (like the WAP member directory). The database (there are some four thousand registered owners) would be maintained by S.S. Ltd and it would be up to the users to take advantage of this source of help. The idea didn't sound too practical to me until I spoke with "Mike" (S.S. Ltd) who told me that MacMoney users are fast becoming their own best experts in applying this automated accounting tool. S.S Ltd doesn't have

contd. on pg 72

MAC-101 KEYBOARD: A Review

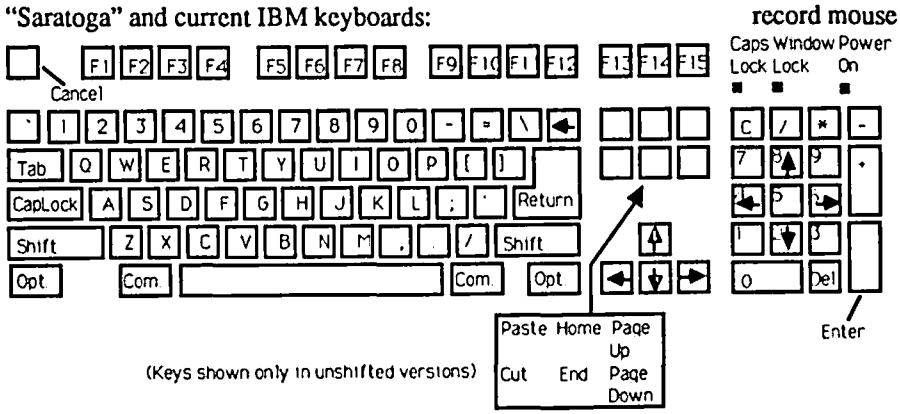
by Charles Bethel

Most Mac and Mac Plus owners love the computer, but not all have been as happy with the keyboards, to which—until recently—there have been no alternatives. Owners of the original keyboard do without a numeric keypad and cursor keys; Mac Plus users enjoy these two features, but some object to the lack of function keys, the small right-hand shift key, or the industrial-strength "feel" of the keys. With the Mac SE and Mac II Apple has introduced the low-profile "Saratoga" keyboard with cursor, numeric and function keys, but it is incompatible with older Macs.

Recently, however, third parties have begun offering Mac-compatible keyboards that claim better "feel," a better key layout, or more features. James Burger reviewed PC MacKey in the May WAP Journal. This is a review of another such keyboard, the "MAC 101" by DataDesk International, based on my early experiences with it while running such programs as Word 3.0, Reflex, and Multiplan.

This product merits attention because it is not just a keyboard. With the included software it is a *programmable* keyboard that allows you to assign mouse and/or key sequences to any or all of 15 function keys, 6 page control keys, and 11 numeric keypad keys. Each of these keys can be given multiple functions, depending on whether they are pressed alone or with shift, option, command, or some combination of these keys (the 15 function keys alone are capable of 90 possible assignments). Sound interesting? How about the ability to create glossary entries, called up by function keys or letter abbreviations? Or the ability to create "Macro Files" dedicating a customized set of function keys to each of your applications? Or the ability to use the Tempo macro application with or instead of MAC-101? Although MAC-101 can link macros, it does not have all the features of specialty macro programs. What it can do is allow you to configure your keyboard most efficiently for each application you run, and to eliminate mouse-work entirely if you wish.

Before a further discussion of these features, let us look at the MAC-101 keyboard itself, which is visually similar to the "Saratoga" and current IBM keyboards:



I have found several features of the layout to be helpful:

• The Cancel (equivalent to Command-Period) key at the upper left is hardwired and acts similarly in all applications (pressing Shift-Cancel has the same effect as Command-Z, or Undo).

• Duplicate Option and Command keys facilitate the use of these keys with function keys on the right side of the keyboard.

• The Shift, Option and Return keys are *large*.

• The numeric keypad has large Enter and Plus keys, although the only Equal (=) key is the one on the main key cluster.

• The Cursor keys are grouped in the inverted "T" pattern, which I find easy to use (although some users may prefer the Mac Plus layout).

• LED's show power on, caps lock, and window lock (to be explained below).

My only complaint about the layout is that the Backspace key is not larger, but this may be a reasonable tradeoff for the large Return key. The action of the keys themselves is short-throw, soft but positive. The MAC-101 seems sturdily built, but not as tank-like as the original Mac keyboards (it comes with a 30-day money-back guarantee and a two-year warranty). It is a low-profile unit, with PC-ish legs that drop down to tilt the keyboard upward at the rear.

To enable the Mac to recognize and make use of the function and other special keys, you install a desk accessory program called 101-KEYS. Installation is needed only once for each application disk or hard disk, is almost instantaneous, and does not require Font/DA Mover. Clicking on 101-KEYS in the Apple menu gets you underway. You are prompted to create and name a "macro file," usually for the application in which you are currently working, containing all your special key assignments. Once a macro file has been created, it can be changed at will. It can also be auto-loaded when you begin working in an application by pressing Command-Shift-9. Any number of macro files can reside on the same disk, and you can switch from one to another easily.

You build a macro file by working in one of three "modes" available from the 101 pull-down menu that appears once you have named a macro file. The Mouse mode allows you to assign any mouse-selectable command to a function key (you can also record mouse *clicks* for assignment purposes).

The Keyboard mode allows you to assign keystrokes to function keys (alone or combined with Option, Command, etc.). The functions created can consist of sequences of commands, or macro strings, including Mouse mode macros, and can use virtually all special keys (including cursor keys). In the Keyboard mode you also create glossary entries, limited to 500 characters each (you assign an abbreviation to each entry, then call up the entry by typing the abbreviation preceded and followed by a space). Also in the keyboard mode you edit or remove existing keyboard assignments.

The Window mode operates on 11 of the numeric keypad keys. You toggle from numeric entry to function key entry by pressing the right Option and Clear keys together (activating the

contd.

Window Lock LED). In default mode (automatically included in each new macro file unless you choose otherwise) the numeric keys replicate mouse movements in manipulating the active window. You can scroll up, down, left, and right by line or by page, go to the beginning or end of all screens, zoom in and out, or close the active window, all from the keyboard. Any or all of these keys can be reprogrammed to perform some other function. Microsoft Word 3.0 already assigns cursor-control functions to the numeric keypad, toggled by pressing Clear. With 101-KEYS and this program the numeric keypad now has three input modes.

The six page control keys located above the cursor keys also have a default mode, corresponding to their labels: Paste, Cut, Home, End, Page Up, and Page Down (in addition, Shift-Cut will invoke the Copy command). If the default setting is inactivated, these keys can be programmed to accept any other functions you select. If you retain the default setting, you can still add extra functions to the six keys by using the Shift, Option, and Command keys.

101-KEYS comes with a macro file for Word 3.0, created with the help of Microsoft, that assigns 26 commands to the function keys. Not all the choices are ones I would have made, but I can customize the macro file, deciding, for example, to give a single key a function such as "indent first line of paragraph one inch and use all caps in 14-point Geneva." 101-KEYS actually affects a program like Word less than most others, since this application as written already has keyboard equivalents for almost any command you can think of. However, it is nice to be able to replace often-invoked three-key sequences with a single function key. Included with 101-KEYS is a template for the Word 3.0 macro file that fits around the function keys and has labels for all the commands they invoke. A blank template is on the reverse side, and additional templates can be ordered from DataDesk.

MAC-101 allows you to standardize common commands (for example, Save As or Close) across all your applications, and it might help an office standardize many common operations between the Mac and other computers using similar keyboards. At the least it might mitigate the culture shock of someone transfering from a PC to the Mac.

I purchased MAC-101 directly from DataDesk International (800-826-5398) for $149.95 plus $10 shipping. This price was claimed to be $20 off the regular price as part of a special offer to purchasers of Word 3.0, but I don't know whether the usual price is actually higher. $160 is pricey for a keyboard, but in my view the excellent keyboard layout and feel, and the truly useful function key utility, make MAC-101 a reasonable value.

Softviews contd. from pg 65

between Mac and PC and you need dBase compatibility, McMax provides it. It does so with considerable ease of operation over the PC environment. If you have never used a database and are choosing one on the Mac, you may want to consider more Mac-like alternatives first. While dBase was an advanced program several years ago, the Mac's easy to use interface has been incorporated into other relational database programs such as Reflex, Overvue, Omnis or Helix.

At a list price of $295 dollars (discounted to $219), I consider McMax worth your attention. The Mac version of the Granddaddy from Ashton Tate is reported to cost considerably more. The competition can only help the consumer. If you need dBase compatibility, McMax offers it in a fairly Mac-like environment. Nantucket, 12555 Jefferson Blvd., Suite 300 Los Angeles, CA 90066. Phone (213) 390-7923.

MacMoney contd. from pg 70

enough of the accounting answers. After all of the makers of wood saws are not necessarily expert carpenters. The network (directory) idea would help to link up both professional and home users so they can provide themselves mutual assistance.

I asked Mike about the likelihood of establishing an 800 toll free telephone line for inquires. However, it was already fast becoming clear that this firm is far smaller than the quality of their product suggests. He said they simply can't afford it. How much money can these "survivors" make on some four thousand registered owners? If these kind of small quality software firms are going to "make it" they must either sell more or charge more.

So let me say again, "Wasn't home finances one of your original justifications for getting a home computer?" With MacMoney's "fall version" I think we will finally have a complete clean Macintosh accounting package for the home and small business user, at a very reasonable price.

MEMORY UPGRADE FOR THE SE

by David Morganstein

In last month's Mac Q & A, Jonathan Hardis gave us all the needed "poop" on using 1Meg SIMMs on the plus and on memory upgrades for the Mac II. To fill a small SE hole, here is what you need to do.

1) Buy 2 or 4 one Meg SIMMs. Dove has a good price these days.

2) After opening the SE and carefully removing the motherboard and 256K SIMMs, find resistor R35. It is near the 68000 chip. Remove it (or unsolder one end).

3) Install the 1 Meg SIMMs. If you only bought 2, you might want to put two of the 256K SIMMs back for a grand total of 2.5Megs.

4) Replace the motherboard and enjoy!

Note: the SE motherboard does not slide straight out as did the Plus motherboard. Not, that is, until you unplug the twin wires connecting the board to the speaker. An easier method, to reconnect the speaker wire, is to slide the motherboard out about 1/2" after which one side will drop down due to slots Apple cleverly put there just for this pupose...

SHALOM DAVKA: Judaic Software Review

by Judi Spintman

You can really tell when a computer system has come of age when software is developed that addresses itself to just a small segment of the population. I've just had the opportunity to review several software packages from a company called DAVKA CORPORATION, who have produced a series of Macintosh disks that deal with synagogue administration, Judaic art, learning to read Hebrew and making a Hebrew calendar. Other software from DAVKA, including a Hebrew word processing package (Achbar™ $249.95) was not available to me at this time.

The most appealing of these packages is Hebrew Calendar Maker™ ($24.95). You will need a copy of CE Software's CalendarMaker™ (works with versions 2 and 3, as appropriate,) to run this program which allows you to create calendars that contain the Hebrew dates for each month, the Jewish holidays, and the Torah portion for each week. You can also personalize your calendars with Judaic icons and FullPaint™ pictures. If you're familiar with CalendarMaker, you'll find Hebrew CalendarMaker easy to use. Any observant Jewish family or religious group will find this program appealing—you don't have to wait for your local funeral home to send its yearly calendar for you to plan your life. Now you can tell years in advance when the dates will occur for all of the important holidays. The FullPaint pictures depicting the various holidays aren't great art, but this doesn't really detract from the calendar—you can just choose not to use them and make your calendar full page size without pictures.

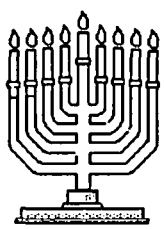
DavkaGraphics™ ($34.95) functions as a graphics disk of Judaic pictures for applications such as MacWrite, MacPaint, FullPaint and The Print Shop. If you're familiar with the graphics tools of any of these programs and know how to copy to the clipboard, paste into the scrapbook, or, in the case of Print Shop, to import graphics from Paint files, you'll be able to make use of these pictures. There are about 90 pictures of Judaic items, from torahs and menorahs to Hebrew signs and symbols. The art work is rather simplistic, but since this is the only source of Judaic art that I know of, the disk may be of use for synagogue and Hebrew school newsletters or for other groups who need a source of Judaic pictures.

Learning to Read Hebrew™ ($39.95) was a disappointment. It is a stand-alone program designed to teach you to read modern Hebrew in a self-paced 14 unit instructional package including quizzes and review material. Sound was included to help with pronunciation. I found, however, that the program required too much English reading for a young child to use, and was too repetitious and boring for an adult. The sound, although a great concept, was almost unintelligible at times and became so distracting that I had to turn it off. If you want to learn Hebrew, I suggest you sign up for an adult education course at your local synagogue or university and send your children to Hebrew school.

MacShammes™ ($995.00) is a specialized database system for synagogue management. It can be used to keep financial records and produce monthly statements, keep a membership list and produce mailing labels, keep a Yahrtzeit list and produce yearly reminders. The programs are interactive and can be added to or changed at any time. For a small congregation that cannot afford more sophisticated systems, this program may be very useful. If you are a synagogue treasurer, membership chairman or ritual committee head, and your group is not yet committed to a complex computer system, you may want to take a look at MacShammes.

Yarmulkas off to DAVKA CORPORATION for trying to meet the needs of a fairly small group who can use Judaic software items. There is a bit of humor in their copyright notice "Unauthorized reproduction of this disk is in violation of the Biblical commandment" and in the Chassidic rabbi icon for MacShammes with forelocks and black felt hat. They may also be the only software company that sends out letters signed by a Rabbi! Mazel Tov, DAVKA. For further information contact:

DAVKA CORPORATION
845 North Michigan Avenue. Suite 843
Chicago, Illinois 60611
Phone (312)944-4070; Orders: (800) 621-8227



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COPY PROTECTION
by Rusty Romaine

Recently I provided consulting services to help a person interface a HP LaserJet printer with a "Fat" Mac (512K). She had bought a SoftStyle's LaserStart package and was having problems interfacing everything. Nothing worked for long.

Well, we went through the setup procedure and everything went as planned—laser copies came out just fine. She had done the same procedure before and had the same results. But after we turned her machine off and then back on, the software stopped working correctly. The printer "told" us that it was having a communications problem. I checked the cable, etc.

We installed the package several more times. Each time the package failed after the Mac was turned off. This was contrary to what was described in the documentation.

Finally we called SoftStyle to try to find out what was going wrong. We talked to Mr. Steve Wilson, and he suggested that our Macintosh had a bad battery! Now what does a bad battery have to do with their software package? Well, I asked him if they were using the Mac's PARAMETER RAM (the 20 bytes of battery saved RAM) to store their settings and he answered that they were. It seems that our settings were getting unset each time that the machine was turned off.

The way that we confirmed their prognosis was to power down, then back up and then check the "time and date" from the control pannel. They had reset themselves: the "real" problem had been found and off we went for a new battery!

Their application is, in fact, using a form of copy protection, even though they do not use a disk copy protection scheme for their software. The Port A (or Port B) settings are changed in the PARAMETER RAM storage area, which is allowable by Inside Macintosh standards, requiring the user to use his/her software on one (1) Macintosh at a time, unless the install program is run on another machine. This means that the user can not install LaserStart on a diskette on machine "A" and then take the diskette on which the "installation" was performed to machine "B" and expect it to work on that machine. The install program has to be run on machine "B" in order for the diskette to work.

SoftStyle's driver software (LaserStart) should initialize the port information (upon startup) for each time that it is chosen. It should not be dependent upon the "default" values stored in the PARAMETER RAM for hardware dependent reasons. This in fact is a poor programming technique; the initialization program should save the new parameters as a resource of the LaserDriver, rather than in the PARAMETER RAM where it can be reset by another application or by a hardware failure. They should also warn the user in the user manual that a bad battery (or hardware failure) can cause interface problems with the external device (HP LaserJet in this example).

MAC PROGRAMMERS GROUP NEWS
by Robert C. Platt

The July Mac Programmers meeting featured Rich Norling's talk on color QuickDraw on the Mac II and new TextEdit routines on both the SE and the II.

The next meeting of the group will be Wednesday, Sept. 2 at the WAP Office. Kurt Schmucker, author of "Object Oriented Programming for the Macintosh", will present and demonstrate MacApp 1.1 and MPW 2.0. Kurt's last presentation to the group generated a lively discussion, and we expect his return talk to be equally interesting.

The SigMac Programmers is open to anyone who is interested in programming the Macintosh, regardless of programming language preference. The group's recent project has been to jointly develop a computer-assisted instruction (CAI) application. A portion of each session is directed to sharing our latest achievement/bugs on this effort. Upon completion, the CAI program will be added to the WAP library.

Although we selected the CAI project because it would be an interesting application which uses most of the features in the Mac ROMs, our design decision was recently validated by a commercial product. The August Byte magazine (p. 263) reviews Course Builder by Bill Appleton (who also wrote World Builder.) Course Builder calls upon Mac resources to construct sequences of frames in a manner similar to that which our group had set as a goal. Although someone has beat us to "market," the project is proving to be educational for all participants. Please call me at 703-486-1466 if you are interested. Portions of the project were discussed in the Jan 1987 WAP Journal p. 80 and July WAP Journal p. 58-64.

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DEVELOPER'S VIEW...

Levco shut off, More RAM, and goin' to Boston

by Jim Lanford

Levco Correction.

In my last column I stated that I wish that the Levco also had the ability to turn the Accelerator off so that the Macintosh runs in native 68000 mode. It does. It is so "obvious" I don't know why I did not find it. The fact that Levco did not include a user manual with my Prodigy SE may have helped in my not finding out until after that article went to press. Here is all you have to do: hold down the programmer interrupt switch, press reset, and release the programmer switch. It works for me one out of three times.

More Ram.

During demonstrations of Micro Dynamics MARS I am often asked why we chose the Macintosh over the PC. I usually talk about graphics and how the 68000 is better for large graphics because of its large address space.

I just read in the July 21, 1987 issue of *PC WEEK* that only 5% of PC's have one Meg or more of RAM. The article was about the one Megabyte memory requirement of PC Excel. Depending on which research firm that you listen to, there have been between six and ten million PCs and "Klones" sold. (They do not say "in use".) Assuming ten million PCs, that means only 500,000 have one Meg of RAM. Apple has sold about 1,300,000 Macs thru July 1987. If we conservatively guess that only 75% have 1 Meg of RAM, this means that there are 975,000 Macintosh's with one Meg of RAM. It seems that there is a larger market for our software in the Macintosh world. MD MARS runs even better with 2 Meg of RAM.

Boston.

Bernie just told me that this issue has to go to press early because of the MacWorld Expo at Boston. This column is going to be short because Micro Dynamics is having a booth at the show and we are getting ready to go.

Next month, my view of the show...

Jim Lanford is the architect of MacLabeler™, Micro Dynamics MARS™, PostHaste™, and other software for the Macintosh II. He has implemented ground stations for Spartan 1 and other real-time 68020-based testing systems for various satellites. Jim is president of Micro Dynamics, Ltd., the largest Macintosh software company in the DC area.

Mac Disketeria contd. from pg 85

Artisto allows you to open up a MacPaint or FullPaint document from inside any program that supports desk accessories and select any portion of the image and copy it into the clipboard. ***Shareware - $5.00 or $10.00.***

Art Browser Folder f

ArtBrowser. Allows one to browse or print encapsulated PostScript documents. There are two such documents here, Golfer Art and Rose Art, each in two PostScript versions (Mac and plain vanilla), of which the DA deals only with the first. (Hint: Open the plain files as text to see what the Postscript code looks like.) There is also a MacPaint version of each piece of art, but they don't look much like the originals. There is also an IBM version of the Rose Art file for those who may have access to IBMs or compatibles and want to compare screens, print time, etc.

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BEST OF THE MAC ITEMS FROM TCS

by Bill Baldridge

C Programming

LOUIS M. PECORA on 07/06
I think I've found an error in the Lightspeed C math library. The function for the hyperbolic cosine is wrong. It gives (5/8)*exp(x) rather than the correct (exp(x)+exp(-x))/2. I've got a call into LSC people now. I'll report back on their response and on how to fix the math library.

LOUIS M. PECORA on 07/14
I was right. The hyperbolic cosine function in the math library of Lightspeed C is wrong. I spoke to their technical people about it and they told me the math library is buggy in general; however, so far it's the only bug I've found. To get a new math library (hopefully bug-free) from Think Technologies, send a self-addressed-stamped folder with a formatted blank disk to: Phillip Borenstein, Technical Department, Think Technologies, 135 South Road, Bedford, MA 01730. Failure to give them the self-addressed-stamped folder with a formatted blank disk will result in a delay; maybe you'll never get it. Send a nice letter requesting it, too. Mr. Borenstein is doing this on his own time.

Data Bases

BILL BALDRIDGE on 07/05
The June 29 issue of Infoworld has an article on Bill Atkinson's latest jewel to be called "Wild Card"—a sophisticated database, incorporating hypertext features. It uses stacks of cards to store and sort information, similar to Xerox's Note Cards program, and has the capability to set up visual links between files. Hypertext is used extensively in the help functions built into the program, enabling the user to browse in multiple directions. Graphics tools similar to those in MacPaint will be incorporated into the program, as well as a programming language called WildTalk. It is expected to be released later this year under the name HyperCard.

ELLEN CASWELL on 07/08
Can anyone suggest a good book on data bases? As in how they work, how to structure them, etc.? I'm not primarily interested in one that deals with one or more particular data bases, although if such a book has a good section on how to use data bases in general I'm not averse to it. I have projects both at work and at home that will require data bases, and I don't seem to have the necessary concepts yet.

BOB MASSO on 07/10
Ellen, what type of book depends upon what type of databases you will be using. However, one prolific DB book author is C.J. Date, and I found his "A Guide to DB2" (DB2 being an IBM mainframe SQL-based DB) a fairly good intro to relational & SQL topics. His "An intro to Database Systems, Volumes I & II" are also good, and more general. I hope onewill hit the spot.

MARK OSTROFF on 07/17
FYI, I called Acius about dealer and/or developer info on 4th Dimension. First of all, they said you could sign up as a developer for $695 and that entitles you to up to five copies of 4th Dimension at 50% off list. You can also buy a 4-pack of the Run-Time Modules for $150. These would be needed to sell with any application you developed. Scott Knaster said that they will be shipping a demo version in a couple of weeks. The demo is a full blown version, except that it limits the number of data files and records you can create. He also said that your Mac MUST have a MINIMUM of 1 Mb to run 4th Dimension. Oh, well!! I guess I'll have to get that upgrade anyway. I'll let you all know when my demo copy arrives.

DEACON MACCUBBIN on 07/17
I received my copy of 4th Dimension a week ago. My MIS guy is drooling over its capabilities. He loves it! It's better, he said, than any other data base he has ever used (and he's used lots, including DBase III, Revelation and Omnis3+ and Double Helix). He actually set up a somewhat simple but large data base in about three hours on his first day with it.

DAVID GURSKY on 07/22
I received an interesting offer from Odesta the other day. It seems they are offering registed Double Helix owners an introductory tape to Double Helix II (VHS or Beta) for $20. Talk about marketing! Double Helix II is scheduled to be announced at MacWorld. The cost for registered owners will be $85 and will include new, revised, up-to-date, etc. manuals. Maybe even better notebooks!

Desk Accessories

ROBERT EFROYMSON on 06/03
My favorite DAs are MiniGuide and Multi-Scrapbook. I like the MiniGuide just because I like Guide so much, its a program of limitless application, though sometimes rough to control. The Multi-Scrapbook DA makes pasting between various applications under Switcher a less hair-tearing job. I have had the problem that different programs would grab different Scrapbook files when the regular DA is used. Multi-Scrapbook ensures that I always get the one I put the graphic or whatever in. Makes Switcher work for me, and that is important.

KEN HANCOCK on 07/08
The DA I have found most useful above and beyond all others is Disktop. If you have never seen it, it's definitely worth it. A complete finder utility as a DA. I use it almost every time I have my Mac on.

BILL BALDRIDGE on 07/11
There's a really spiffy DA on the Downloads board called "Scribbler", which is a mini-MacDraw in a desk accessory.

DAVID KREISBERG on 07/11
My favorite DA is CheapPaint. It gives me access to any Scrapbook and allows me to modify Scrapbook pictures or create new ones. It is particularly handy when using RSG, because I can change my pictures without leaving the application. On the same disk is ArtGrabber which lets me grab any part of a Fullpaint/MacPaint picture without leaving the application—another plus with a page-layout program.

PAUL CHERNOFF on 07/11
I have been using Outlook, Borlands outlining DA a lot. I have been mostly using it instead of the Scrapbook to transfer lots of charts from Excel to MacDraw for editing. While I could have

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done the same thing by using switcher, the advantage of Outlook is that I have copies of the charts organized in a rational manner and they can be retrieved later for any other program. One fault of Outlook is that in MacDraw, Outlook will automatically Quit when I open or activate a MacDraw window (I assume that this is due to a bug in MacDraw).

DEACON MACCUBBIN on 07/11
I cast my vote for DiskTop, too. Version 2.0 is incredible! And the free programs you get when you register are worth the registration fee by themselves. Widgets is a fascinating collection of utilities for making startup screens, diddling with a LaserWriter, etc. A DA called LaserStatus comes with it. It lets a networked Mac user check the status of the LaserWriter without getting up from his or her desk. The whole package is another example of the good stuff done by CE Software.

DEACON MACCUBBIN on 07/11
Here are some other favorite DAs: Thunder!—the interactive (or batch mode) spell checker which, along with an INIT called Immortality, is always "alive" and ready to pounch on my bad misspellings. It even werks while I'm BBSing! (no—really—it does work. You should have heard it beeping at me just then!). Acta—the Outliner DA by David Dunham. A very fine piece of work. MacDialer and CalendarBook—two of the many DAs included in Sidekick from Borland. MacDialer will look up numbers and dial your phone, keep track of phone notes and track client billing times. CalendarBook gives you week-at-a-peek or monthly calendar views and keeps track of appointments. Notepad+ comes in this package, too (it's actually MockWrite with a new name). Other—Lofty Becker's DA that gives you access to uninstalled DAs.

DEACON MACCUBBIN on 07/17
Not only does Thunder! still exist, but a new version (1.1) has just been released. Batteries Included was bought out by Electronic Arts and that may have caused delivery problems for a while. But you should have no problem getting it now. Certainly, MacConnection has it.

KEN KNIGHT on 07/12
OK, here is one for you folks that I ought to know but can't recall—How do you go about installing a DA into a specific application? I vaguely recall it being possible (other than using ResEdit and installing a Driver resource into the application). The reason I ask is that I have not found anything that'll expand my DA menu yet on the II (still have a couple of things to try, like Other 3.09).

LOUIS M. PECORA on 07/16
Use Font/DA mover 3.5. When you click on "Open" hold down the Option key simultaneously. The ensuing dialog box will now contain applications, as well as system, and DA files. From there everything's the same. I think you're limited to a maximum of 4 DA's per application.

DEACON MACCUBBIN on 07/17
The 15 DA limit will disappear very shortly, IF you buy Suitcase, a new commercial program due out RSN from Steve Brecher (of MacUser magazine). It will eliminate your reliance on Font/DA Mover. Just pop your DAs into your system folder (or into a folder labeled DAs in your system folder) and they will be loaded automatically. There will be no limit (other than that imposed by memory constraints). I know one beta tester that had several hundred DAs installed! It will handle fonts in the same way. $59.95 retail list. Watch for it!

Desktop Publishing

DEACON MACCUBBIN on 05/30
Do yourself a favor and take another look at RSG3.0. PM2.0 is almost as good (and is better for some projects, like tabloid-size pages) but I still think RSG has it beat. It does use a hyphenation algorithm, but it is very reliable (and fast!) and you can always correct any errors (including adding those words to an exception dictionary so you'll never have to correct them again). In one of the RSG menus there is a "hyphenation exceptions" choice (or something like that). Choose that and type in the "exceptional" word putting hyphens in the appropriate places. It's easy.

CHARLES REILLY on 05/28
Doesn't anybody use digitizers out there? An associate has put me on the spot to recommend a video digitizer for use in a sign language book they're doing overseas. They need to superimpose arrows over digitized images. Any ideas which machine is best (Magic, MAcvision, whatsup?)

BILL BALDRIDGE on 05/28
I already replied to you over on the Graphics Board, Charlie. I asked what kind of budget you had and gave you a range of prices. I can add here a small comparison of three digitizers from a newsletter from Clinton, in case you don't get it.

	ThunderscanMacScan	Abaton Scan	
Resolution	288DPI	300DPI	300DPI
Interface	Serial port	SCSI	Serial/SCSI
Halftone?	Yes	Yes	Yes
Speed	Slow	Fast	Medium

The Abaton Scan 300 comes in two varieties, single-sheet & flat bed (this gives the capability to scan books). MacScan is very fast; it will scan a full page at 300 dpi in eight seconds. In deference to the statement I made on the other board, MacScan CAN save in MacPaint format—in addition it can save in MacDraw, PageMaker1.2, Postscript and TIF format. Thunderscan is the low-budget scanner (<$200 - the only one I'm sure of the price on). Its drawbacks are you need an Imagewriter to scan documents, and it's slowwww—about 10 minutes to scan a full page (20 minutes if you want hi-res). Hope this gives you more background to work with...

JERRY WALZ on 06/06
We just receved Cricket Draw version 1.01 and like the feature to wrap text around arcs or free form lines . Great for logos etc. Using with RSG 3.0.

NICK ROBERTSHAW on 06/25
I have had trouble with large bit-mapped graphics in RSG documents. I loaded a diagnostic into the LaserWriter and it showed a PostScript error was being generated. I replaced the largest graphic with a PICT version and it then printed OK. Sorry, I don't remember how big the file was, but it was only a two-page document.

KEN HANCOCK on 07/14
Are there any commercial places in the Washington DC area that have both a LaserWriter and a Linotronic 100 hooked up to a Mac for printing use? I have a few things I'd like at 1200 dpi once it checks out alright at 300 dpi.

PETER LINDSTROM on 07/17
I use the services of Artform graphics located in the Dupont

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Circle area. (Specifically, 1826 Jefferson Place, phone, 331-7423). They are a printing shop, so it is good to call (probably Ron Moore, resident Mac Genius) to discuss your needs and make an appointment. Their Linotronic and LaserWriter are hooked up to a single Mac Plus, making things much easier. I can't remember how much they charge, but it is reasonable—so reasonable they knocked 50% off our usual typsetting charges. And that is important for a non-profit firm like the one I work for.

Entertainment & Education

DEACON MACCUBBIN on 07/11

Hurrah! Even though the bulletin still claims that this is the Educational Software board, rumor (and the board's title) indicates that it's really the place for games! Thanks to whomever is responsible for moving it back home where it belongs. Anybody played any new Mac games lately? Has everybody finished Shadowgate? (And without a single clue from me?) I've been playing an oldie but goodie, Real Poker—and won $365,000 last night. Wish I could do that when the chips are real! If you like board games, try 1000 Miles on the Mac. It's an exceptionally well done shareware game based on a Milton Bradley favorite.

KEVIN HARRIS on 07/24

GAME REVIEW - JULY 1987 - SUB BATTLE SIMULATOR from EPYX: The same people who brought you WINTER GAMES, now bring you SUB BATTLE SIMULATOR. SBS is a naval combat game that allows you to command 60 different simulations, in the Atlantic as a German sub, or, in the Pacific as an American sub. It also allows you to link missions so the fun can go on and on. Also, this game beats GATO by a mile. Why? SBS uses both Macintalk AND digitized sound effects that make it seem like you're really there! Via Macintalk you can hear damage reports coming in from the crew and other different responses. It is by far THE BEST Sub Simulator yet! STATS: Requirements: 512k+. List Price: $39.95

DEACON MACCUBBIN on 07/24

Electronic Arts has announced Scrabble for the Mac. They have planned for an August release—but didn't sound all that sure of the time schedule. Has anyone played The Lurking Horror from Infocom yet? Or Stationfall?

KEVIN HARRIS on 07/30

GAME REVIEW - AUGUST 1987 - SKYFOX from ELECTRONIC ARTS: No, this may not be a new game, but, it's a GOOD one. This game puts you in the cockpit of SkyFox, a super fighter plane that can go from 0 to Mach 4 in 4 seconds. Excellent Graphics & sound. Allows you to fly on two levels. On low level you battle against Tanks, on high level you battle against deadly planes that attack you with everything they've got. You have 15 different scenarios, each more difficult than the other. Your SKYFOX is outfitted with limitless laser power, heat seeking missiles, and radar guided missiles. Five skill levels, from Cadet to Ace of the Base. Your objective is to defend your homebase, as long as it's safe, you've got a chance. RATING : * * * *

Graphics & Design Software

LOUIS M. PECORA on 07/07

Does anyone know how to get plots from Cricket Graph into MacDraw or, especially, MacDraft WITHOUT having the plot lines getting jaggity? We have tried everything from saving the Cricket plot as PICT and opening MacDraw or Draft to going through the clipboard or scrapbook. The problem appears to have something to do with the grid-snap. When this is turned off the plot can be moved and resized in MacDraw and moved only in MacDraft without incurring the jaggies, but the overall plot still looks bumpy. I should point out here that I am talking throughout about the output from the LaserWriter from these programs. Doesn't Cricket Graph save the plot with enough precision to allow it to be moved and blown up a bit without ruining it? It seems something else is involved, but we're at our wits end where I work to get out smooth plots which can be customized in MacDraw or MacDraft. Any help is greatly appreciated.

BILL BALDRIDGE on 07/07

Without being familiar with the capabilities of Cricket Graph as far as output formats, Lou, all I can offer is the basic theory behind the various formats used on the Mac. 1) PICT - this file is composed of QuickDraw primitives, which make perfect sense to the Macintosh, but don't mean diddly to the LaserWriter, so you still get biasing (the "jaggies") if the smoothing routine in the LaserWriter driver doesn't jibe with the output from the application from which you are printing. 2) OBJECT - here we have a series of bitmaps, which can be handled independently (scaled, rotated, etc), without affecting other portions of the file. Again, when this file is output to the LaserWriter (depending on the application), if the smoothing routine/algorithm (the more proper term) can't re-map it into a smooth image you end up with the jaggies. 3) BITMAP - this is the most basic format, where all images, from fonts to graphs to scans are represented by a 72 x 72 dot per inch grid. Any scaling of this image must be done in increments divisible by two (.25, .5, 2, 4, etc.) for realistic output. But again, biasing creeps in if the image cannot be properly remapped by the laserwriter driver. Hence, two suggestions—one simple, the other expensive. The first involves scaling the image to twice its size once it is imported into MacDraw/Plot and then "redrawing" it at that scale; actually, the larger you can scale it will result in a smoother output, once you output at a reduced size; a 4x rescale & redraw, with final output at 25% would end up with a resolution closest to that of the laserwriter. The second involves purchasing a program like Adobe's Illustrator, which would allow you to actually remap the image into a postscript image. Programs like SuperPaint allow limited manipulation at LaserWriter-like resolutions, but the size is very limited. Hope this helps you resolve your problem.

BILL BALDRIDGE on 07/30

Just got the latest update to the Thunderscan software (version 4.0) yesterday, and read through all the new documentation (much improved/expanded), and played with it a bit. My general impression is, "Where's the beef?!" Though it has some new gadgets—a gee wiz user mappable gray scale filter, and grid map on the scan page set-up (whoopie!), and can now save in more formats than patterns in your grandma's quilt (TIFF, DIFF, JIF?, POSTSCRIPT, and a couple more), it's still the same ol' format, same ol' bump & grind to re-halftone. When are these folks gonna get down to some serious assembly coded number crunching?! I feel a nastygram comin' on—good thing it was only $25 to upgrade, which IS worth the money, despite my gripes.

BILL BALDRIDGE on 07/31

Thunderscan can't be beat for a low-end scanner/digitizer, but the trade-offs are slow speed and slow re-halftoning. The new software is available NOW, or should be (unless Thunderware is shipping to registered owners first, which I highly doubt)—give MacConnection a call to see if they're carrying it. Version 4.0 allows printing directly to a LaserWriter (assuming you have one) using either a dotscreen or linescreen (which are pseudo-grayscale methods newspapers use dotscreen for their graphics).

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My previous comments were a bit on the "sour grapes" note because I don't own a LaserWriter (and not very many home users do, which I assume includes most of the audience). However, if one is fortunate enough to own a LaserWriter, then the new version offers some significant improvements over previous versions. But then if one can afford to buy a LaserWriter, one can certainly afford to purchase a suitable 300 dpi scanner to use with it.

LOUIS M. PECORA on 07/31
I just got the application "Softwear Plot" by Softwear Products in Lanham, Md. After fooling with it I thought some of you might be interested in my impression. Overall, this is a gem of a plotting program. The people who wrote it have obviously had experience plotting lots of data and they've added some nice features which reflect that experience. For you Cricket Graph users note that Softwear Plot does not seem to have any trouble getting a smooth plot to the LaserWriter. The plots look great. Diddling with the plots in MacDraw or MacDraft also does not affect the plot smoothness (no jaggies or shifted plot lines like with Cricket Graph plots). It does not have all the bells and whistles of Cricket Graph, like plot fitting or interpolation. It only plots line or scatter plots. No bar or pie graphs. However, what it does do it does exceptionally well. It offers a greater choice of line and plot symbol types than Cricket, including lines made from patterns (which you can edit to suit yourself). Plotting is very fast and you have the nice option of manually or automatically updating the screen. This is nice for plotting lots of points when you want to make several customization changes to the plot; you don't have to wait for a "screen refresh" every time you close a dialog box (nice touch!). There are also two very nice extras. One is a Zoom feature which zooms any part of the plot to full screen with correctly labeled axes! The other is a "measure" option, which, when chosen, changes the cursor to cross hairs and simultaneously gives the x-y coordinates (in terms of the plot units) on the screen. I recommend it to all, especially engineering or scientific types, who have to plot lots of points and/or need to customize a plot in another Graphics program and not worry about how it will come out on the Laserwriter. Softwear Plot is about an 8 out of 10 (Cricket 7 out of 10) for my usage. P.S. Forgot to say that the data files are simple and straight-forward and the program is very easy to use. The price is $99.

NICK ROBERTSHAW on 07/31
MacWorld has a CricketDraw help article. Quite good. One of the Undocumented features that they talk about (albeit somewhat vaguely) is the Transfer Mode (now there's a name that carries a lot of meaning). If you havn't explored this, here's what to do: 1) Select a text object or other fillable object. 2) Option click on the fill box in the bottom left of the screen. 3) The Transfer mode dialog box should appear. Try lines at 30 degrees, 15 frequency (did I promise this was intuitive?). 4) Click O.K. and laser print it . See! (Tough if you don't have a laser printer). 5) Try a radial fountain on the object. 6) Form a Company for your new logo!

Hard Disks

BILL QUALLS on 06/20
I'm putting together a homebrew HD for my Mac Plus, and I have some questions about formatting and installing a driver on the thing. My system consists of a Seagate ST 225 20 MB HD and an Adaptec 4000 controller. Once I assemble the components, I would like to install System 4.1 and Finder 5.5 on the HD. I would like to format the HD with an interleave factor of 2:1. I would also like to take advantage of the new, improved SCSI Manager. I've done some research on the subject, but at this point I have more questions than answers. Here are my specific questions.

1. Do I have to upgrade to the ROM found in the new platinum Mac Plus to format the HD with an interleave factor of 2:1? (I believe the Mac SE and the platinum Mac Plus use an interleave factor of 2:1; the beige Mac Plus uses an interleave factor of 3:1.).
2. Do I have to upgrade to the new ROM to use the new, improved SCSI Manager?
3. Does Apple include a SCSI installer and driver in the new System Tools (System 4.1/Finder 5.5) disk which I can modify to set up my unformatted HD?
4. As an alternative, is there a shareware or commercial SCSI installer/driver that I can buy and use to set my HD?

If anyone has done what I'm suggesting or can offer help, I would really appreciate it.

DAVID GURSKY on 06/22
1) You do not need the 256K ROMs. The ROMs in the MacPlus have not changed in about a year. 2:1 seems to be the standard for the interleave althought others work. To wit, my Micah is 1:1 as are the DF XP series. 2) You can't upgrade to the new ROM. You have to buy an SE or Mac][. 3) Dunno. 4) Doubt it.

KEN KNIGHT on 06/23
I might have mentioned this before. MacTutor has been running a very good series on D.I.Y. hard drives for the Mac. It is a 3 parter. The first part as in February this year (I think), the second was in the June issue and I don't know when the third will show. However, they are pretty good. The Pi office, I think, has MacTutors stashed away somewhere you might want to check.

DEACON MACCUBBIN on 06/25
I need to get some kind of backup system for my Jasmine 80 meg. hard disk. I've been warned that LoDowns are—well—low down and I should stay away from them. Does anyone have any suggestions?

DAVID GURSKY on 06/25
DataFrame makes a tape backup system. While I have no experience with it, I suspect it is in line with the rest of their merchandise. As I recall, you can either backup by dragging files to the tape drive's icon (and thus create a very readable image of your disk) or use some streaming program SuperMac has to backup your entire volume (this is much faster).

BILL BALDRIDGE on 06/25
You might have seen the by-line on the new Tecmar 40-Meg portable streaming tape SS for the Mac. Only $1395—see Pg.30, Infoworld (June 22).

LOUIS M. PECORA on 07/02
I have a LoDown 20 Meg tape backup at work and have had zero problems with it. Using it was straight forward, too.

RICHARD BROSNAHAN on 06/30
Just got mine (Jasmine 80 - ed.) a week ago. It arrived a week ahead of when they said it would. It is plug and play, which is great. It is LOADED with shareware and was configured with Sys/Find 4.1/5.5. It is a bit noisy but is very fast. It does get warm and I have moved it from under my Mac to another location. I do not want to fry my motherboard on the Mac. Warm is the word here. Not by any means hot. Put it under the Mac and the case cannot get rid of the heat on the top. Good thing I got the 6 foot cable option.

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BILL BALDRIDGE on 07/01
There was a nice write-up on Jasmine 80 in the latest InfoWorld—"highly recommends looking at this drive for your Macintosh." They gave it an 8.5 (out of 10), which is excellent.

JEFFREY BARNES on 07/26
I'm not much given for recommending software but I must say that I am most satisified with the reliability and design of the DiskFit backup/restore application from SuperMac. I have done full restore three times (not by choice) and as far as I know it worked perfectly. It makes an admittedly tedious (hard disk to diskettes) backup about as painless as can be. I also really like Disk Express for compressing the HD.

BILL QUALLS on 08/01
I just thought I would fill everyone in on the resolution to my friend's problem with his Rodime HD20. He couldn't get it to work with an upgraded Mac 128K and a DataFrame daughterboard SCSI port. The installation software on the Rodime was buggy. He called Rodime and they asked him for the version number of the installation software. His version was 2.Something. The current version was 8.Something. Rodime shipped him new software via Federal Express. He installed it and everything works fine now.

Misc. Programming

DAVE GIBSON on 07/02
McFaceware, 1310 N. Broadway, Urbana, Illinois, 61801 (217) 328-5842 has a package called McFace.sub 3.0 which "gives your Fortran programs a McFaceLift with calls to McFace.sub" provides access to menus, desk accessories, file handling, alerts, dialogs, printing etc. for $40.00. I am trying to order a copy. The next issue of MacTutor is supposed to have a review.

RICH NORLING on 07/10
MPW (Macintosh Programmer's Workshop - ed.) is available only from APDA (Apple Programmers & Developers Assn), 290 SW 43rd St., Renton, WA 98055. APDA is a membership organization at $20 per year, and members can buy from a catalog that includes a lot of draft documentation and software tools from Apple. MPW 1.0 was released last fall. Version 2.0 is available right now from APDA in Beta form, will be final soon. Prices are MPW (Editor, Linker, Assembler, Shell, etc) $150; MPW Pascal compiler,$125; MPW C compiler, $125. The MPW Shell is a powerful text-based script language that is Unix-like, but for version 2.0 they have added a Mac-like interface for most of the tools. You don't need to know toolbox arcana to use MPW. MPW 1.0 runs on any Macintosh 512K or larger, 2.0 requires a Mac Plus, SE or II. (even 1.0 sometimes runs out of memory on a 512). For more information, you can look for my column in the July WAP Journal. Hope this helps.

Rumor Manager

DALE SMITH on 06/23
The 6/15/87 issue of MacWEEK has an article on the three-year repair records of 1500 Macs and 700 IBMs at Carnegie-Mellon University's service center.

100% of IBMs returned at least once EVERY year for repair.
24.5% of Macs returned for repair each year.
Macs - false alarm rate: 4.5%
IBMs - false alarm rate: 30%...VERY interesting.

NICK ROBERTSHAW on 07/15
Hot Rumor of the nanosecond! Microsoft, anxious to ensure that the new DOS for the PS/2 ships on time, no matter what, has assigned to this critical project the manager reponsible for the timely shipment of Word 3.0. Macintosh vincit omnia!

RICH NORLING on 07/19
I don't know what came over me, causing me to be so nice to Ashton-Tate. Rumor has it that dBase Mac, which they "showed" at last year's Boston MacWorld Expo, will be "shipping" at this year's Boston show. Not going to hold my breath.

Software Misc.

BILL BALDRIDGE on 07/05
Just talked with the publishers of Mac Disk Cataloger yesterday, and they say they are coming out with version 3.0 in mid-August. Look for flyers in the mail, if you're a registered owner.

KEN KNIGHT on 07/14
The main plus to upgrading to 4.1/5.5 is that you will have many of the features found in the ROMs of the SE and II. For example, better printer drivers, newer (and still with some bugs, though work arounds do exist) TextEdit (big difference is that you can control style/font/color now), and other little goodies. It also fixes some bugs that caused trouble with hard drives larger than 32 megs. The "down" side is that some stuff will not run, but most of it can be patched to run with out much pain (programs that made use of a low memory global—02BF—now die; you just change it with Fedit or whatever to 0A78—usually works). That might have muddied the issue more. But, I hope it helps.

LOUIS M. PECORA on 07/17
For several patches for software which bombs in Sys/Find 4.1/5.5 see MacTutor issue July 1987. I've tried one (the MegaMax C one) and it works.

Tech Notes

PETER LYDA on 07/06
Anyone have a power supply schematic for the Mac + and SE? Apple is very tight with their drawings. Maybe you've seen one on another BBS somewhere?

BILL BALDRIDGE on 07/06
You might try contacting Beck-Tech (415-548-4054), who did the schematics for the original Macs and marketed them.

Telecommunications

NEEDHAM LANGSTON on 06/15
My source is the 15 Jun 87 issue of InfoWorld page 6 which states that Apple will release a fix for incompatabilities between MacTerminal and System 4.1 in early July. Also it will add compatability with the new Macintosh keyboard and Appleshare.

JEFF ANDERSON on 07/16
I just completed downloading my first file from the TCS and at the completion of the transfer, I noticed that the number of bytes received exceeded the number that supposedly existed in the file. Does anyone know why this is the case? I have downloaded many files before and have never seen this.

BILL BALDRIDGE on 07/17
Must have been an introductory offer—you got some BONUS code with the download <grin>.

DALE SMITH on 07/17
When you use the X)modem - Mac protocol selection, you are using the standard checksum xmodem which (for compatibility with CP/M) pads a partial xmodem block with CTRL-Z's to make a full 128 bytes of data. It will add 128 bytes of CTRL-Z's, if the file length is an exact multiple of 128—for the same reason. Your downloaded file may be up to 128 bytes longer than the file

contd.

stored on the TCS.

ROBERT DOHERTY on 07/18
Actually, I believe you can get up to 128 bytes from each of the file forks, the resource and the data.

DAVID TODD on 07/19
Can anyone comment on which communication packages work on an SE with the new System? What other utilities will I need? Thanks in advance.

DEACON MACCUBBIN on 07/20
Smartcom II 2.2B, Red Ryder 9.4 and Microphone 1.1 all work fine with an SE. If you're going to be doing downloading, you might want Packit III (version 1.3 is current) and BackDown (though I'm not absolutely certain that it's compatibe with the SE, I think it is). A good text editor is helpful for communications, too—EDIT or QUED are good.

Utilities

BALDY BALDRIDGE on 07/17
There is a nifty utility on the Up/Dn Conference called INFOMaker, which can be used as a file conversion utility to/from many different file types and formats. It utilizes script files (generated by you, but apparently many are available from the author upon payment of shareware fee).

Word Processors

BILL BALDRIDGE on 06/18
PageMaker 2.0 now imports and exports WriteNow documents directly, which is a big surprise, as WriteNow's file format is different from any of the other "big name" word processors. I'm sure this can't but help sales of this tough little gem of a word processor. This is not to detract from the power of WP packages such as Word 3.x or any of the other "document processors" yet to show their faces. It would seem WN has carved out a nice little niche for itself in the middle-power WP market.

BILL QUALLS on 06/20
Just got something in the mail today that might interest Word 3.0X users. It's a newsletter called Inside Word, and it's devoted to tips and techniques for making the most of Word 3.0. Inside Word is published by the Cobb Group, the same folks who publish EXCELLENCE, a newsletter for Excel users, and the book, *Excel in Business*. The copy that came in the mail was unsolicited; they're looking for subscribers. I expect all of you other registered Word 3.0X users will be receiving copies soon too—if you haven't already. A subscription costs $45 per year. My impression—I might just go for it. The newsletter had seven articles describing how to use various features. I already knew how to use some of these features, like customizing the font menu and creating user spelling dictionaries. On the other hand, the lead article dealt with Word's side-by side paragraph format. I didn't know anything about that feature and picked up ALOT of useful information from the article. At any rate, if you're interested and don't get your copy in the mail, you can request one directly. The address is: The Cobb Group, Inc.; 301 N. Hurstbourne Lane; Louisville, Kentucky 40222.

Mac SE/II

JIM DONNELLY on 06/30
Ken, can you give me a tentative list of workable word processors for the II? I dont need a whiz-bang program, because I always print from PageMaker anyway—even my correspondence—so MacWrite suits me fine, but I understand it doesn't hold up too well on the new machines. What about Write Now?

KEN KNIGHT on 07/01
MacWrite dies, though there is supposed to be a version (4.6 I believe) that will run coming out RSN. MS Word 3.0 runs. WriteNow also runs. Other than those two I don't know. But the MacWrite , Word 3.0, and WriteNow basically make the WP market, unfortunately (I suspect FullWrite when it shows will work, but that is not till August or so). P.S. The Translator for WriteNow takes a fair amount of time to translate MacWrite files (I really don't like that thing, wish it did it on the fly like MS Word 3.0 but..). So far I can not say if I like WN—I have not used it much yet.

KEN KNIGHT on 07/06
Every now and then my Apple Monochrome monitor gives a series of quick shimmers. And ideas what might be casuing this? And any thought on things I might try short of taking it in (even though its under warranty I don't want to lose it)?

LOU PASTURA on 07/06
On a //c, the problem you describe usually can be fixed by squeezing the ground connectors on the RCA plugs so they make a tighter connection. Anything similar on the Mac?

The Mac Fed SIG

DAVE GIBSON on 07/23
Does anyone have a program which compares the FERS retirement system to the CSRS retirement system. The only one we have here at FHWA runs on the PC. Since I have a Mac at my desk, I really don't have time to run back and forth and play with it like I should. If you do have one, could you have our SYSOP put it into the FedSIG library?

PAUL CHERNOFF on 07/23
Being somewhat familiar with the FERS program (I was the original programmer on the HAY model) I would doubt about the availability of a Mac model (I know that HAY did not do a Mac version, though other companies are also involved in trying to make a buck out of this business). Since it took so long to get the MS-DOS version going I would not count on a Mac EXCEPT that the MS-DOS FERS program was written in Turbo Pascal (I do not know what the final version was written in). You might be able to get the source code and compile it on the Mac version of Turbo. Does anyone know if this would work?

TIM MCGRAW on 07/28
I've heard that an office in the Pentagon is getting rid of 1,000 MS-DOS machines and replacing them with 1,000 Macintoshes. Army (I think that's who is involved) are being quite secretive about it. Anyone know about this?

DAN YURMAN on 07/29
Aha! What a surprise to see on the front page of Government Computer News for 7/31 an article detailing my agency's plans for "1,000 desktop publishing sytems . . ." and quotes from EPA's IRM director on pg.12 suggesting that IBM systems will NOT (emphasis mine) meet EPA's needs. As one who's life and limb was torn assunder in early 1986 for buying just two (2) Macintoshes for an end-user organization, I can tell you that my reaction was one of wonder to see the world turn and bitterness to know that the people who fought so hard to keep this technology at arm's length are now declaring victory on the other side of the issue. One can only stand back and view it all with astonishment!

FALL WAP TUTORIALS
by Robert C. Platt

In addition to the regular Apple II and Macintosh tutorials, WAP is offering the following one-time tutorials:

Telecommunications on the Apple II - *Allan Levy*
Saturday, September 12, 9 a.m.- noon

Learn the important basics of accessing other computers with a modem. Topics covered include: setting up your hardware; sources for hardware and software; and demonstration of communications programs, including: Point-to-point, MouseTalk and DCom 3.3 Do not bring your computer.

Telecommunications on the Mac - *Allan Levy*
Saturday, September 19, 9 a.m.- noon

Learn the important basics of accessing other computers with a modem. Topics covered include: setting up your hardware; sources for hardware and software; and demonstration of communications programs, including: Red Ryder, and MacTerminal. Do not bring your computer.

Introduction to the IIgs - *Ted Meyer, David Todd, Sherman Lewis*
Saturday, September 19, 1 p.m. - 4 p.m.

This course is a gs specific adjunct to the regular Apple II introductory tutorial. Learn about switching between ProDOS 8 and 16; desk accessories; the program selector; control panel; RAM disk; programming environments; available shareware and public domain programs. Please bring your computer, a copy of your system disk, and a blank disk.

The fee for each of these tutorials is $15 for members, $20 for non-members. Please call the Office to reserve a space, or use the form in the back of the WAP Journal.

WORLD BUILDER CONTEST
by Robert C. Platt

WAP is conducting a World Builder adventure game writing contest. (See Aug WAP Journal p. 38.) Remember that all entries must be received by Wednesday, Sept. 16. We are pleased to announce that Silicon Beach Software, the publishers of World Builder, have agreed to provide prizes for the best entries and is interested in seeing the winning entries. Of course, the contest will be judged by Ron Wartow, the nationally-acclaimed author of Deep Angst™.

The prizes include copies of SuperPaint, Silicon Press and Dark Castle as well as World Builder sound libraries.

Bill Appleton, the author of World Builder, has sent along some interesting technical information. First, the status command displays the following two values:

Experience = Physical + Spiritual Hit Points of all monsters killed.

Wealth = Sum of the value of all objects in player's pack.

Second, it is possible to print user variables as long as only one is used in each print statement.

Third, Bill has provided a data layout description of World Builder saved game files. I hope to write a "cheater" program with this layout that will speed the judging process. Please contact me if you need this information to help with your entry. Bill is pleased to learn of WAP's contest and sends his best wishes to all entrants.

IIGS DISKETERIA NEWS
by David Todd

I've been getting several questions on how to set up and run the programs on /WAP2001 & /WAP2002. Neither of these disks contain the ProDOS system files. If anyone would like detailed instructions, send a S.A.S.E to David Todd, P.O. Box 297, Cambridge, Md 21613.

Errata for /WAP2003:

Kermit was dropped from this disk because of compatibility problems. Three additional SHR screens appear on the disk:

Escher1: ThunderScan space filling graphic.

Snakes.640: T-Scan Escher compatible with Deluxe Paint II's 640 mode.

ThreeWorlds.640: T-Scan Escher compatible with DeluxePaint II's 640 mode.

/WAP2004: SLIDE SHOW I

This month's offering is a slide show gallery of twenty three SHR screens in a variety of styles and subjects. The titles are self descriptive.

Alien	**Faucet**
Darth.Vader	**GreatWave**
Robot	**Mount.Fuji**
Red.Dragon	**Race.Car**
SpaceWalk	**Porsche**
Enterprise2	**Engineer**
Knight	**Ben.Franklin**
Middle.Earth	**Bugs.Bunny**
Tiger1	**Daffy**
Tiger2	**Bugs.N.Bull**
Spheres	**Bill.the.Cat**
Medfly	**Slide.Show**

MAC DISKETERIA NEWS

by Martin Milrod and Dave Weikert

This month we have five new disks, including two fonts disks, one disk of desk accessories, one disk of utilities and one of "sounds." The utilities are the result of the efforts of one of our members, Jim Sohn. This month's submissions are brought to you by William Jones, Bob Soule and Dave Weikert, and the efforts of all the duplicators listed under the masthead. Credit for last month's submissions was inadvertently omitted but they were also brought to you by the same annotators. The folder information, where appropriate, precedes the listing of program contents. Folder information is underlined, programs and files are printed in bold with shareware price information printed in bold italic print.

A Note on Shareware...

Please remember to send authors their requested shareware fees if you decide to add the programs to your software library. Shareware now accounts for over half of the material that we receive for Mac disks and we need to encourage the authors to continue to use this distribution channel. We all like to use a program for a while before deciding whether it is useful or not; shareware gives us that opportunity which we don't get with commercial programs. If we don't support the shareware concept with cash, the sources will find different distribution channels. With the announcement that the long awaited Red Ryder 10.0 is going to be released commercially instead of via the shareware route, there is graphic evidence of this trend. (You did remember to send Scott Watson your Red Ryder shareware fee, didn't you?) The authors put a lot of effort into the development of the software that we see as shareware. It is only fair to reward them for this effort by sending in the fees that they request. The lack of response to shareware fees must be due to procrastination; we can't believe that so many people would intentionally stiff these authors over the small fees that they request. Now, while you are thinking about it, get out your checkbook (and computer to look up the addresses) and pay for those programs that you use. Keep that shareware coming!

Good News and Bad News Department

The Summer, 1987 Mac Disk Catalog containing comprehensive information about the entire WAP Disk collection (through Mac Disk 109) is now available. The good news is that the catalog will be updated more frequently since a smaller number of catalogs was ordered this time. The bad news is that the price has been increased from $3.25 to cover the smaller press run. The catalog is available for $4.25 at the office or general meetings; you may order it by mail for $5.75 to cover postage and handling costs. The catalog lists disks by (1) disk name, (2) description of disk contents, (3) alphabetic listing of files across all disks and (4) by "type of file" listing across all disks.

Restructuring Mac Disks at WAP

In September, four more disks will be removed from the Disketeria, Volume 43 and the three-disk Modula set. If you want to add them to your collection, order them this month as they will no longer be stocked even on an archival basis. Since March when we first started selectively deleting disks from the Mac Disketeria, we have removed the following volumes: 1, 4, 5, 7, 8, 10, 13, 14, 15, 16, 18, 19, 21, 22.1, 24, 25, 34, 43, 60, 61A, 61B, 62, 63.1, 64 and the three disk Modula set. We have now completed the purge of disks that contain dated material.

We have started restructuring the Mac Disketeria along functional lines by program category. The first of these is Desk Accessories; all DAs in the current library have been grouped into one series of nine disks, alphabetically arranged. We have added DAs not currently in the library and have updated other DAs to their latest version. These DAs are now being annotated and will likely be released by October. When the new series is released, the existing volumes with DAs will be removed from the library. We will also release three or four new disks containing the updated and new DAs at that time so that current members do not have to buy the entire series to get the changes. The other series currently being reorganized includes the Fonts, FKeys, System Utilities, Programmer/Hacker Utilities and miscellaneous Utilities. Additional series will be tackled as time permits.

As part of the reorganization effort, we have examined the issue of 400K vs. 800K format for new disks. Although a majority of our members can read the 800K format, we have decided that we will continue to issue the disks in the 400K format at this time. The 400K format is still a universal format that all of our members can read. We did not consider it fair to those members without the ability to read 800K disks to switch at this time. However, the utility of the 400K format becomes more and more in doubt with each issue of updated system files from Apple and with many of the major publishers like Microsoft and Aldus issuing disks in the 800K format. We will reconsider this issue next year and the decision is not likely to be the same. Members that still have Macs with internal 400K drives are encouraged to upgrade to 800K to take advantage of the increased storage space and the more capable 128K ROMs. Many of our advertisers offer this upgrade at a reasonable price.

New September Disks:

Mac Disk 110:Fonts XI

(insert)

Author This plain typewriter-style font for the ImageWriter was created by Joseph W. Miller,.one of our own Washington Apple Pi members from the University of Maryland. He created it because of the lack of a font for the Macintosh that looked like a familiar typeface. In his words, "It has the virtue of being peculiar in no particular way." With a very limited number of optional characters, Author takes less space than does other fonts. For example, Author 12-point requires 2382 bytes, compared to 2892 bytes for Geneva and 3864 for Boston.

Fantaste! f

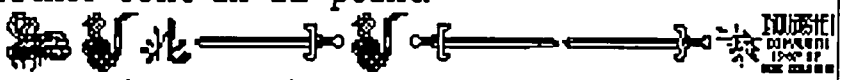
Fantaste! A set of fantasy related pictures.

Fantaste Info Doc. A MacWrite document describing

contd.

Fonts on Disk 110:

This is Author font in 12 point.

Fantaste! 

Šøŗęığń Šøńţ ıń Ìā ŏøıńţśÙ

Monaco 9. MyCyяiÞic 12.

Int'l Cyrillic 12: Инт'л Цыриллиц 12.

Int'l Greek 12: Ιντ'λ Γρεεκ 12.

Int'l Phonetic 12: ɪnt'l ɲhonetic 12.

Int'l Roman 12: Int'l Roman 12.

Fantaste! font and conditions for its use.

Fantaste! Key A MacPaint document which shows a key for the Fantaste! letters.

foreign fonts f

foreign fonts Contains three fonts suitable for typing foreign languages.

Foreign (in 9 and 12 point) allows you to type any foreign language that uses the Roman Alphabet characters. It is otherwise indistinguishable from Geneva.

Monaco (in 9 point) is modified in the exact same fashion that Geneva was used to create Foreign. The author needed the foreign character set for Polish and Hungarian texts.

MyCyrillic (in 12 point) is also based on Geneva and permits typing of all Cyrillic alphabets, including characters needed by Macedonian and Bulgarian and obsolete ones used in "Old Church" Russian.

Foreign Fonts Doc. A half-page MacWrite document that describes the Foreign Fonts.

International Fonts f

International Fonts Contains four sets of fonts suitable for typing foreign languages.

International Roman allows you to type in more than 100 languages.

International Greek ancient and modern Greek.

International Cyrillic enables more than a dozen languages that use that script.

International Phonetic enables phonemic or phonetic transcriptions of nearly any language. *Shareware - $20.00 for one to three Macintoshes; $60.00 for four to eight Macintoshes.*

Instruction Manuals Folder f

Four lengthy MacWrite documentation files for the four font sets listed above. Make sure you install the fonts in your System file before you print the manuals, and you are advised to read the manuals before using the fonts. The author warns that the *Font Editor* destroys the fonts.

Font Squeezer Sampler f

Font Squeezer Sampler Includes six fonts that have been "squeezed" in size to reduce the disk-space requirements of your System file. The squeezing process yields space savings of 30-40%. For example, the six sample fonts (Athens 18, Geneva 24, Helvetica 24, London 18, New York 18, and Times 24,) save about 15K compared to their normal counterparts. (There appears to be a problem with the squeezed London 18 font, which freezes the system when selected in the Font/DA Mover.) *Shareware - $15.00 (entitles user to Font Squeezer utility that allows you to squeeze additional fonts).*

Font Squeezer Documentation A four-page MacWrite document that explains how to install the squeezed fonts and how to order the Font Squeezer utility that allows you to squeeze your own fonts.

Font Squeezer Installer (Version 1.0) After you copy the squeezed fonts to your System file with the Font/DA Mover, copy this program to your System disk, open the icon, and press the install button. Once installed, the fonts are automatically unsqueezed when you use them.

Mac Disk 111: Sounds III

ayaaaah! A primal scream from the lord of the jungle (at the 11 KHz sampling rate). At 22 KHz it sounds like a jungle bird and at 5.5 KHz it sounds like a bull seal.

boom! ooooh A shot and a cry of pain at 11 KHz.

game over, man Just as the file name says, "Game over, man" at 11 KHz.

I'm completely operational... "I'm completely operational and all my circuits are functioning perfectly" from the movie "2001, A Space Odyssey." An assuring statement prior to a heavy computer session.

monkey From the darkest jungles of Africa comes the sound of a monkey when played at 11 KHz; alternatively it sounds like a jungle bird at 7.4 KHz.

Senseless Waste "What a senseless waste of human life". No folks, he is not commenting about the joys of being a WAP volunteer.

Vulcan mind "Are you out of your Vulcan Mind?" when played at 11 KHz.

20 BeepSounds f

Beep #1 through Beep #20 This collection of short sound files may be used to replace the "beep" that your Mac makes; they range from castanets, chords, chimes, hammer, notes, shouts, shots, and others too peculiar to describe.

Mac Disk 112: Utilities XVII

Jim Sohn, a member of the Washington Apple Pi and ham radio operator with call letters WA4DGB, sent us these utilities that he developed. This is a nice collection of utilities that solves some of the many engineering equations necessary in constructing and operating a ham radio station. These programs are written in compiled BASIC by BASCOM so they are standalone applications. The ones that have a suffix notation "Talk" require MacInTalk which is included on this disk.

Construction Computes the materials needed for the stone base and for a concrete slab given the length, width and depth of either the base or the slab.

Decibels Computes decibel ratios for power, voltage and current values; ratio conversions for W-dBW, W-dBm, mW-dBm, dBm-W and dBw-W; and power/voltage/current gain numerical ratios. (If you have to ask what decibel ratios are, you don't need to know.)

GreatCircle Computes the bearing and distance (in Nautical

contd.

miles) between any two points specified by their longitude and latitude.

HamRadio Computes transmission line attenuation for quarter, half and balun configurations. Calculates antenna construction parameters for specified frequencies. Lists power supply characteristics for different configurations such as full and half wave. Performs range and bearing calculations like the GreatCircle program.

HamTalk A talking introduction to the HamRadio file preceding.

LineLoss.Talk Computes IR loss in a specified length and gauge of wire with a specified current flow.

Mac Disk 113: Fonts XII

Fonts on Disk 113:

Palencia Application V2.1 A very high quality typeface that produces beautiful print on the ImageWriter. This version upgrades the earlier version on Mac Disk #97 by correcting spacing problems in all-caps titles, by adding a 36-point size, by redesigning some of punctuation marks, and by improving the manual. Palencia fonts, are available in sizes of 9, 10, 12, 14, 18, 20, 24, 28, 36, and 48 points, and are not accessible to the Font/DA Mover until they have been "extracted" by means of the Extract command under the File menu. The only catch is that the extracted fonts cannot be saved to the original 400K disk because of space limitations. If you are working with 800K disks, you won't have a problem. Otherwise, save the fonts to a separate disk when you execute the extraction process. ***Shareware - $12.00 ($2.00 upgrade fee for registered users).***

Beehive The title is descriptive. This one's available in 24 point.

Crete It's all Greek to me (in 9 and 12 point).

DeStijl The first patchwork quilt font that I've seen (in 24 point).

Ham A modern-looking font in 14 point.

LED 24 Looks like your digital watch (in 24 point).

Mystic Bold 14 A stylish, modern-looking font suitable for headlines (in 14 point).

Neon Make your own neon signs in 18 point! (I like this one.)

Stiletto.fnt Looks sinister (and well done!), in 14 point.

Tokyo 24 The street lights in Tokyo ? (Only seems to work in capital letters.)

V-Blind 12 Letters hidden behind venetian blinds. This author gets the prize for originality. You get the prize for figuring out what to use it for.

Munich f

Munich 36 This one would make a good typeface for writing letters from your castle on the Rhine. The capital letters are particularly fancy.

Munich Font Sample A MacPaint document that allows you to preview the Munich font.

McCloud f

McCloud 36 Letters that look like clouds—another prize for creativity on the Mac! **McCloud.doc** A one-page MacWrite file that describes McCloud.

Music f

Music 24 Write music notes in 24 point.

Music 9, 10, 14, 18 Write music notes in 9, 10, 14, and 18 point.

Music Instr. A one-page MacWrite file that provides a key for using the Music fonts.

Mac Disk 114: DA's XI

DePICTer v. 1.61 Translates any picture file on the clipboard into a text file of its hex code.

Graphics Viewer Opens PNTG (MacPaint) and PICT (MacDraw) files from within any file. ***Shareware - $7.00 for a version that copies to the Clipboard.***

Melter Watch your screen image slide into oblivion. (This DA's better mannered than others of its genre; a single click of the mouse restores the screen.)

Moire A better-looking than average idle DA with an interesting circular pattern.

Pattern Mover 1.0 Lets you move a set of patterns from one MacPaint or FullPaint palette to another.

Piczle A variation on the basic Mac puzzle, this time with a familiar picture scrambled. Click the screen to set the pattern, then manipulate the pieces as you would the Mac Puzzle. ***Shareware - $5.00.***

Poker Game Poker against the Mac *a la* a Las Vegas poker machine. Place your bet, select your discards, and see what happens. ***Shareware - $5.00.***

Poly.da Another idle, similar to Moire, this time with straight lines.

Scribbler 1.0 A Draw (object-oriented) program in a DA, done quite elegantly. ***Shareware - $25.00.***

µPaint A Paint program in a DA. Experiment with the boxes at the left of the window, which perform like the icons in MacPaint. (The text feature did not seem to work while running the DA under Other 3.09.)

Artisto1.42 Folder f

Artisto 1.42 A desk accessory of the "Paint Cutter" variety.

contd. on pg 75

WAP TUTORIAL REGISTRATION

Apple II: The following three WAP tutorials are being offered to Apple II owners on the first three Tuesday evenings of the month from 7:30 to 9:00 PM, at the office, 8227 Woodmont Ave., Bethesda, MD. (The tutorials start promptly at 7:30; if you bring your computer please arrive 15 minutes early to set up.) You may sign up for any or all of the series. They are designed for the "beginner" and will be repeated monthly. A revised outline of the tutorials was given in the October Journal. The fee for each session is $10.00. You are urged to bring an Apple, monitor and disk drive. (Monitors are available for the 1st 5 registrants - call office.) Please note that WAP does not have equipment for you to use; if you do not bring your own, you will have to look over someone's shoulder.

( ) September 1 - **WELCOME TO THE WORLD OF APPLE** ( ) October 6
( ) September 8 - **HOW TO USE YOUR APPLE SOFTWARE** ( ) October 13
( ) September 15 - **POPULAR APPLICATIONS: APPLEWORKS** ( ) October 20

Macintosh: Tutorials for the beginners are regularly given on the 2nd, 3rd and 4th Monday evenings of the month at the office, from 7:30- 9:30 PM. The fee for each tutorial is $10. You are strongly urged to bring your Macintosh—WAP does not have equipment for you to use. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

( ) Monday, September 14 or ( ) October 12 - Introduction to Macintosh . Prerequisite: Guided Tour to Macintosh.
( ) Monday, September 21 or ( ) October 19 - Intermediate Mac Skills. Prerequisite: Familiarity with Desktop, disk copying, etc.
( ) Monday, September 28 or ( ) October 26 - Becoming a Mac Power User. Prerequisite: First two sessions or equivalent.

Non-Regular Tutorials: The following tutorials are being offered in August at the office. The fee for these tutorials is $15 ($20 for non-members).

( ) **Telecommunications on the Apple II - Allan Levy - Saturday, September 12, 9am-12 Noon.** Fee $15 ($20). Do not bring your computer. Hardware, software, demos of communications packages.
( ) **Telecommunications on the Mac - Allan Levy - Saturday, September 19, 9 am-12 Noon.** Fee $15 ($20). Do not bring your computer. Hardware, software, demos of communications packages.
( ) **Introduction to the IIGS - Ted Meyer - Saturday, September 19, 1 - 4 pm.** Fee $15 ($20). Bring your computer, system disk and a blank disk. ProDOS 8 and 16, desk accessories, program selector, control panel, RAM disk, shareware and PD programs.

Please check the desired tutorials and return this form with fee(s) made payable to Washington Apple Pi, Ltd. to:

Washington Apple Pi, Ltd.
Attn. Tutorials
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814

Name _____ Membership No. _____

Day phone _____ Eve. phone _____ Total Enclosed $ _____

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WASHINGTON APPLE PI DISKETERIA MAIL ORDER FORM

This form is only for ordering disks that you want mailed to you.
5 1/4" DISKETTES: - Members $ 5.00 each; Non-members $ 8.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
3 1/2" DISKETTES: - Members $ 6.00 each; Non-members $ 9.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
A $1.00 per disk discount on the above prices is offered for orders of 5 or more disks. Postage remains as above.

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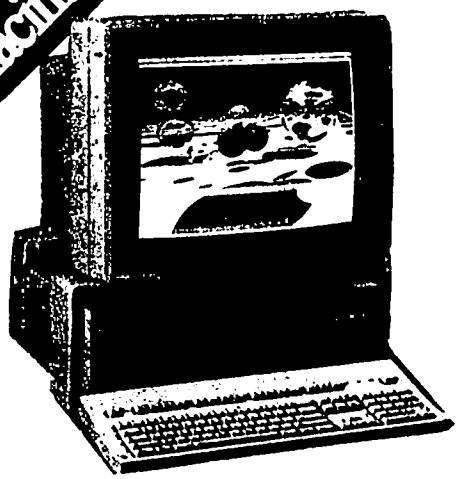

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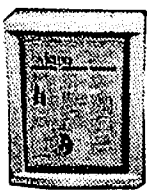

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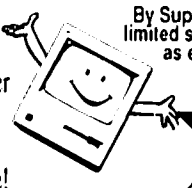

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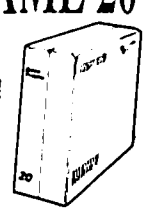

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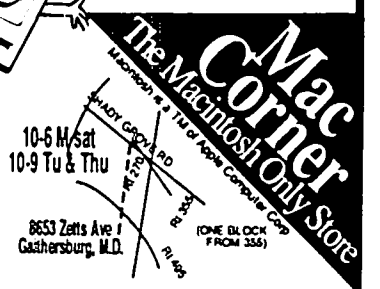

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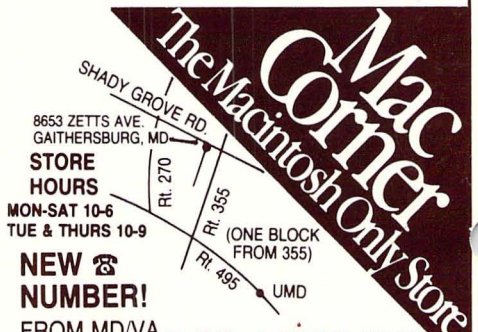

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