

# Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 9

February 1987

Number 2

## Highlights

- Introduction to dBase II
- Family Home Money Manager: Part 9
-  Views and Reviews: 12 Computer Magazines
-  MacNovice: Easy 1st Project With Excel
-  Excel Graphics: Scatter Plots, Trend Functions

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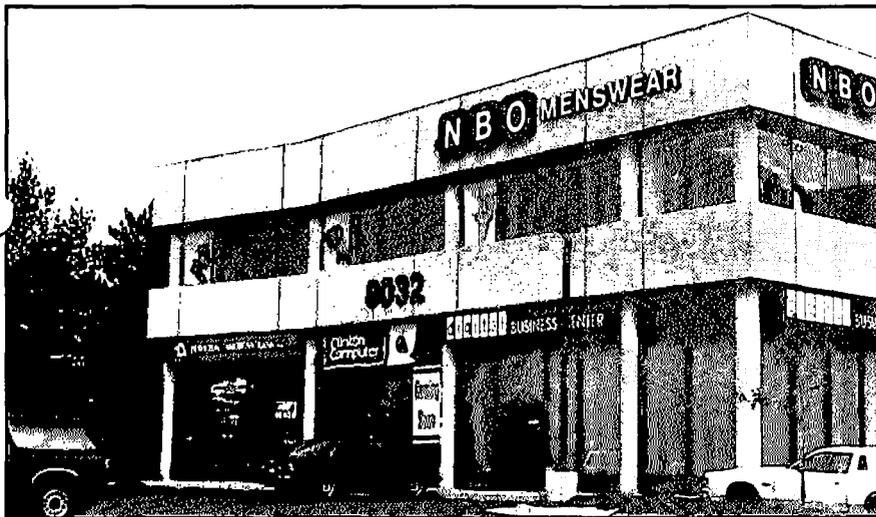
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## Clinton Computer -- A Full-Service Dealership!

### Four Stores Cover Metro Area

Clinton Computer, one of the Metro area's largest retail computer dealers, now has four stores -- in Clinton and Laurel, MD, and in Vienna and Alexandria, VA. We are authorized dealers for Apple™ microcomputers at all four locations.



Clinton Computer's New Store in Tyson's Corner, VA

In addition, our Clinton and Alexandria stores are authorized IBM™ Personal Computer dealerships. We also sell printers, monitors, software, supplies, and service for the products we sell.

Clinton Computer was founded in 1978 by co-owners Art Lundquist and Chuck Perilli. It began as a two-man consulting firm on the fourth floor of an office building and grew into a \$20-million-dollar retail business with over 90 employees.

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

The Laurel, MD, store opened in 1986 when we acquired the assets of the Comm Center. The newest store opened November 24 in the highly competitive Tyson's Corner area at 8032 Leesburg Pike (Rt. 7 West). This is an "Apple Only" store, carrying Apple products and third party products that complement the Apple line.

The company also operates a huge 3600-square-foot service and repair facility in Clinton, with satellite repair shops at the Laurel, Vienna and Alexandria Stores.

### Clinton Computer Opens "Apple Only" Store in Vienna, VA

Clinton Computer's newest retail store is an "Apple Only" facility in the highly competitive Tyson's Corner area of Vienna, VA. Company President Art Lundquist wants to focus on a single vendor of a market segment.



Cheryl Jarratt has been promoted to be the Tyson's Branch Manager. She had been Clinton Computer's Director of Marketing.

"I am very optimistic about the success of the new branch. We are one of the most profitable computer dealers due to our commitment to customer satisfaction," said Cheryl.

#### DISCOUNT POLICY FOR WASHINGTON APPLE PI MEMBERS

CLINTON COMPUTER offers Washington Apple PI members a 25% DISCOUNT OFF THE LIST PRICE on all non-allocated Apple brand peripherals and software and on AppleCare (no CPUs). For upgrades, the 25% discount applies only to the parts; the normal labor rate will be charged. Discount is available to persons who have been PI members for at least 3 months. Discount applies to cash and certified check purchases and cannot be applied retroactively. Add 1% for credit card and personal check purchases. If the product is not in stock, we can take your prepaid order. PI members need to present their cards up-front. No phone or mail orders, please. Discount cannot be used in combination with other promotions. Products on allocation from Apple are excluded from this offer. Clinton Computer reserves the right to change this policy at any time.

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Telecommunications System (formerly BBS) (301) 986-8085

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# EDITORIAL

Some early reflections on yet another MacWorld Expo... Perhaps a little smaller than Boston's, large crowds especially around the BMUG (formerly Berkeley Mac Users Group). Despite rumors to the contrary, Apple was there with a large booth and many Apple representatives. Most of the demonstrations at the Apple booth were given by 3rd party firm representatives: desktop communications, publishing, networking, education, etc. Letraset made a classic gaff. They placed a fancy 4-page spread in the January issue of *MacWorld* for LetraPage, and then announced at the show that they had relinquished rights to it to Boston Software Publishers. They announced that they had picked up

Manhattan Graphics' ReadySetGo 3.0. Apparently they want to ride what they consider to be a winner, but from preliminary reports from our owner members, there are many irksome problems with ReadySetGo. Sounds like a variant on hostile business takeovers.

If I were to be asked what I was most impressed with (didn't I hear a bunch of you asking?) it would be without hesitation two packages: Quark's XPress—a page composition package, and Adobe's Illustrator—a graphic arts package. CricketDraw to complement the pair, a large screen-equipped Mac++ more memory and faster 68000) with hard drive, a LaserWriter+, and away we go ... ☺



# PRESIDENT'S CORNER

by Tom Warrick

Are you saving your pennies? A year ago **John Sculley**, Chief Executive Officer of Apple Computer, Inc., promised that in the next year Apple would introduce more new products than in all the previous nine years of its history. He may not quite satisfy that boast, but if you stretch out the year a bit all will become clear soon enough. We are about to

see the steady trickle of new products introduced over the last year become a steady stream. The IIGs was the first of several new computer models Apple is introducing; it is now finally becoming available in quantity. The other new computers are in the Macintosh family, which has finally begun to get the acceptance in larger businesses and the government that it has had among the more than two thousand of us who own or use Macintoshes. These new models should expand Mac's beachhead into markets hitherto barred to products not flying the MS-DOS standard.

One of these markets, the *Department of the Army*, is the subject of an interesting campaign being waged by Apple against the MS-DOS-or-nothing standard that prevails in many government shops. (We have an interesting graph later on that shows the effect of this mentality on WAP members.) Many of you may have read about this in *Government Computer News*; long-time WAP member and recent Apple employee **Dennis Straighter** was quoted at length in describing the reasons why the Army (and, by implication, other departments and agencies) should give the Macintosh fair consideration. I have heard from others of you in the Federal Government who have expressed an interest in breaking the MS-DOS monopoly in order to get the ease-of-use, power and just-plain-fun of Macintosh computing, and if you are one of these people, you should check the GCN article. Also, if you are interested in joining a Special Interest Group for Federal Government workers, WAP has a group that is looking not only for members (all of our SIG's are always welcoming members!) but is also looking for people who can help a little in spreading the good word. If you are interested, give me a call or drop me a line on the Telecommunications System, or contact the office or **Gordon Stubbs**, the FedSIG Chairman.

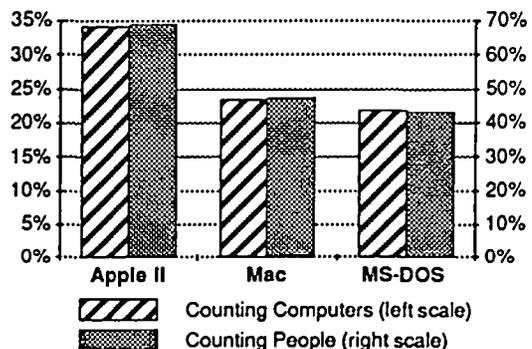
**Laser Tag:** I'm not referring to the game, of course, but to some exciting developments in the *printer* market. Apple is finally addressing the needs of those who thought the *LaserWriter* too expensive on the one hand or not powerful enough on the other. Apple, long recognized as a company on the leading edge of the microcomputer market, appears to

be making a good effort at maintaining its leadership in the desktop laser printer market. (As an aside, I would like to mention that I finally broke down and got a LaserWriter Plus for my office. I've decided after one day of using it that the modern-day equivalent of lighting cigars with \$20 bills must be using your LaserWriter to print your shopping list. But it looks *sooooo* nice!)

Interestingly, there is one market niche in which we haven't heard anything from Apple for a long time, and a niche in which there is clearly a role for a powerful, innovative market leader: compact disk read-only memory, commonly called "*CD-ROM*." There are a number of small vendors already out there, and some of the world's giants waiting in the wings. But just as Apple took the Sony 3.5-inch drive and made it the industry standard for less-than-five-inch drives (raise your hands out there if you remember 3.25-inch drives?), will Apple pick up someone else's CD-ROM product and give it wide prominence as a new standard peripheral for schools and businesses? I'm just whistling in the dark on this one, folks, but I would certainly save my pennies to be able to put, for example, my firm's entire law library on a half a dozen compact disks. (Actually, that may take more than *pennies!*)

A few interesting statistics someone told me about: 60% of all Apple II owners now have *AppleWorks*, which by many accounts is today's single best-selling software package. This fact is all the more amazing when you consider that originally no one wanted to write an integrated package for the Apple II family. Apple's software evangelists had to persuade someone to do it.

Another interesting statistic came from the member survey **Tom DeMay** did for us on the information we all filled in on the back of our election ballots. You may remember from Tom's original article in the October 1986 Journal that of all the computers owned or used by WAP members (including all brands and sizes), 34.3% were in the Apple II family (including the Apple III), 23.4% were in the Macintosh family (including the Lisa), and 22.0% were in the MS-DOS family. I thought that the results might change if instead of counting computers we counted people, i.e., how many WAP members owned or used Apple II's, how many owned or used Macs, and how many owned or used MS-DOS machines. But they don't. Taken this way, the numbers are:



Or, in words, 69.0% of our members have or use Apple II's, 47.5% have or use Macs and 43.4% have or use MS-DOS machines. The really interesting thing, of course, is not that it doesn't really matter whether you count computers or people, but the fact that we have almost as many MS-DOS users as Macintosh users. An interesting commentary on government and business procurement policies, if you ask me.

Let's take up some other club business. One question I occasionally hear is how we handle the mailing of Journals to those of us who aren't able to make it to the monthly meetings. The Journals come to the WAP office from the printer on the Friday before our monthly meeting. (The *Urbans* arrange things so that the deadline for authors to submit articles is as close to the monthly meeting date as possible, thereby increasing our ability to get the latest news.) A number are taken to the meeting and distributed to the 400-700 members who come. The remainder of the Journals, along with the mailing labels for those who weren't able to make it to the meeting, are delivered to the *Montgomery County Centers for the Handicapped, Inc.*, a sheltered workshop that provides useful jobs to some of the area's less fortunate citizens. Those people then place the labels on the Journals, bundle them for bulk mail in accordance with the Postal Service's regulations, and take them to the Post Office, where they are sent, eventually, to you.

Normally it takes the Centers for the Handicapped three or four days to get the Journals labelled and off to the Post Office, but I am quite pleased to report that in December, when we thought that the mail would be especially slow because of the holiday rush, the Centers were able to get all the Journals labelled and to the Post Office in *one* day. Quite an accomplishment for the more than 4,000 Journals they had to process! Their extra effort is greatly appreciated by us.

WAP's relationship with the Centers has been beneficial to both the Pi and the community. The Centers' services are much less expensive than commercial mailing services (saving the Pi several thousand dollars a year) and in most months are just as fast. The only difference in speed is that because many of the Centers' workers cannot arrange their own transportation, the Centers close when Montgomery County schools close because of snow or ice. As a result, heavy snows in the days immediately following a WAP meeting may affect our delivery schedule. This is a very rare occurrence, happening usually no more than once a year.

Also, using the Centers provides employment to a number of people who might otherwise be unemployed. When we can do a good deed like this at little or no inconvenience to ourselves, why not?

The other part of getting Journals to you is the Postal Service. You have two options here. Most Journals go third-class bulk mail, which is relatively inexpensive, although the delivery time ranges from very good (many people in Maryland got their January Journals within one or two days of the meeting) to...well...otherwise. If you don't want to wait for bulk mail, however, you can elect to have your Journal delivered first-class (overseas members can opt for air mail) for the cost of the extra postage. "Have it your way!" as the saying goes.

Every year or so we reassess the possibility of sending Journals via second-class mail. Second-class mail, which is

used by most general-circulation magazines and newspapers, is generally faster than third-class mail. However, we couldn't expect the speed of Time magazine, because weeklies get preferential handling—and the WAP Journal is a monthly publication. So the time advantage would be much less for us than we might want. (Perhaps we should become a weekly publication—do you suppose the editors will print this sentence?) And while the cost of mailing second class would be about the same as mailing third class, the administrative requirements for second-class mailing are far more onerous than third class. To give just two examples, we would have to account for the distribution and disposition of every single copy of the Journal every month, and retain our records for three years. Although for-profit businesses (and large non-profits) can afford to do this, the Pi cannot. Also, we would have to track the number of copies of the Journal sent to each postal zone (not zip code). I once made the mistake of looking up the second-class mailing rules in the Domestic Mail Manual in our library (three attorneys in my firm, including fellow WAP member *Tom McLaughlin*, do a good amount of postal rate work), and I can understand why several of our members who do mailings on a professional basis and even the Postal Service itself have all advised us that we should stick with third-class for mailing the Journal. As I said, we periodically reassess this, and we shall take advantage of second-class mail if things ever change. ☺

# Service

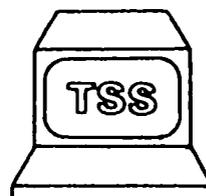
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**FOR SALE:** Mac Carrying Case, good condition, \$30; Sidekick + Phonetalk (versions 1.10B), \$30; Pinball Construction Set \$10; The Home Accountant, \$25. Prices are flexible. Call Peter at (202) 332-7261 (AM or PM).

**FOR SALE:** Wide Carriage Imagewriter II, \$395; 400K External Mac Drive, \$150. Bob Knell, (w) 692-8820/1; (h) 276-9311.

**FOR SALE:** 512K Macintosh with MacPaint and MacWriter for \$990. Call Mike at (301) 350-5129.

**FOR SALE:** Apple III - 256K, Disk III, Apple DMP w/Pkaso Interface, Joystick, Business BASIC w/Graphics, Apple Writer III, VisiCalc, Pascal, all manuals. \$1500. ORBO. (804) 596-2400 evenings.

**FOR SALE:** 400K Apple Macintosh Drive, excellent condition, \$100. John Willis, (w) 301-353-4095 or (h) 301-694-9410.

**FOR SALE:** 400K Apple Disk Drive for the Macintosh, \$85. Call Dan Adkins for information (h) 822-8052 or (w) 252-5990.

**FOR SALE:** 400K Apple Disk Drive for Mac, \$140. Brand new condition. Call Jim Lohman, (w) 202-767-5433 or (h) 202-372-6240.

**FOR SALE:** Apple IIe, Monitor III, 2 drives, FX-80 printer, modem, mouse. Plenty of software including AppleWorks. \$1100 or best offer. Call Walker, (703) 533-0457.

**FOR SALE:** Two 400K disk drives, regular Mac keyboard, best offer. Call Cynthia (301) 565-3951, evenings.

**FOR SALE:** Dollars and Sense by Monogram for the IIc, used only once, \$60; Apple Monitor and stand for the IIc, good condition. Best offer over \$100. Call Jim (703) 525-3665. ☺

## JOB MART

**HELP WANTED:** Part-time programmer(s) with experience in Applesoft BASIC programming needed by psychologists developing rehabilitation "games" for learning disabled individuals. You must have your own Apple II. Call Michael W. Mills, 484-0808 or 295-2475.

**HELP WANTED:** Washington Apple Pi has a part-time position open—answering phones, processing requests, serving members, some routine office work and being a general "person-Friday". Some computer experience preferable. 22-25 hours per week, 10-2:30 daily plus occasional evening or Saturday afternoon. \$6.50/hr. Informal, congenial, non-smoking atmosphere. Call Gena at 654-8060 between 10 and 2:30 M-F. ☺

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**FOR SALE:** Apple II+, 48K, 2DD, Apple III Monitor, Hayes Modem, Orange Micro Grappler Card, software, all manuals, receipts. Call Michael Logan (703) 684-0721, leave message.

**FOR SALE:** Panasonic RS232C Adaptor (Serial to Parallel); Mercury 1200 Intelligent Modem, \$100; Apple IIc Modem Cable. Call Deborah, 667-2618, evenings.

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## 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:

February 28	- Apple II: AppleWorks
	- Mac: Accounting Packages
March 28	- Apple II: Pinpoint
	- Mac: Add-on Products

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

# SIGNEWS

\* February 1987 \*

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the Chamber of Commerce Bldg., 1615 H Street NW, DC. The next meeting will be on February 25. See their news elsewhere in this issue.

**AppleWorks SIG** offers two meeting options: 8:00 AM before the regular meeting and 12 Noon after the Apple II Q&A session. Attend either or both.

**DisabledSIG** - For information call Jay Thal at 344-3649.

**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 February 4. See their news elsewhere in this issue.

**EdSIG** (the education special interest group) meets on the 4th Thursday of the month at 7:30 PM at the office. The next meeting will be on February 26.

**Fed(eral)SIG** - Call Gordon Stubbs (703) 750-0224 for meeting details.

**GameSIG** meets on the first Thursday of each month at the office, 7:30 PM. The next meeting will be on February 5. See their news elsewhere in this issue.

**MusicSIG** meets on the 2nd Saturday of each month at 1:30 PM. See their news elsewhere in this issue.

**PIG**, the Pascal Interest Group, meets on the third Thursday of each month at the office, 8:00 PM. New and prospective users are welcome. The next meeting will be on February 19.

**PI-SIG** meets on the first Monday night of each month at the office, 7:30 PM. See their news elsewhere in this issue.

**SigMac Programmers** meet on the 1st Wednesday of each month at 7:30 PM at the office. The next meeting will be on February 4.

**StockSIG** meetings are on the second Thursday of each month at the office, 8:00 PM. The next meeting will be on February 12. See their news elsewhere in this issue.

**Telecom SIG** is being reorganized. Watch the Journal for news. ☺

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 PI-SIG 7:30 PM Office	3 Apple// Beginning Tutorial #1 7:30-9:00PM Office	4Mac Pro- grmr.-7:30 Office; dPub SIG 7:30 PEPCO	5 GameSIG 7:30 PM Office	6	7
8	9 Deadline for Journal Articles	10 Apple// Beginning Tutorial #2 7:30-9:00PM Office	11 Executive Board 7:30 PM Office	12 StockSIG 8:00 PM Office	Sat. 14 --> Fred. Slice Apple II 9:30 AM Fred. Libr.	14 Annapolis Slice 10 AM Anne Arun. Comm. Coll.
15	16 Holiday Off. Closed Mac Beginn. Tutorial #1 7-10PM Off.	17 Apple// Beginning Tutorial #3 7:30-9:00PM Office	18	19 Pascal SIG 8:00 PM Office	20	21 ReadySetGo Tutorial 10:00 AM Office
22	23 Mac Beginn. Tutorial #2 7-10 PM Office	24StockSIG Mut.Fund Gr 8PM-Office; Fred.Mac 7:30 MRIID	25 Apple /// 7:30 PM Ch. of Com. DC	26 EDSIG 7:30 PM Office	27	28 WAP Meeting 9:00 AM USUHS

\* March 1987 \*

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 PI-SIG 7:30 PM Office	3 Apple// Beginning Tutorial #1 7:30-9:00PM Office	4Mac Pro- grmr.-7:30 Office; dPub SIG 7:30 PEPCO	5 GameSIG 7:30 PM Office	6	7 Intro. Applesoft Tutorial 9:00 AM Office
8 --> Deadline for Journal Articles is Mon. Mar 9	9 Mac Beginn. Tutorial #1 7-10 PM Office	10 Apple// Beginning Tutorial #2 7:30-9:00PM Office	11 Executive Board 7:30 PM Office	12 StockSIG 8:00 PM Office	Sat.13 --> Fred. Slice Apple-9:30; Annapolis Slice 10AM	14 Inter. AS Tutr. 9AM-Office; SuperCalc3a 12:30-Off.
15	16 Mac Beginn. Tutorial #2 7-10 PM Office	17 Apple// Beginning Tutorial #3 7:30-9:00PM Office	18	19 Pascal SIG 8:00 PM Office	20	21 Music Softwre-Mac Tutorial 10:00 AM Office
22	23 Mac Beginn. Tutorial #1 7-10 PM Office	24 Fred. Slice Mac SIG 7:30 PM MRIID	25 Apple /// 7:30 PM Ch. Of Com. DC	26 EDSIG 7:30 PM Office	27	28 WAP Meeting 9:00 AM USUHS
29	30 Mac Beginn. Tutorial #2 7-10 PM Office	31				

# WAP HOTLINE

For Use by WAP Members Only

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

<b>General - Apple //</b>	John Day (301) 621-7543	<b>Hard Disks</b>	Tom Vier (BBS) (301) 986-8085
	Dave Harvey (703) 578-4621	Corvus & Omninet	Leon Raesly (301) 439-1799
	Robert Martin (301) 498-6074	Corvus	Jaxon Brown (301) 350-3283
		Sider	Otis Greever (615) 638-1525
<b>Accounting Packages</b>		<b>IBM</b>	Ray Hobbs (7:30-10) (301) 490-7484
Accountant(Dec.Sup.)	Mark Pankin (703) 524-0937		Leon Raesly (301) 439-1799
BPI Programs	Jaxon Brown (301) 350-3283	<b>Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)</b>	
	Otis Greever (615) 638-1525	A	Louis Biggie (301) 967-3977
<b>Home Accountant</b>	Leon Raesly (301) 439-1799	A,I	Peter Combes (301) 251-6369
Howardsoft (Tax)	Leon Raesly (301) 439-1799	A	Jeff Dillon (301) 422-6458
	Otis Greever (615) 638-1525	A	Richard Langston (301) 869-7466
<b>APPLE SSC</b>	Bernie Benson (301) 951-5294	A	Leon Raesly (301) 439-1799
Apple TechNotes	Joe Chelena (703) 978-1816	A,I,M	Richard Untied (609) 596-8816
AppleWorks	Ken DeVito (703) 960-0787	A,I,M	John Love (703) 569-2294
<b>Communications Packages and Modems-Telecom.</b>		M	Ray Hobbs (7:30-10) (301) 490-7484
Anchor Mark 12	Jeremy Parker (301) 229-2578	P	Michael Hartman (301) 445-1583
Apple Inc. Modem	John Day (301) 621-7543	Forth	Bruce Field (301) 340-7038
ASCII Express	Dave Harvey (703) 578-4621	MS Basic	Ray Hobbs(7:30-10) (301) 490-7484
BIZCOMP Modem	Jeremy Parker (301) 229-2578	Math/OR Applns.	Mark Pankin (703) 524-0937
Hayes Smartmodem	Bernie Benson (301) 951-5294	Monitor, RGB	John Day (301) 621-7543
Smartcom I	Harmon Prichard (301) 972-4667	Music Systems	Ray Hobbs(7:30-10) (301) 490-7484
XTALK CP/M Comm.	Bernie Benson (301) 951-5294	Operating Systems	
<b>Computers, Specific</b>		Apple DOS	John Love (703) 569-2294
Apple //c	John Day (301) 621-7543		Adam Robie (301) 460-6537
Franklin&Laser128	Doug Trueman (417) 679-3526	<b>CP/M</b>	Richard Untied (609) 596-8816
LISA/Mac XL	John Day (301) 621-7543		Ray Hobbs (7:30-10) (301) 490-7484
<b>Macintosh:</b>		<b>MS-DOS</b>	Leon Raesly (301) 439-1799
General	Michael Yourshaw (703) 534-2077	ProDOS	Ray Hobbs (7:30-10) (301) 490-7484
	Terry Monks (703) 471-4610		Leon Raesly (301) 439-1799
	Donald Schmitt (717) 334-3265	<b>Printers</b>	Walt Francis (202) 966-5742
<b>Desktop Pub/Graphics</b>	Jay Rohr (301) 655-0875	General	Leon Raesly (301) 439-1799
Excel	David Morganstein (301) 972-4263	Apple Color Plotter	John Day (301) 621-7543
	Mark Pankin (703) 524-0937	Apple Daisy Wheel	John Day (301) 621-7543
	Jim Graham (703) 643-1848	IDS 460	Jeff Stetekluh (703) 979-8249
<b>Helix</b>	Jim Berry (703) 662-0640	Imagewriter	John Day (301) 621-7543
	Harvey Levine (301) 299-9380	MX-80	Jeff Dillon (301) 662-2070
<b>Inside Mac</b>	Jon Hardis (301) 330-1422	Okidata	Michael Proffitt (301) 874-2270
MacDraw	Tom Berilla (301) 434-3256		Dan Robrish (301) 530-4202
	Tom Parrish (301) 654-8784	<b>PrintShop/Newsroom</b>	
<b>MacLion (DBMS)</b>	Mark Miani (202) 333-0098	Spreadsheets	Leon Raesly (301) 439-1799
MacProject	Jay Lucas (703) 751-3332		Walt Francis (202) 966-5742
MacTerminal	Jon Hardis (301) 330-1422	Lotus 1-2-3	Walt Francis (202) 966-5742
MS-BASIC & MS-File	John Love (703) 569-2294		Ray Hobbs(7:30-10) (301) 490-7484
Magic	Joyce C. Little (301) 321-2989	VisiCalc	Walt Francis (202) 966-5742
Multiplan	John Boblitz (301) 356-9384	Sprdsht. 2.0(MagicCalc)	Leon Raesly (301) 439-1799
	John Love (703) 569-2294	SuperCalc Ver. 2.0	Leon Raesly (301) 430-1799
	Walt Francis (202) 966-5742		Terry Prudden (301) 933-3065
<b>OverVue</b>	J.T.(Tom) DeMay Jr. (301) 779-4632	<b>Stat. Packages</b>	David Morganstein (301) 972-4263
	Tom Parrish (301) 654-8784	Stock Market	Robert Wood (703) 893-9591
<b>Programming</b>	Michael Yourshaw (703) 534-2077	Time-Sharing	Dave Harvey (703) 578-5621
ReadySetGo	Jim Graham (703) 643-1848	Word Processors	Walt Francis (202) 966-5742
	Marty Milrod (301) 464-2154	Apple Writer II	Dianne Lorenz (301) 530-7881
<b>Spreadsheets</b>	David Morganstein (301) 972-4263		Leon Raesly (301) 439-1799
Spreadsheets&Graphics	Bob Pulgino (202) 797-0879	<b>Gutenberg</b>	Harris Silverstone (301) 435-3582
Sidekick	Ray Hobbs(7:30-10) (301) 490-7484	Gutenberg & Jr.	Neil Muncy Can. (416) 298-3964
ThinkTank	Jim Graham (703) 643-1848	Letter & Simply Perfect	Leon Raesly (301) 439-1799
	Tom Parrish (301) 654-8784	Magic Window and II	Joyce C. Little (301) 321-2989
	Marty Milrod (301) 464-2154	Apple PIE	Jim Graham (703) 643-1848
<b>Word</b>		ScreenWriter II	Peter Combes (301) 251-6369
<b>Data Bases</b>			Gene Carter (202) 363-2342
dBase II	Paul Bublitz (301) 261-4124	<b>Word Handler</b>	Jon Vaupel (301) 593-3316
	John Staples (703) 255-6955	Word Perfect	James Edwards (301) 585-3002
<b>dBase II &amp; III</b>	Ray Hobbs(7:30-10) (301) 490-7484		Henry Donahoe (202) 298-9107
	Jim Kellock (day) (301) 986-9522	<b>Word Star</b>	Leon Raesly (301) 439-1799
	Leon Raesly (301) 460-0754		Dana Riel (301) 350-3283
<b>Data Perfect</b>	Leon Raesly (301) 439-1799		
PFS	Bill Etue (703) 620-2103		
	Ginny Spevak (202) 362-3887		
<b>Q-Pro-4</b>	John Staples (703) 255-6955		
<b>Games - Apple //</b>	Charles Don Hall (301) 864-2715		
<b>Games - Mac</b>	Ron Wartow (301) 654-4439		

\* Calls until midnight are ok.

Please Note: Thanks to Nancy Seferian, we have been able to update our Hotline. If we have made any errors in posting her changes, or if you have any further additions or deletions, please call the office.

# BYLAWS CHANGES

Pursuant to Article XV of the bylaws of Washington Apple Pi, Ltd., notice is given of the following bylaws changes, which were both approved unanimously at the December 10, 1986 Board of Directors meeting. *New material is shown in bold italics; material deleted is underscored.*

The first bylaws change was to correct the provision regarding who can sign checks. First, this provision of the bylaws had not been changed to take account of the fact that WAP now has two Vice Presidents. In addition, under the bylaws prior to their amendment, WAP would have been unable to pay its bills in the event that the Treasurer and the designated office staff member (presently Gena Urban) were both unavailable to sign checks. As amended, the bylaws now also permit the President and one of the Vice Presidents to sign checks jointly, giving WAP a third option in the event that both the Treasurer and the designated office staff member are not available.

## AMENDMENT TO ARTICLE XII, FISCAL CONTROL

**SECTION 1. DISBURSEMENTS.** Disbursements over \$25.00 shall be made only by check. Any disbursement over \$5.00 shall be supported by voucher or receipt. All checks, drafts notes and evidence of indebtedness of the Corporation shall be signed by the Treasurer and either the President or *one of the Vice Presidents.* However, *checks in an amount not to exceed \$6,000 may be signed by either the Treasurer or by both the President and one of the Vice Presidents.* The Director of Group Purchases shall have authority to sign checks in an amount not to exceed \$500.00, and the Treasurer shall have authority

# 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.

to sign checks in an amount not to exceed \$6,000.00. Designated staff shall have the authority to sign checks in an amount not to exceed \$6,000.00 from an imprest fund established by the Treasurer or from such other accounts as the Board of Directors may by resolution determine. [Amended April 1983, June 1983, January 1984 and October 1986.]

The Board also approved a change in the bylaws that changes a provision that previously said that in the event a person was entitled by election or appointment to more than one position on the Board of Directors (as has happened on several occasions), the person is entitled to only one vote and the other position remains vacant. This can leave the Board of Directors with an even number of members. The amendment allows (but does not require) the "empty" seat on the Board to be filled using the procedures already in place for filling vacancies on the Board.

## AMENDMENT TO THE LAST SENTENCE OF ARTICLE VII, SECTION 2:

If an individual is entitled to serve on the Board of Directors by virtue of election or appointment to more than one position, then such individual shall be entitled to only one vote and the second one Director position shall remain be declared vacant. [Amended April 1984.]

## AMENDMENT TO ARTICLE VII, SECTION 5:

**SECTION 5. VACANCIES.** Upon the resignation or removal of a Director-at-Large, *that Director position shall be declared vacant.* [The Board of Directors may, by majority vote, appoint a member as *Director-at-Large* to fill any vacant Director position. *The Director-at-Large so appointed shall serve for the remainder of the Director's term of the Director he or she replaced.*]

ALL ASSEMBLED & TESTED WITH ONE YEAR WARRANTY			
<b>DISK DRIVE (HALF HEIGHT)</b>		<b>64K/80 COL. BOARD</b>	
<ul style="list-style-type: none"> <li>• Super Quiet Drive by TECMAR</li> <li>• For IIx/IIc/IIk (specify)</li> <li>• Color Matches Apple</li> </ul>	<b>\$129.00</b>	<ul style="list-style-type: none"> <li>• Expands Apple IIc to 128K</li> <li>• Software Selectable 40/80 Columns</li> <li>• 100% Replacement for Apple Extended 80 Column Card</li> </ul>	<b>\$39.00</b>
<b>128K RAM BOARD</b>		<b>256K/80 COL. BOARD</b>	
<ul style="list-style-type: none"> <li>• Expands IIc 64K to 128K</li> <li>• Saturn (Titan) Software Compatible</li> <li>• Combine with PLUSWORKS XM and Expand Your APPLEWORKS DESKTOP to 135K on Your Apple or Franklin</li> </ul>	<ul style="list-style-type: none"> <li>Above BD w/o memory <b>\$65</b></li> <li>PLUSWORKS XM Software <b>\$39</b></li> <li>128K Bareboard Ltd. Quantity <b>\$10</b></li> </ul>	<b>\$89.00</b>	<ul style="list-style-type: none"> <li>• 256K Expandable to 1.0 Megabytes!</li> <li>• Software Selective 40/80 Columns</li> <li>• 100% Extended 80 Col. Card Compatible</li> <li>• FREE Software Expands APPLEWORKS DESKTOP to 252K (1014K with 1.0 MEG)</li> </ul>
<b>SUPER SERIAL BOARD</b>		<b>80 COLUMN BOARD</b>	
<ul style="list-style-type: none"> <li>• IIc/IIc/IIe</li> <li>• Similar To Apple's Super Serial Card</li> <li>• 50 19,200 Baud Selectable</li> <li>• Communication &amp; Terminal Use</li> </ul>	<b>\$49.00</b>	<ul style="list-style-type: none"> <li>• IIc/IIc</li> <li>• Similar To Videx Videoterm</li> <li>• Upper &amp; Lower Case Generation</li> <li>• Inverse Video</li> </ul>	<b>\$49.00</b>
RS 232 CABLE 10' MALE MALE All 25 Lines Connected	<b>\$12.95</b>	40/80 COLUMN SOFTSWITCH For Above Board	<b>\$14.95</b>
<b>Z80 CP/M BOARD</b>		<b>SUPER COOLING FAN</b>	
<ul style="list-style-type: none"> <li>• IIc/IIc/IIe</li> <li>• A Low Cost Microsoft Compatible CP/M Board</li> <li>• Supports 48K And 64K Apples</li> <li>• Turbo Pascal Compatible</li> </ul>	<b>\$39.00</b>	<ul style="list-style-type: none"> <li>• Slides on Side of IIc/IIc. Color Matches Apple</li> <li>• Power Switch Controls AC to Computer &amp; Dual Rear 3 Prong AC Outlets</li> </ul>	<b>\$29.95</b>
<b>JOYSTICK III</b>		<b>IIc NUMERIC KEYPAD</b>	
<ul style="list-style-type: none"> <li>• Similar to HAYES MACH III</li> <li>• Large Fire Button on Stick</li> <li>• Selectable Self Center &amp; Non Self Center</li> </ul>	<b>\$24.95</b>	<ul style="list-style-type: none"> <li>• 16 Keys Total</li> <li>• 0.9 and Decimal Keys</li> <li>• ., /, * and Return Keys</li> </ul>	<b>\$39.00</b>
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# ON THE TRAIL OF THE APPLE ///

by David Ottalini, /// SIG Co-Chairman

## FIRST OFF

If you missed the December Garage Sale, you missed out on a great chance to buy some Apple /// software and hardware. A number of your SIG members all threw in together to set up a sales area (it's amazing what one can do with chairs these days) and managed to sell a number of software packages to interested /// members.

These sales never seem to come soon enough, so write down on your calendar that the next one is the fourth Saturday in June. Al Lambert and I were able to pick up /// ProFile controller cards for \$25 each (to go along with the 5 Meg ProFiles I bought for \$90 each at the recent Rasmus auction)! And there was an excellent array of // software that will run under your regular 48K emulation mode too. Unlike last June, there were no ///s for sale, but some of our SIG members managed to buy printers and other peripherals at very good prices.

## A NEW CO-CHAIRMAN

I'd like to announce that /// SIG member Tom Bartkiewicz has agreed to become a Co-Chairman of our Special Interest Group. Tom is a Software Engineer with Engineering Research Associates in Vienna, Virginia and a real Pascal Wiz. You may remember he did an article a few months back reviewing the 800K UniDrive for the /// and wrote a Pascal program designed to make use of Apollo Software's MacStuff Intrinsic Unit (he has a review of that in the works too). It's great to have Tom on board and I hope you'll all welcome him at our next /// SIG Meeting.

By the way, Tom comes in at a particularly good time, since my wife is expecting next month and our hospital decided to hold birthing classes on Wednesday nights! I'm really looking forward to a new Apple ///er coming into the world (but don't worry, there are no plans to name the baby Sara if it's a girl!).

## PHASE /// CONFERENCE UPDATE

The Third Apple Users Group (TAU) is starting to send out a little more information about the Phase /// Conference you've been hearing about. The dates have now been set for October 1-3 1987 at the Hyatt Regency Woodfield, about 15 minutes by bus from Chicago's O'Hare International Airport.

Seminars are being planned for Friday, Saturday and Sunday, with a limited attendance /// Forever luncheon on Saturday and a "Big Banquet" with "major well-known speakers" set for Saturday night. There will be an exhibition room as well. Early registration with big discounts should have been announced by the time you read this and I will pass that information along to you via the WAP TCS and in the Journal. Room rates, however, are out and will be only \$57 per night single or double. That is an excellent price for a Chicago-area hotel.

Indications now are that the conference will include a wide range of topics with appeal to novice though advanced users and people interested in all types of software. TAU says it has promises from almost all of the well-known names in the /// community to attend and take an active part in the

conference.

I am definitely planning to go and would be interested in working out some sort of arrangements with other /// SIG members, either to fly as a group or drive if necessary. Let me know if you're interested. There may never be another conference like this in the future, and the chance to meet and talk with other members of the /// community from all over the country makes this a must-attend event. If you'd like more information, write to: Randall Jackson, Phase /// Conference Chairman, 1511 North Bell, Chicago, IL 60662.

## OUR NEWEST MEMBER

Is none other than Dr. Al Bloom, who heads up Institutional Research at Virginia Tech in Blacksburg, Virginia. Dr. Bloom is well-known around the /// community, having written a number of articles over the years as well as dabbling a bit as a programmer (his latest offering is a calendar program offered though TAU, in fact).

In a recent letter, which I hope he won't mind me relating here, Dr. Bloom mentioned that his wife Leslye, a //e computer graphics artist, actually helped him decide to join WAP. He says she has made presentations to art teachers around the country, "showing them how to get the computer from the math department and what to do with it even without much of a budget."

Best of all, Dr. Bloom has offered to provide the SIG with public domain software and perhaps an article or two. I will also make an effort to get him for an upcoming program if the dates and times can be worked out. Dr. Bloom and his wife are great additions to our SIG and to WAP and we welcome them.

## OTHER CLUB NEWS

It seems the Apple THREE Group International Club, based in Norfolk Virginia has decided to continue despite a poor year-end response to renewals. ATGI is run single-handedly by Joseph Dobrowolski and features the largest, and least expensive, public domain library around. His newsletter, News and Views, also strives to provide as much information as possible for the /// community. We have some of ATGI's newsletters in the WAP library.

And the Apple THREE Users Group of Colorado recently sent the SIG a letter indicating it will no longer be publishing a newsletter. Meetings will continue, but President Tom Glover says putting out the newsletter was getting to be too much for one person to do.

## MORE VENDORS

I wanted to mention another local vendor who holds liquidation sales of software and some hardware. The Computer Place is located in the Potomac Valley Center in Gaithersburg. Manager Deh-Wei Tu (Andy to his friends) has been holding sales on weekends the past few months (ads in the Post classifieds under Computers) and does have a decent selection of Apple /// software, as well as an excellent selection of // and IBM programs. Some Mac software is also on the shelves. Many of the programs I saw are brand new and offered at substantial savings. For more information you

contd.

can call The Computer Place at 301-330-6016. Andy was kind enough to lend me a huge Apple /// dealer's manual (a three ring binder full of information actually) so that I could copy it for the WAP Library. It should be available for you to look at by the time you read this.

Finally, I wanted to give you the address of one other vendor who is offering Apple /// hardware at decent prices. Pre-Owned Electronics advertised a 128K Apple /// and monitor for \$599 in the latest Computer Shopper. Their address is: P.O. Box 644, Lincoln MA. 01773. Phone number is 617-891-6851. I called and talked to "Charles" who said they have quite a bit of Apple /// hardware, including motherboards, memory cards, analog cards for the outboard disk drive and power supplies. They don't have a flyer you can write for. Best thing to do is call and see what's available.

#### THE ASKY ENVOY CARD

While reading the latest A+, I saw a short article about a new plug-in card for the // called the Envoy, which allows you to read and write data from IBM compatible drives with your Apple. The card looks as though it will fit into our ///s as well, since it is ProDOS (and thus SOS) compatible, and if so, is only a driver away from becoming available to us. This card is different from the soon-to-be-released Little Blue card, since Envoy will only read or write to IBM disks and does not contain a co-processor to let your Apple think it's an IBM.

Ryda Stuart, a spokeswoman for ASKY says it will support up to 4 IBM disk drives, including 3 1/2 inch and 5 1/4 inch, but that they need their own power supplies, since the Apple can not provide power to the card and drives as well. She also says ASKY will have a BBS available at the end of January to provide information and answer customers questions.

I understand that WAP's own Leon Raesly has one of the cards and is currently working with it for an upcoming review. Hopefully, we can work with him at some point to see if it will fit into the ///.

ASKY's new address is 770 Sycamore Dr., Milpitas, CA 95035 and their phone number is 408-247-5742.

#### AND MORE DONATIONS

My holiday project was setting up a /// system in Asheville, North Carolina for my wife's sister. I was able to purchase an Apple /// with monitor, outboard disk drive and Apple DMP printer with software for \$550 from a ///er on CompuServe (proving you can get great deals if you are patient and lucky, since the day I ordered, the prices went down considerably.)

The system also came with a second printer, an Apple Silentype, which has been donated to WAP for use with our Apple /// in the office. I

was also able to purchase a 5 MB ProFile hard disk for the /// at the Rasmus Auction, which I will donate to the club. But the machine does not currently operate and will probably have to be sent to Sun Systems for some work. If we can get it up and running, we'll put a lot of the software directly on the ProFile so that it can be used quickly and easily by all /// SIG members who are interested. (3)

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# Q & A

by Bruce F. Field and Robert C. Platt

A letter I received recently from Mel Holliday has some more information about losing data on track 0. For those of you joining this serial in the middle, a number of people have had problems with ProDOS trashing track 0. The problem has been reported extensively here and observed elsewhere. Some people have claimed the problem is due to bad Apple power supplies, and most recently Stephen Thomas reported that it is due to a bug in ProDOS. A patch program written by Stephen for ProDOS version 1.1.1 was published in Tom Weishaar's *Open Apple* that is supposed to solve the problem. Other people have reported that there are three versions of ProDOS labelled 1.1.1. The bug is supposedly corrected in the 18-Sep-84 version. However, Mel writes:

"I have been following the discussion in *Open Apple* (and Call -A.P.P.L.E) on losing data in track 0. Most have indicated it is ONLY in ProDOS that this happens. I disagree. I have lost data in DOS 3.3 and so have many other people that I work with. Some have used older Apple //c's as well as newer ones. I changed my power supply and have not lost any data since that time. I have advised my co-workers to do the same."

Thanks Mel. What can I add? We may have two problems here that produce similar symptoms, one caused by the ProDOS bug, and another unrelated one caused by bad or weak power supplies.

Q. I know it's not good to frequently turn on and off any computer, but what about the printer? If my Epson MX-80 won't be used again for maybe 30 minutes, should I leave it on or turn it off? What's the longest time it should be kept on?

A. Any piece of equipment that contains semiconductor chips probably benefits from being left on. One of the causes of failure are stresses generated from heating and cooling, within the chip, between the chip and the chip package, and between the chip package and the printed circuit board. If the device is properly designed so that it doesn't overheat I would recommend leaving it on for as long as you expect to use it, all day if desired. I turn my stuff off at night more to save electricity than anything else.

Heat and elevated temperatures are probably the worst enemies of semiconductor circuits. There is little you can do about this; chip temperatures are mostly a function of the design of the equipment. But, you can help by making sure that ventilation slots are not blocked by papers, books, or dust, that all fans are working, and there is sufficient space between equipment, walls, etc. for proper ventilation.

Q. Will damage occur to the computer if the hand-controllers or RF modulator are plugged-in or taken-out with the power on?

A. No, not directly from plugging them in, but you must have little itty-bitty hands (certainly much smaller than mine) if you can reach in the Apple and plug in the

controllers or the RF modulator without disturbing anything else. For example just wiggling the disk controller card with the power on could blow chips. If you have the type of controllers that plug in the back of the Apple //c, and you don't have to go inside, there is no problem.

RS232 devices like serial printers and modems can also be plugged-in and unplugged with the power on but this is not true of all devices. Be particularly careful with disk drive cables. On some Apple models the connectors are similar to the RS232 connectors and people think they too can be disconnected and connected with the power on. **DO NOT DISCONNECT OR CONNECT DISK DRIVES WITH THE POWER ON**, doing so will also certainly damage the disk drive, the controller card, or both.

Q. I hope to be getting a modem soon, but I only have a dial phone. What disadvantages are there to not have a Touch-Tone phone?

A. None. Any modems I know of, and any that follow the Hayes command language, can work with pulse-dial or Touch-Tone lines.

Q. I copied a disk on my Apple //c using either AppleWorks or the DOS 3.3 copy routine. The purpose of the copy was for backup. Since then my //c has not been able to read either the original or the copy. Clearly there is data on both because when I copy either the original or the 1st copy the procedure takes enough time, makes the sounds and displays the disk-in-use lights to indicate that a copy is being made. I have heard that there are programs that can recover lost data from disks or that there are people who know how to do this.

A. I wish I could give you an easy answer but there is no simple program that you can run to recover the information. First, AppleWorks uses the ProDOS operating system, so to copy a disk you should either do it from within AppleWorks or use the ProDOS System Utilities to copy a volume. The DOS 3.3 copy program will not copy the AppleWorks disk properly. Even if you did use the DOS 3.3 copy program there is no reason why the original disk should be damaged. Are all the files on the disk destroyed? Can you display a directory of the files on the disk? Possibly the files are okay but the directory information has been corrupted.

Boot your computer with the ProDOS System Utilities disk that came with your computer (or a copy of it) and exit to Applesoft. From the left bracket prompt (]) type "CAT" (without the quotes) and see if the file names are reasonable. Format a blank disk and use the file copy utility to try to copy the individual files to the newly formatted disk. Some or all of your information may be recovered this way. If this is not possible you can use a program that reads individual sectors on the disk, a so-called "Disk Zap" program, but you will also need contd.

extensive knowledge about the way ProDOS stores information on the disk. Skillman C. Kim Hunter wrote a good article, "Road Maps to Apple II Disks: DOS 3.3, CP/M, Pascal, and ProDOS", *Call -A.P.P.L.E., Vol. 8, No.2, February 1985*, that helps explain what goes where.

I know it sounds time consuming (and it's too late this time), but for really important files it is not too extreme to have an original and 2 backups. I spout this advice frequently, but I must admit that although I always make at least one backup I rarely make more than one. As you see, though, it is possible to destroy both the original and backup. Suppose there is something wrong with your program or computer that destroys the original data disk; you think you just can't read it. So you immediately stick in the backup which is also promptly destroyed. By this time warning flags should pop up in your head before you destroy your second backup.

Q. With Apple Writer //e, I created a glossary definition Control-O, A, RETURN to catalog a disk. The definition properly presents the files, but skips by the first 16 files and displays files 17-39. Is it possible to create a definition that will display the first 18 files so that the contents of the entire disk can be reviewed?

A. You appear to have stumbled on a small bug in Apple Writer //e. As you know your glossary definition first calls up the DOS command menu with the Control-O. The 'A' selects the catalog function, and the carriage return should be the response to the "Enter Slot, Drive (Example S6, D1) : " prompt. What appears to be happening is that an extra carriage return is being inserted so that the catalog listing does not pause after printing the first page of 18 files but skips right on to the next page. You have probably also discovered that if you leave off the carriage return the definition ends with you sitting at the "Enter Slot..." prompt. I played around with this a little bit, and (horrors!) even read the manual, but I couldn't find a way around the problem. The next best solution is to leave the carriage return off the glossary definition and manually press return in response to the "Enter Slot..." prompt.

For those readers who may be wondering how to insert carriage returns into a glossary definition, you simply type the right bracket (]) to represent the carriage return.

Q. I want to run AppleWorks using Plusworks on my Apple II. I have put the Autostart and Applesoft ROMS into the machine to convert it to an Apple II+, but I don't know how to solve the shift key problem. It's a Revision 1 motherboard, with the outrigger on the keyboard, and I don't know how to do the hardware mod. Can you advise?

A. Well, with a little careful soldering it's not that hard to do. Turn your Apple over and remove the ten screws around the outside of the bottom of the case. Carefully turn it back over and lift the case up and simultaneously disconnect the cable from the keyboard where it plugs into the motherboard. Look at the keyboard printed circuit board where the two shift keys are soldered to it. You should see two small solder blobs for each key, and a printed circuit trace connecting together one solder blob from each key. Solder a thin wire to the other contact on

either of the two keys, put the Apple back together, and stick the other end of the wire into pin 4 (pushbutton input 2) of the game I/O port. That's it. To test it, from Applesoft, type PRINT PEEK(49251) and press return. Hold down the shift key when you press return and the number printed should be less than 128. If you don't hold down the shift key the number printed should be 128 or greater. If you accidentally get the wrong side of the shift key nothing will be damaged, the mod just won't work; then try the other contact.

Q. I have been using the new mini-assembler and disassembler on the IIgs. It works like the one on the //, except that two bytes are generated for the break (BRK) instruction—even in 8 bit mode. Why?

A. The IIgs uses a 65816 instead of a 65C02 microprocessor chip, which is used on the //e and //c. These chips obey a given set of commands called an "instruction set." Even though the 8 bit mode of the 65816 is supposed to be exactly like the 65C02, it really is not. On the 6502, a BRK will increment the program counter by one, store information and branch to the address stored in \$FFFE and \$FFFF. This helps in debugging. However, in both the native and emulation modes of the 65816, a BRK will increment the program counter by two, store information and then branch to a service routine. This allows you to place any code byte that you wish in the BRK instruction to assist you in your debugging efforts.

Q. Apple is now selling several different types of 3.5" disk drives. Which can be used with each type of computer?

A. The "UniDisk 3.5" was designed to work with the Apple II, //e, and //c. It included its own microprocessor. However, Apple took a different approach with the Macintosh's 800K external disk drive. That drive does not have its own microprocessor and all of its logical operations are handled in the main computer. The new drive is the "Apple 3.5" and is very similar to the "dumb" Mac external drive. As a result, the Apple 3.5 will work with the //gs and the Mac, but will not attach to the control cards that were designed for the UniDisk 3.5. You can also use a UniDisk 3.5 on a //gs.

You should note that the UniDisk 3.5 and Apple 3.5 disks may respond differently to various copy-protection schemes, and you should make sure to buy the correct control card for use with your disk drive. Also note that early //c's require an upgrade to work correctly with the UniDisk 3.5 or Apple's new memory card.

Q. Is Apple producing a new version of the motherboard for the //e?

A. Yes. The big difference to the user is that the famous "shift key" modification will be hard-wired into the machine. This means that all programs will be able to sense whether the shift key is pressed by sensing a game I/O switch. The new board will be less expensive to manufacture because it will use fewer but larger RAM chips to hold the 64K of RAM. The ROM remains unchanged, but will reside in one big chip instead of two.

contd. on pg 14

# APPLEWORKS SIG NEWS

by Ken DeVito

Because of the semi-annual Garage Sale last month there were no AppleWorks SIG Meetings (which are normally held at 8:00 AM and Noon on the Saturdays of the regular WAP meetings) and therefore no minutes to summarize for this article. We have therefore decided to download a number of Library files from the AppleWorks Bulletin Board to give the readers a sampling of what is contained within the Library Files and also provide some useful information for our AppleWorks users.

The number for the WAP Telecommunications System is 986-8085. The AppleWorks Board can be found on Conference 2, Board 2. Your comments are welcome and appreciated.

## 03 APPLEWORKS PATCH 12/22/86

The following program is from the November issue of OPEN APPLE. This program will modify AppleWorks so that it "doesn't stop on the way to the desktop during the startup sequence. These patches will be welcomed by those who have a clock card or who boot AppleWorks off a 3.5" drive or a hard disk."

```
10 FIS = "APLWORKS.SYSTEM" : REM USE
    FULL PATHNAME
20 PRINT CHR$(4);"BLOAD";FIS;"TSYS,AS$2000"
30 A = PEEK(8250)
40 V = (A=202) + 2*(A=169) + 3*(A=180) :
    REM VERSION
50 IF NOT V THEN PRINT "Unrecognized
    version of AppleWorks" : END
60 PRINT "Patching AppleWorks Version 1.1";V
70 IF V=1 THEN A1=13139 : A2=13522 : REM V1.1
80 IF V=2 THEN A1=13135 : A2=13518 : REM V1.2
90 IF V=3 THEN A1=13193 : A2=13855 : REM V1.3
100 POKE A1,44 : REM NO SPACEBAR
    FOR APPLEWORKS
110 POKE A2,208 : POKE A2+1,19 :
    REM NO RETURN FOR DATE
120 PRINT CHR$(4);"BSAVE";FIS;"TSYS,AS$2000"
```

Downloaded from Washington Apple Pi's Telecommunications System AppleWorks Library File #3.

## 08 AW-PAGE NUMBERING 09/14/86

Here's the scoop from Tom Weishaar's OPEN APPLE, (Feb. issue):

1. Enter the Printer Options Menu (OA-O)
2. Select Page Header (HE) or Page Footer (FO)
3. Select Page Number (PN) and enter the starting page number--you can skip this step if the document starts with page 1.
4. Select Print Page Number (PP)
5. Exit Printer Options Menu (ESC)

Here are some additional notes--when you do step 2, the message "-----Page Header" or "-----Page Footer" will appear on your screen. Whatever appears in the following line (you can type in anything you like) will print at the top (or

bottom) of each FOLLOWING page of your document.

The PN command in step 3 changes the number of the page the command appears in. For everything to work correctly, obviously, the PN command must appear BEFORE the PP command on that page.

Step 4 puts a caret at the position the cursor was in when you pressed Open-Apple "O" (OA-O). Your page number will appear at this right-left position. You can also embed page numbers at any point within the text of a document with PP--even several times on the same page.

The advantage of using a header or footer is that the page number will then appear automatically on every page. If you embed the page number in text (that is, anywhere but in the line immediately following a page header or a page footer mark), you have to put it on every page manually.

Robert Erickson's APPLEWORKS: TIPS AND TECHNIQUES (on page 79) has an example of using the page numbering feature to create sequentially numbered invoices.

Downloaded from Washington Apple Pi's Telecommunications System AppleWorks Library File #8.

## 09 UPGRADE INFO 12/08/86

AppleWorks Version 2.0 Upgrade Program

An upgrade program for AppleWorks owners to obtain the new AppleWorks Version 2.0 is being offered for a limited time. Customers can upgrade their AppleWorks Version 1.3 disks, or any previous version of AppleWorks, from September 15, 1986 to April 30, 1987. All orders must be post-marked no later than April 30, 1987.

To order an upgrade, customers complete an AppleWorks Version 2.0 upgrade mailer (included in the your Apple dealer's September 15 dealer mailing). Customers are to send in their original AppleWorks program disk, the cover of their AppleWorks Reference Manual, and a check payable to Apple Computer, Inc. The charge is \$50 (\$15 for an Education 10 Pack). Send the mailer to: Apple Computer, Inc., AppleWorks Upgrade Program, Cupertino, CA.

Downloaded from Washington Apple Pi's Telecommunications System AppleWorks Library File #9.

Q & A contd. from pg 13

Q. What is the latest version of ProDOS?

A. ProDOS 1.2 which has a date of 6-SEP-86.

Q. Does ProDOS 1.2 have the same track 0 bug which was described in the December 1986 Q&A column?

A. Yes. *Open Apple* has modified the patch program to correct version 1.2. Change the program listing in Tom Vier's January 1987 WAP Journal article in the following three lines:

```
200 FOR 22723 TO 22732 rest of line the same
```

```
300 ADR=20996 rest of line the same
```

```
550 PRINT "This version of ProDOS not 1.2"
```

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# THE CLAN PRACTICAL ACCOUNTANT: A Review

by David Granite

I have been using an accounting program at home on my Apple ][+ to track expenses, contributions, and wages. My goal has been to present my accountant with a printed and sorted report of these transactions. I have been happy with the program I was using, but I wanted to look at another one in the field, which brought me to The CLAN Practical Accountant.

This program comes from Sir-Tech, the famous WIZARDRY company. There is no monster-killing in this software, however. I was hoping for some graphics showing our hero slaying the dread IRS dragon, but no such luck. The best I could hope for would be a happy ending in the quest for improving my fiscal well-being.

OK, no more game-playing analogies. The program has excellent documentation with a Tutorial, a Reference Guide, and a Question and Answer Guide. There's also a Beginner's Guide which explains accounting principles and terms for the non-accountant. The Tutorial is used in conjunction with a sample data disk to allow you to explore the program without harming your own data. The Reference Guide offers more complete information about specific capabilities of the program. For example, setting up automatic transactions (items like salary that occur every month at the same time) is covered in much broader detail than the small note it is given in the Tutorial, but the Tutorial information is really all that is needed to make the program work. Finally, the Question and Answer Guide was very helpful for specific problems, such as how to put in the opening balance for an account, how to enter salary withholding, how to enter stock transactions, etc. The documentation was excellent and written well enough for the accounting novice doing this review.

On opening the box, however, the first message you see is NOT to read the books, because the authors are confident that the program can be used without reading the documentation. This is a grand idea for someone like me who rushes into software without reading the accompanying literature. I want to get down and dirty right away and most documentation stinks, anyway. So I really did boot up the sample disk and really did try to use it without the docs, and the program was easy to use.

The CLAN Practical Accountant is a data base and report generating program. It is written in Pascal, which makes for a lot of module-loading from the disk, but it is fast in sorting and presenting the information. You can enter payments, receipts, and transfers (a transaction without actual receipt or payment, such as tax withholding from salary). These entries can be dated, given memoranda, and sorted by account for monthly report of assets, liabilities, income, and expenses. Accounts include checking under assets, car loan under liabilities, salary under income, and food under expenses, as well as many others in each category. These accounts can be added or altered to make a new listing according to the user's desires. The reports can be printed in an 80-column fashion or 132 column on any one of a large number of printer types.

Another major facility of this program is its reconciliation

module. You can use this to check the accuracy of bank and check book. I have not used this capability in other accounting programs because it seemed to be less trouble to do it manually, but it does seem to be easier in this program.

I liked this program; it does live up to its claim for ease of use. In addition, the documentation is clear and we all know how unusual that is. It ran on my 64K Apple ][+ and it printed on my NEC 7710 with super serial card. I plan on using it during the coming year. ☺

## APPLEWORKS TAX TEMPLATE: IRS 1986

by Paul Koskos

It's getting to be that time of year again, and the Pi will again have an AppleWorks Federal Tax template in the Disketia. More precisely, there will be two templates.

**MONSTER VERSION:** The first will be the monster template, using 90K of Desktop memory and requiring at least 128K of extended memory beyond the basic 64K that comes with the //e. It will include forms 1040 and 6251 as well as schedules A, B, C, D, E, G, SE, W, and an earned income table for both spouses. (Schedules C and SE are also duplicated for both spouses.)

All of these forms will be linked, where possible, so that entries in the income table, for example, will automatically be picked up in the appropriate places in 1040, 6251, etc. In addition, the appropriate tax will be calculated automatically from the tax schedules and entered where specified in Form 1040 and Schedule G.

**NON-MONSTER VERSION:** For those of you who have only a standard 64K extended 80-column card in your //e, you will have only 55K of desktop memory for AppleWorks, and will be unable to load the MONSTER template described above. Therefore, we have split the MONSTER in two. The first part requires 49K of Desktop, and contains Form 1040 and Schedules A, B, C, D, W, and SE. The second part requires 40K of Desktop, and contains Schedules E, G, and Form 6251. While the forms inside each part are linked, data from the second part, if used, will have to be manually entered into the first part.

And now the mandatory disclaimer. These templates are offered solely to assist you in the preparation and calculation of your taxes. We are not offering tax accounting service. You must check to see that you are using all the forms required by the IRS, and that you are entering the proper data. The templates should make the job easier for you, but do not relieve you of any responsibility for proper preparation of your return. ☺

# MAGIC SLATE: A Review

by David Kreisberg

It is difficult for a word processor to satisfy the requirements of a family or school. You would need software that is simple enough for children to use, yet containing the power and flexibility for more demanding applications. Often a compromise is the result, with either the adult or child left with a tool that is not really suited to the task. A product that offers a solution for the Apple II series is the Magic Slate word processor from Sunburst Communications which lists at \$99.95.

It's more expensive than some other school oriented word processors, but you are getting three different versions of the program for this price. It comes with two program disks, two back-up copies, and an extensive manual. One program disk contains 20 and 40 column versions and the other disk has an 80 column version. There is a similar structure to all three versions, with many additional features available when you move up to 80 columns. The program is copy protected, but you are permitted to transfer some program utilities to your data disk.

The 20 and 40 column versions are icon based. When you boot the disk, which is loaded entirely into memory, key words underneath indicate your choices of edit, load, print, new, save, delete, make or quit. Using arrow keys or typing the first letter of the key word highlights your choice. The 20 column version with its large type is ideally suited for the early elementary grades. The 40 column version displays characters in the size found in many elementary school word processors. An especially useful feature of the 40 column version is that you have a choice of eight typestyles including boldface, italics, and underline.

The 80 column version is menu driven and is a significant step up in terms of features, although the commands learned in the 20/40 column versions are the same. Some additional options include the ability to fix the date for a file, enter two files into memory (so you can toggle between them or see both on the screen using windows), and define function keys (up to 255 keystrokes for all defined keys at a time).

A two hundred page manual includes reproducible student handbooks for the 20 and 40 column versions, numerous writing activities, and a section on the special features of the 80 column version. In addition, a small spiral bound manual and handy reference card are provided.

Printing options provide a great deal of flexibility in terms of margins, spacing, etc. To accommodate the fancy typestyles, printing is usually done in the graphics mode which is relatively slow, but produces an attractive document. The text mode is faster, although the output is less distinctive.

There is a help menu to give on-line information on commands, which saves time when you need a quick reminder about features you don't often use. Students and teachers like this feature because they don't have to spend time hunting through a manual. A window appears on the screen giving help options, which when highlighted reveal a smaller window with specific information about selected commands.

A separate disk with additional typestyles and a font editor

is available for \$49.95. The typestyles can be loaded onto the program disks and choices will appear on the help menu.

Magic Slate is used in the middle school where I teach and has been a hit with students and teachers. Some teachers prefer the simplicity of the icon based 40 column version for their classes. Other classes with visually impaired students benefit from 20 and 40 column versions. Many classes work with 80 columns without delving into the more complex features. Teachers who have tried to learn how to use other word processors are amazed at how easy it is to master the basics of Magic Slate, and some have explored the program's more advanced capabilities. While this program may not offer all the features found in other sophisticated word processors, it's worth considering for families and schools who need software easy enough for elementary age children and advanced enough for high school students or adults. ☺

## ANNAPOLIS SLICE NEWS

by Claire Johnson

The Annapolis Slice of Washington Apple Pi met Saturday, December 13, 1986 at 10:00 AM in the Career Lecture Hall of the Anne Arundel Community College. An informal question and answer session and demonstrations of software for both the Mac and Apple II's were the order of the day. Highlights included information about *PC Pursuit*, an MCI type BBS available for \$25 initial fee and \$25/mo, giving access to 25 cities across the country. This is to be further explored as a topic for demonstration at future meeting ... *AppleWorks* was generally recommended as tool for running small businesses... Availability of communications packages for access to ASCII data from other computers was noted... *DB View Text* was discussed as a means of getting text of newspapers across the country... *Servant* was recommended and demonstrated as a downloading tool... A method was shared for printing stencils through the Imagewriter, allowing for incorporating original art work with text, preparing inexpensive newsletters and educational material, etc. (remove ribbon, fake out Imagewriter with a magnet at the forward left hand corner, being sure to secure the magnet with tape, to allow for circumvention of message for ribbon and cover to be intact, print document on paper to remove excess ink, print on stencil as though it were computer paper, clean Imagewriter by vacuuming excess wax and running computer paper through prior to re-installing ribbon).

The Annapolis Slice meets on the second Saturday of each month. The next meeting will be on Saturday February 14 at 10:00 AM in the Anne Arundel Community College Science Lecture Hall. We welcome visitors and potential new members. Call Jim Wint (301-544-5850) for information. ☺

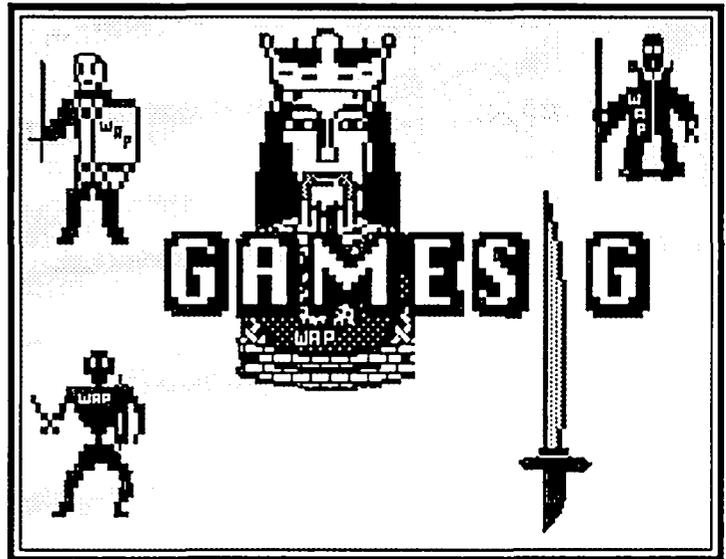
# GAMESIG NEWS

by Steven Payne

Sadly, since our January GameSIG meeting was bumped from New Year's Day to the 14th, the usual meeting report will have to wait until the next issue. The next regular meeting will be on Thursday, February 5th, at 7:30 P.M. in the WAP Office. Meanwhile, computer games were once again a highlight of the December Garage Sale, with many purchases from the tables of GameSIG regulars such as Charles Don Hall (who even received an offer for the Wizardry T-shirt he was wearing). Later that same day several members attended a party at the home of David Granite, where other guests—medical researchers from Johns Hopkins—were enticed into a challenging round of MICROBE, an older game from Synergistic in which your medical team is reduced to microscopic size and injected into a patient to battle his or her particular ailment (similar to "Fantastic Voyage" but without Raquel Welch).

Recently we received from SSI a copy of GEMSTONE HEALER (Apple II series with 64K, \$29.95 list), a follow-up to GEMSTONE WARRIOR; it will be reviewed in a future issue. At the moment, several of our fantasy/role-play enthusiasts are already engrossed in MIGHT AND MAGIC from New World Computing (Apple II series with 64K, \$54.95 list), described in the company's advertisements as having "more monsters, more spells, more speed, more individuality, more geography, more psychology and even more cartography than the best-selling fantasy game we all know the name of."

GameSIG contributions in this issue include reviews of F-15 STRIKE EAGLE and LORDS OF CONQUEST, as well as two articles on FLIGHT SIMULATOR II by GameSIG chairman Thomas Johnston. He also notes that SubLOGIC will shortly be releasing its Eastern Scenery disk (which includes Washington, DC), so we should soon know what happens if you try to land on the White House lawn.



part because some companies are still reluctant to send review copies to user groups. WAP members who want more information on current games may be interested to know that, besides the reviews in the regular computer magazines, there are periodicals dedicated more exclusively to electronic entertainment. COMPUTER GAMING WORLD (P.O. Box 4566, Anaheim, CA 92803) comes out 9 times a year, with \$19.95 for a year's subscription. QUESTBUSTERS (202 Elgin Court, Wayne, PA 19087) focuses on adventure and role-playing games, and cost \$15 for 12 issues; their notice appears on page 29 of the January 1987 WAP Journal.

Finally, in the "for what it's worth" department, just to show how far our favorite "special interest" has come in terms of respectability, the December 21st issue of NATIONAL CATHOLIC REGISTER, a fairly traditional Catholic newspaper, included (along with articles on Mother Teresa and the hierarchy) a glowing review of BALANCE OF POWER, as well as a lengthy interview with its creator, Chris Crawford. Further proof for doubting friends and coworkers that playing computer games is a serious and respectable occupation (and theologically sound, too!) (3)

## SIMULATING YOUR OWN AIRSTRIP IN FLIGHT SIMULATOR II

by Thomas Johnston

Did you ever want to mark a place of your own to take off and land from in FLIGHT SIMULATOR II (FS2)? Perhaps your favorite airport is not in the simulator. Maybe you want to mark your own airstrip behind your grandfather's farm on Long Island. Let's say that you sectioned off a landing strip in your grandfather's fields and marked a white line down the middle of it. It's not much, but you can see it from the air. Well, you can do that in FS2.

FS2 provides an ability to turn on a smoke trail. While flying in a loop you can turn on the "smoke", and FS2 draws a line in the air where you've been. You can then fly around and look at it. To mark your own airstrip all you have to do is draw a straight line on the ground with this "smoke" and—voila!—there is your white center line. You can use any and all navigational aids to find that place of your own: visual

sighting, your navigation radios with distance measuring equipment, aeronautical sectional charts, whatever. Try these coordinates: N-17066, E-20983, Alt-417, Heading-209.

Here is how to do it. Position yourself on the ground where you want your airstrip, facing in the direction you want your center line. Hit 'Q' and a menu for flight recording will appear. Choose 'D' to begin precision recording, then hit ESCape. Now apply full throttle and taxi down your airstrip. (Are you pouring a can of white paint out the window as you go?) I usually taxi until I reach 100 knots airspeed; just remember you don't want to leave the ground. Now without bothering to stop, hit 'Q' again. Choose 'B' to display your line. Hit ESCape.

Now for fun, go ahead and take off. Out the rear of your plane as you ascend you can see your new centerline. The line  
contd. on pg 20

# THE ABANDONED AIRSTRIP AT DUVALL: A Flight Simulator Adventure

by Thomas Johnston

On the Seattle Aeronautical Sectional Chart, east of Seattle on the Snoqualmie River, is the symbol for an abandoned airstrip, a "ghost" airstrip if you would. This is the perfect place to demonstrate my idea for creating your own airstrip (see my accompanying article, "Simulating Your Own Airstrip in FLIGHT SIMULATOR II").

Hopefully you know how to use your FLIGHT SIMULATOR II editor. If you don't, read your manuals or consult Charles Gulick's 40 GREAT ADVENTURES FOR YOUR FLIGHT SIMULATOR books. Buy the books anyway, they're great.

Before we start, we're going to sneak out before dawn and paint a new centerline on that abandoned runway. Enter the following into your editor:

North - 21410	Time:
East - 6724	Hours - 5
Altitude - 489	Min. - 0
Heading - 230	Season - 2, Spring

Hit 'S' to save this setting. Remember to reset after the first time you exit the editor because it usually doesn't quite reach the right heading the first time. Now hit 'Q' to enter the flight recording menu. Choose 'D' for precision recording and ESCape back to your cockpit. Dark out there, isn't it? Hit Ctrl-L if you want to see how dark it really is. Apply full throttle. Don't leave the ground. When you reach 100 knots airspeed hit 'Q' again. Choose 'B' for display, and ESCape back. Now we're going to leave here. Our plane is at an active airfield on the other side of Seattle. ESCape to the editor and enter the following coordinates (don't forget to reset the editor first to set everything to neutral):

North - 21373	Time:
East - 6483	Hours - 6
Altitude - 370	Min. - 25
Heading - 0	Season - 2, Spring

It is morning twilight, just before dawn. You are lined up for takeoff at Port Orchard Airfield west of Seattle. Take off and level off at 1000 feet. Just after you level off there should be a disk access. Wait another minute and then bank right. You'll see a mountain come into view in the distance. That is Glacier Peak. Head straight for it. You should find yourself at a heading of about 37 to 40 degrees. Stay at about 1000 feet. (I know we're flying too low, but there is a reason for it.)

Just about now the sun should come up. Now you can see that we're flying over Puget Sound. Ahead of you, on the other side, is downtown Seattle. You will see a cluster of buildings appear with a single tower off to the left. Head straight for that tower. When you get close to it you can see what it is. Pause for a second and have a good look. Maybe you can talk somebody in the restaurant (that is a restaurant on top) in to handing you a coke.

Once you're past the tower turn immediately to a heading of 50 degrees. Below you are the islands and floating bridges of Lake Washington. You can add some altitude now. We shouldn't fly so low. Tune NAV1 to 116.8, VORTAC, Seattle and set it for 18 degrees. Tune NAV2 to 114.2, VOR, Paine, and set it for 106. Duvall's abandoned airfield is at the intersection of these two settings, where both NAVs are centered and your DME reads 22.5 miles. Not that you need all these navigational aids. You can probably already see that white line we painted in the dark this morning. It's before and toward the right of the foot of Glacier Peak.

Prepare to descend and land on your rediscovered, abandoned, ghost airfield. Maybe one of the residents of Duvall will take you for a ghost yourself. Some old codger will come out and say, "Why, I haven't seen an aeroplane here since the barnstormers left in '43! Where did you come from?" But remember, he might be a ghost himself. It's still only 7 o'clock, still early enough for misty hallucinations. ☺

## F-15 STRIKE EAGLE: A Review

by Ian Soboroff

F-15 STRIKE EAGLE (Apple II series with 64K) is one of MicroProse's many flight simulators. In this game, you fly a (what else?) F-15 Strike Eagle through a series of 7 missions, which are taken from an assortment of historic wars and battles. The first, and easiest, is the American attack on Libya on August 19, 1981. Others include Egypt during the Yom Kippur War, Haiphong, and Hanoi.

In each mission, there are from 1 to 3 primary targets which you must bomb, and assorted numbers of airstrips and SAM missile sites you can strafe for extra points. In addition, from each airstrip, enemy fighters attack you with air-to-air missiles to stop you from getting to the primary targets. You also must avoid SAM's fired from the ground units. Completing a mission consists of bombing the pri-

mary targets and getting back to base alive. Bombing and shooting other targets is just extra credit. After finishing a mission, you have the option of going on to the next, or starting over again. The missions get progressively harder, and in 4 skill levels: Arcade, Rookie, Pilot and Ace. Almost the only difference between Arcade and Rookie is that in Arcade your plane does not roll when you steer.

The documentation is not too lengthy for a flight simulator, about 40 pages, which covers the controls, the features, mission descriptions, and a mini-flight-training section, which tells you the basics of aerodynamics, how to fly the plane, and certain maneuvers that help you kill your enemies more tactically. There is no problem just shooting them down normally, but learning the stunts and using them in combat.

contd.

adds a little flair to the game. Also included in the box are the usual registration card, a manual update for the Libya mission, and a catalog. There is likewise a series of Authentication codes you need to know, and it asks you for them at the beginning of the game. You can't fly the plane, and most of the weapons systems, without the proper code.

I kid you not, this gets to be a hard game at the higher levels! It helps to have a little FLIGHT SIMULATOR II experience when playing Rookie on up, because the rolling is hard to control for beginners. Arcade is fun, but you can't use that great fighter tactic, the Immelman, in which you get the enemies behind you, go up till you are flying upside-down, then roll over and shoot them up. Because you can't roll in Arcade, you eventually crash. The higher up in levels you go, the smarter the enemies, and the more numerous. About the only thing the same in each mission is that there is always a plane

at the beginning which you can shoot down to warm up.

This game is not without its faults, either. There is an awful lot of disk work, between menus and missions alike. Also, the animation is choppy, like FLIGHT SIMULATOR. It would have been better if it were more smooth, like SKYFOX. Again, the reference map in the corner is rather hard to read without a color screen.

Having all the different weapons systems and displays can be intimidating at first, but adds a lot of realism to the game. There are so many ways to kill enemy fighters it boggles the mind. This is a really fun game, and I look forward to other MicroProse simulations. If you truly want to get the full benefit of this game, you really need a color monitor. This game is almost right up there with such greats as BILESTOAD, AUTODUEL, OGRE, LAW OF THE WEST, and PIXEL'S REVENGE; I give it a 9 out of 10. ☺

## LORDS OF CONQUEST: A Review

by K. C. Mulcahy

LORDS OF CONQUEST (Eon Software, Distributed by Electronic Arts, Apple II series with 64K, joystick recommended, color monitor required for three or more players) is a strategy game where the goal is to conquer a world by outwitting your opponent(s). The concept is similar to the Parker Brothers board game RISK, but the program makes it faster and easier to play. The program also allows an endless variation of game maps since you can build your own. If you like RISK, you are almost certain to enjoy this game. If you don't care too much for RISK, you may find that this program overcomes your problems. If you have never played RISK, chances are still good that you can look forward to a lot of fun with this game.

The packaging is attractive. The documentation is clear and complete, although for some reason (not clear to me) it is divided into a manual and a six-page reference card. The reference guide on the back cover of the manual could be on a one-page card and the mapping guidance put in the manual. By why quibble with that? Once you have read the documentation, the program prompts give all the help needed.

When you boot up the game disk, it takes about two minutes to get to map selection which requires removing, flipping and reinserting the disk. Once you have a map, you have to reverse the process to start playing. The computer distributes resources to territories, you take turns selecting territories, and then play begins. The program keeps track and won't let you make mechanical mistakes. It also won't let you initiate suicide attacks. You win when you are the first to have the agreed-upon number of cities at the end of a turn. If more than one player has the winning number of cities, you keep on until one has more cities than any opponent. When you win, all the territories turn your color and a "Hail to the Victor!" message appears.

You can play at any one of four levels from beginner to expert. Expert has more types of resources and permits moving them more freely. When you go "head to head" with the program, the play is further divided into nine different degrees of difficulty. The most difficult gives the program

first pick of territories, the first attack, and four extra territories. You can also vary the quantity of resources available, the number of cities needed to win, and the level of chance. Finally, you can have music, or not and you can play with the keyboard or a joystick. I prefer silence (that way it's less obvious I'm playing a game) and the keyboard (these old reflexes aren't fast enough to stop the joystick in a small territory).

You can play on one of the 19 stored maps, or watch the program generate a map from characteristics it chooses, or choose the characteristics yourself, or make your own map. You can save any generated map that you like. You can save games and try out different strategies. If you find one, two, or three opponents, you can play them using the program to track the game. In three and four player games you can trade resources, and when a third party's territory borders on the one under attack, an alliance vs. neutrality decision needs to be made.

I like this game and whole-heartedly recommend it, even at the \$39.95 list price. If I ever do beat the program at "expert-nine", there is no end to new maps to try. If I can't beat the program, there are always family and friends to impress. After all, I've had all this experience—they're novices, and I'm a Machiavelli-like negotiator. This game has great long-term playability. ☺

### Simulating contd. from pg 18

will stay there until you choose to draw another line. One advantage of your new airstrip is that you can see it from very far off. Another advantage is that it even shows up at night, as blue lights no less! Much better than that white paint. One disadvantage is that this two dimensional line has no perspective other than length. It is very hard to judge how far you are from it. You'll discover another problem when you land on it. This is a little mystery. From the ground next to it, it is less like a centerline and more like a clothesline. See for yourself. But who's to complain? It's a place to call your own. ☺

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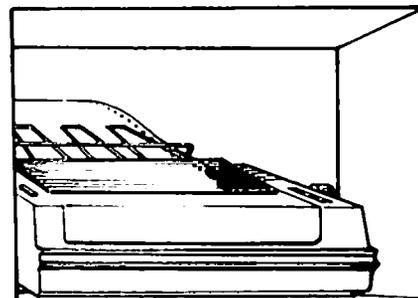
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# INTRODUCTION TO dBASE II

by Gary Hayman

I am late getting around to it, but due to the availability of Z-80 cards at reasonable prices I decided to buy one at a swap meet and trade for WordStar and dBASE II too. I have discovered dBASE II and enjoy it much more and find it more useful than PFS File and PFS Report which I have been using. Yes, I know that dBASE III and dBASE III+ exist and are superior, but for anyone who can trade or purchase the dBASE II at a reasonable price and have a Z-80 card or can get one, it is a worthwhile and inexpensive investment.

Like WordStar, dBASE II has a lot of commands to learn. I have looked at the literature and extracted some pertinent instructions and am presenting them in a format that is easy (hopefully) to understand and will guide the novice (like myself) in establishing and using the database. I did this primarily for myself, but I do want to share my efforts with others.

I want to give the major credit for the organization of my comments to Tony Lima, whose excellent book *dBASE II FOR BEGINNERS* was my guide. I have extracted, reorganized, and in some cases changed to meet my understanding, information to prepare the list which follows. I hope that this list will be of valuable aid while learning to use the program.

## INSTRUCTIONS FOR dBASE II

Brackets around name indicate that it is a file name. Ex. <MYFILE>

DO NOT TYPE THE BRACKETS! <FILENAME> SHOULD BE TYPED AS FILENAME.

### FIRST THINGS FIRST

LOADING DBASE II:

A>DBASE

DATE:

MM/DD/YY (include slashes)

SETTING DEFAULT:

.SET DEFAULT TO B:

### SETTING UP YOUR DATA BASE

CREATING A DATA BASE:

.CREATE <FILENAME>

Filename 8 or fewer letters and numbers.

Must begin with a letter.

DEFINING THE STRUCTURE:

NAME, TYPE, WIDTH, DECIMAL PLACES for each field.

Ex. ITEM:NAME,C,20

QUANTITY:N,8,3

C is used for character fields.

N is used for numeric fields - only use if numbers are going to be used with arithmetic. Also you will use the decimal places structure with numeric fields.

L is used for logical fields.

Width should always be a little longer than the longest entry to make a neater report appearance. This comment does not apply if you want to limit the amount of entry to a specific number of characters or numbers such as year, SSN, zip, yes/no etc.

Press <CR> in blank entry and do not select to input data at this time.

SAMPLE WIDTHS:

ID	4	STREET	30
LASTNAME	20	CITY	30
FIRSTNAME	13	STATE	2
YEAR	4	ZIP	5
SSN	11	PHONE	14
YES/NO	1		

QUITTING dBASE II:

.QUIT

### USING YOUR DATABASE

TO DISPLAY STRUCTURE:

.USE <FILENAME>

.DISPLAY STRUCTURE

This will present the structure of the database.

CLOSING DATABASE:

.USE

.USE <FILENAME>

PRINTING ON/OFF:

.SET PRINT ON

.SET PRINT OFF

DELETING A DATABASE:

.DELETE FILE <FILENAME>

NOTE: If you try to delete a file that is currently open you will get an error message. You must first use USE to close the database and then use the above command.

### ADDING DATA

APPENDING INFORMATION:

.APPEND

ADDING DATA:

Cursor control keys:

^E - UP

^X - DOWN

^S - LEFT

^D - RIGHT

Add data. When finished press <CR> in a blank field and then Type USE to record it.

### LOOKING AT YOUR DATA

HOW TO FIND OUT WHAT DATABASES ARE ON THE DISK:

.LIST FILES

LISTING DATABASE:

.LIST or .DISPLAY ALL or .DISPLAY NEXT 6

Will list all items in opened database.

DISPLAYING DATABASE:

.DISPLAY or .LIST NEXT 1

Will list just the one record where the pointer rests.

MOVING THE POINTER

.GOTO RECORD X

.GOTO TOP

SUPPRESSING THE RECORD NUMBER:

Use OFF after the LIST or DISPLAY

.LIST OFF

.DISPLAY OFF

contd.

## LISTING ONLY FIELDS THAT YOU WANT:

.LIST OFF ITEM1, ITEM2, ITEM3  
.DISPLAY ALL OFF ITEM:NAME, QUANTITY,  
UNITPRICE

## SPECIAL DISPLAYS:

### DISPLAYING FOR A SUBFIELD

.DISPLAY ALL FOR DEPT = 'produce'  
DEPT is the field, produce is the entry  
Entries are enclosed by ( ) except when entered as a  
numeric.

.DISPLAY ALL FOR DATE = '860512'  
.DISPLAY ALL FOR UNITPRICE = 1.99

### WORKING WITH TWO FIELDS

.DISPLAY ALL FOR DEPT = 'produce' .AND.  
UNITPRICE = 1.99  
.DISPLAY ALL FOR DEPT = 'linen' .OR. DATE =  
'851203'

### USING COMPARISONS

.DISPLAY ALL FOR UNITPRICE > 1.00  
.DISPLAY ALL FOR UNITPRICE < 5.00  
.DISPLAY ALL FOR UNITPRICE >= .99  
.DISPLAY ALL FOR DEPT < 'produce'

### COMPLICATED EXAMPLES

.DISPLAY OFF ALL ITEM:NAME, UNITPRICE,  
QUANTITY; FOR DEPT = 'linen'

## DISPLAY SYNTAX:

.DISPLAY [OFF] [<SCOPE>] [<FIELDS LIST>] [FOR  
<EXPRESSION>]

OFF - Leave out record numbers.

SCOPE - ALL - consider every record.

NEXT n - consider only next n records.

RECORD n - consider only record n.

FIELD LIST - Any valid field names, separated by  
commas.

EXPRESSION - Any dBASE II expression, including

.AND. .OR. > < >= <= <>.

## PARTIAL CHARACTER STRING MATCHES:

.DISPLAY ALL FOR DEPT = 'prod'  
.DISPLAY ALL FOR DATE = '86' (very useful here)

## PARTIAL CHARACTER STRING TOGGLE SWITCH:

.SET EXACT ON  
.SET EXACT OFF

## MACRO CAPABILITY:

.STORE ITEM:NAME, UNITPRICE, QUANTITY TO  
<FLIST>  
.DISPLAY ALL &<FLIST>

You put the fields that you are interested in into a  
macro and call them up with an &<macro>. The macro  
is a memory variable.

## SAVE THE MACRO TO DISK:

.SAVE TO <MAC1>

## CALL THE MACRO FROM DISK:

.RESTORE FROM <MAC1>

## CHANGING DATA

## EDIT RECORD:

.EDIT 5 (must have a record number)

Use cursor control keys to move around the record.

^W - tells dBASE II that you have finished.

.USE saves it to disk.

## INSERT MODE:

^V turns Insert Mode on. Allows you to insert info  
instead of overstriking. ^V turns Insert Mode off.

## REPLACE COMMAND:

.REPLACE ITEM:NAME WITH 'widget, large'  
.REPLACE NEXT 3 DATE WITH '860912'  
.REPLACE ALL DEPT WITH 'tools' FOR DEPT =  
'hardware'

## USING MATH FUNCTIONS:

.REPLACE ALL UNITPRICE WITH .75 \* UNITPRICE  
FOR DEPT = 'linen'

## SYNTAX OF REPLACE:

.REPLACE [<SCOPE>] <FIELD> WITH  
<EXPRESSION>  
[<FIELD> WITH <EXPRESSION>,.....] [FOR  
<EXPRESSION>]

SCOPE can be ALL, RECORD n, or NEXT n.

NOTE: ^W and . USE to register and save to disk are  
needed too.

## MAKE A COPY OF THE DATABASE:

.COPY TO <NEWFILE> It is best to save your database  
to a newfile before you make changes.

## DELETING DATA

## DELETING:

.DELETE

This will delete only the record at which the pointer  
stands. The record will appear with an (\*) marking  
it. The record, at this point is not physically  
removed, only marked.

.DELETE ALL FOR DATE = '860530'

.DELETE NEXT 4 FOR DEPT = 'linen'

.DELETE ALL FOR DEPT = 'electrical' .AND. DATE=  
'860422'

DELETE works like DISPLAY or REPLACE

## DELETE SYNTAX:

.DELETE <SCOPE> FOR <EXPRESSION> If SCOPE  
is left out only the current record is acted upon.

## UNDELETING:

.RECALL ALL FOR DATE = '860918'

.RECALL ALL

## GETTING RID OF DELETED RECORDS: (that are marked with (\*))

.PACK

## CHANGING THE ORDER OF YOUR DATABASE

### SORT:

.SORT ON ITEM:NAME TO <SORTFILE>

SORT gives you an alphabetical or numerical order and  
saves it to disk. It is much slower than INDEX which  
has more uses. It is recommended to use INDEX i  
instead.

### INDEX:

.INDEX ON ITEM:NAME TO <INDXFILE>

With INDEX, the record numbers stay the same while  
the items are put in the proper order. INDEX is much  
faster with long lists. You can INDEX on a character  
field or a numeric field.

## USING AN INDEX:

.USE <DBFILE> INDEX <INDX1>

You can now display it as you wish.

.DISPLAY ALL FOR DEPT = 'linen'

contd.

## REVERSED ORDER INDEX:

.INDEX ON -UNITPRICE TO <UNPRICE>  
.INDEX ON -ITEM:NAME TO <REVNAME>

## INDEX USING TWO FIELDS AT ONCE:

.INDEX ON DEPT+ITEM:NAME TO <DEPTITEM>  
This will group by DEPT then ITEM:NAMES within the DEPT.

.INDEX ON DEPT + DATE TO <DEPTDATE>  
This will group by department with dates in proper order.

LIMIT - 99 characters in the key field expression.  
YOUR INDEX <FILENAME> MAY NOT BE AUTOMATICALLY UPDATED IF YOU APPEND AT A LATER TIME. SOLUTION - Make a new index file. You can even use the same <FILENAME>.

## LOCATING A RECORD

### FIND A RECORD:

.FIND pliers (Note that () do not surround pliers.

.DISPLAY (Needed to see listing)

You will be taken to the first occurrence of pliers. If you do it again, you will still be at the same place because FIND takes you to the top before the search.

### FINDING THE NEXT OCCURRENCE:

.SKIP (Moves you down to the next FIND occurrence)

.DISPLAY

### FINDING ON TWO INDEXES:

First, the file should be an indexed file. (See INDEX USING TWO FIELDS AT ONCE above). Second, because possible blanks at the end of character fields a problem can arise. SOLUTION - use the TRIM feature and set up an INDEX. Then use the FIND command in this special way.

.INDEX ON TRIM (DEPT) + DATE TO <SPECINDX>

.FIND electric860922

.DISPLAY

Notice the character field is set off with ( ) and there is no space between the DEPT entry and the DATE entry.

### LOCATE:

A more flexible command than FIND. It is also faster. Recommended instead of FIND.

.LOCATE FOR ITEM:NAME = 'screwdriver'

.DISPLAY (Needed to see listing)

.CONTINUE

.DISPLAY

.LOCATE FOR DEPT = 'plumbing' .AND  
DATE='860721'

.DISPLAY

(This can't be accomplished with FIND)

LOCATE also takes you to the top record as does FIND. Once you type LOCATE with it's necessities it is remembered and can be used with just LOCATE without the remainder until you need another LOCATE expression.

### SKIP - BY ITSELF:

You can skip forward or backwards among your records as indicated. It moves the record pointer.

.SKIP

.SKIP 8

.SKIP -4

## ADDING UP YOUR DATABASE

### SUMMING YOUR DATA BASE:

.SUM QUANTITY\*UNITPRICE Does just that for the entire database.

.GOTO TOP

.SUM QUANTITY\*UNITPRICE NEXT 9 Does it for the first nine records.

### SUM SELECTED RECORDS BY FIELD:

.GOTO TOP

.SUM QUANTITY\*UNITPRICE FOR DEPT = 'paint'

.SUM QUANTITY\*UNITPRICE FOR DATE = '861225'

REMINDER ..... DO NOT TYPE THE BRACKETS (< >) THEY ARE JUST TO REMIND YOU THAT WHAT IS INSIDE IS A FILE NAME.

### SAVE RESULTS OF SUM IN MEMORY:

.SUM QUANTITY\*UNITPRICE TO <M:TOTAL>

? <M:TOTAL>

<M:TOTAL> is a memory variable.

? - says show me what the following memory variable means.

.SUM QUANTITY\*UNITPRICE TO <M:TOTALP> FOR DEPT = 'plumbing'

.SUM QUANTITY\*UNITPRICE TO <M:TOTALH> FOR DEPT = 'hardware'

? <M:TOTALP> + <M:TOTALH> (Gives you the totals for plumbing and hardware added together.)

### MULTIPLE SUMMINGS:

.SUM QUANTITY, UNITPRICE TO <M:QUAN>, <M:PRICE>

?<M:QUAN> \* <M:PRICE> (Gives you result)

### STORING MEMORY VARIABLES:

.STORE <M:QUAN> \* <M:PRICE> TO <M:QXP>  
(Puts memory variable on disk.)

### DISPLAY MEMORY VARIABLES:

.DISPLAY MEMORY

### STORING ALL MEMORY VARIABLES TO DISK:

.DISPLAY MEMORY

.SAVE TO <MEMALL>

### GETTING THEM BACK:

.RESTORE FROM <MEMALL>

### TOTALING:

TOTAL will save your results to disk. Memory variables vanish when the computer is turned off unless you saved them. (See above) TOTAL will not work on expressions (+ - \* /) only the fields in the data base.

.TOTAL ON DEPT TO <DEPTTOT>

.USE <DEPTTOT>

.LIST

### OBTAINING CORRECT NUMBER OF DECIMAL PLACES:

Quantity times Unit price might produce more decimal places than you desired. You could do this. Suppose that the sum of Quantity \* Unit price has been placed in memory variable <M:TOTAL>. Then do this.

.STORE (INT ((100 \* <M:TOTAL>) + .05))/ 100 TO <M:ROUND>

? <M:ROUND> would get you a two decimal figure.

## COUNTING YOUR DATA BASE

### COUNTING RECORDS:

contd.

.COUNT will give you the count of all records.  
.COUNT FOR DEPT = 'tools'  
.COUNT FOR DATE = '8605' gives you May's count.  
.COUNT FOR UNITPRICE >9.99  
.COUNT FOR UNITPRICE <10 .AND. DEPT = 'wall treatments'

#### AVERAGING WITH COUNT:

.SUM QUANTITY\*UNIT PRICE TO <M:TCOST>;  
FOR DEPT = 'plumbing' <--(use (;) before  
.COUNT FOR DEPT = 'plumbing' <CR> to continue  
TO <M:NBRITM> expression to  
.STORE <M:TCOST>/<M:NBRITM> next line)

#### CHANGING DATABASE STRUCTURE

##### MODIFY STRUCTURE:

Don't work on original! Make renamed copy first.  
Please be extra careful for you could ruin your data base.

.USE <FILE>

.COPY STRUCTURE TO <NEWFILE>

.USE <NEWFILE>

.MODIFY STRUCTURE

Answer (Y)es

Use cursor control keys to make any changes.

^W will save the changes.

.DISPLAY STRUCTURE will let you look at it.

##### GETTING DATA INTO THE MODIFIED STRUCTURE:

.APPEND FROM <FILENAME> this was the original name of the file that contains the data. The data now flows to <NEWFILE> in all area where the fields match exactly.

##### CHANGING <NEWFILE> BACK TO <FILENAME>:

.USE

.DELETE FILE <FILENAME>

.RENAME <NEWFILE> TO <FILENAME>

.USE <FILENAME>

#### GENERATING REPORTS

##### REPORT 101:

.USE <FILENAME>

.DISPLAY STRUCTURE we do this so that the structure is on the screen to aid you with field names and column widths.

.REPORT FORM <FILEFORM>

ENTER OPTIONS:

Pressing <CR> will give you default settings of LM = 8, 57 = Lines Per Page, Page Width = 80.

PAGE HEADING: Answer (Y)es and you will be able to type in your heading.

DOUBLE SPACE REPORT?: Answer (N)o unless r required.

ARE TOTALS REQUIRED?: Answer (N)o unless required. Will be discussed later on.

ENTRIES:

WIDTH: The width should equal either the width of the field or the number of characters in the heading. It has to give enough space not only for the data in the field but also for the heading.

CONTENTS: Type the exact field name.

(Obtained from .DISPLAY STRUCTURE above).

HEADING: Type the heading you want. It

doesn't have to be the same as the field name.

MADE A MISTAKE:

.CLEAR

.DELETE FILE <FILEFORM.FRM>

Start again

<FILEFORM.FRM> SAVED TO DISK

AUTOMATICALLY:

Answering <CR> only to the last column will save the report form to disk.

<FILEFORM.FRM> CAN BE USED IN FUTURE:

.USE <FILENAME>

.REPORT FORM <FILEFORM> Notice that this brings back the report if <FILEFORM.FRM> is on the disk, otherwise it takes you into the report form preparation.

PRINTING THE REPORT:

.USE <FILENAME>

.REPORT FORM <FILEFORM> TO PRINT

REPORTING PARTS OF YOUR DATA:

.USE <FILENAME>

.REPORT FORM <FILEFORM> FOR DEPT = 'paint'

This will use the same report form but will only report the established columns for DEPT = paint.

REPORTING USING AN INDEX FILE:

.USE <FILENAME> INDEX <SPECINDX> assuming <SPECINDX> already exists on disk.

.REPORT FORM <FILEFORM>

This will give you a report in the specifications established in your <FILEFORM> but indexed according to <SPECINDX>.

MOVE REPORTED NUMBERS AWAY FROM

CHARACTERS:

In reports numbers are moved to the right of the column while characters are moved to the left of the column. This could cause confusion when columns of characters and numbers are side by side. SOLUTION: When establishing, or modifying your report and inserting your CONTENTS just add a couple of spaces before the field name. Example.

' '+UNITS

That's several blank spaces surrounded by (') followed by a (+) sign and then the field name. This will separate the columns. If you haven't done it correctly you can fix your report form. Directions later.

CHANGING HEADING:

.SET HEADING TO Whatever You Want

The original heading that you established when you set up the report form is now changed.

CHANGING DATE:

.SET DATE TO 3/9/86

The original date which came from your entry when you ran dBASE II is changed for this report.

##### REPORT 201:

POSITIONING HEADINGS FLUSH LEFT AND FLUSH

RIGHT:

Headings are normally centered but we can change that to make the report look more attractive. In general character column headings look better flush left, and numeric column headings look better flush right.

When forming your report form add a (<) or a (>) for contd.

flushing heading left or right before the heading name.

Example.

>Quantity

<Item Name

If you forget these, they can be edited in later with a MODIFY COMMAND. Discussed later.

#### CAUSING UNDERLINES:

Heading underlines can be accomplished with (-) or (=) at the time of report formation or later edited in. Just insert a (;) after the heading name and type in the correct amount of (-) or (=). Example.

>Quantity;----- causes:

Quantity (flush right in column)

#### HEADING OVERFLOW:

If your heading is too long to be entered on one line as you make up your form, use the (;) before the <CR> to signal continuation. Example.

Hardware Sales Summary ;

For 1986

Hardware Sales Summary;

#### TOTALING UP NUMERIC FIELDS:

Replying (Y)es to the question "Are Totals Required?" when it is asked the first time and answering (Y)es or (N)o to when it appears for each numeric column will result in totals where (Y)es is indicated at the bottom of the report. dBASE II know which are numeric columns because you told it so when you made the structure.

#### SUBTOTALS BY TOTALS:

.REPORT FORM <FILEFORM> FOR DEPT = 'paint' will produce a total for the "paint department" which is really a subtotal for the entire data base. No other subtotals will be produced. See later method if many subtotals are desired.

.REPORT FORM <FILEFORM> FOR DATE = '8610' will produce a total of October 1986 entries. The date column does not necessarily have to be one of the columns established in the report form.

You can always reset the heading to describe what the report is about. Example.

.SET HEADING TO October Sales

#### REPORT 301

#### SUBTOTALING REVISITED:

In order to subtotal by field AND subfield within the field we respond to (Y)es when asked if we want SUBTOTALS IN REPORT? This question will be asked automatically if we indicate that we want totals.

We will also be asked to ENTER SUBTOTAL FIELD:

You should respond appropriately. You will then be asked to ENTER SUBTOTAL HEADING: You

respond with the heading you desire. Example.

SUBTOTALS IN REPORT? (Y/N) Y

ENTER SUBTOTAL FIELD: DEPT

ENTER SUBTOTAL HEADING: Subtotals by

Department

#### SOME EXAMPLES:

We will assume in each case that there are no indexes or report forms saved. We desire to have a report that shows columns by Item Name, Quantity, Price, Tot. Cost. We would like the report to be subtotaled by department in alphabetical order and each item in the

department also in alphabetical order.

.USE <FILENAME>

.REPORT FORM <FORM1>

Set up your Report Form for totals and subtotals with proper column headings and totals asked for in the Tot. Cost column.

.INDEX ON DEPT + ITEM:NAME TO <DPITINDX>

.SET HEADING TO Subtotals by Department

.SET DATE TO 12/12/86

.REPORT FORM TO PRINT <FORM1>

We want to produce a short summary report by Department but we don't need item listings.

.REPORT FORM <FORM2>

Enter for TOTALS, SUBTOTALS, SUBTOTAL

FIELD : DEPT, SUMMARY REPORT (Y),

COLUMN ONE: 31, QUANTITY\*UNITPRICE,

HEADING: Total Cost.

.REPORT FORM TO PRINT <FORM2>

#### SUMMARY REPORTS:

Answering Y to question re: SUMMARY REPORT

ONLY produces a report that leaves out the line by line details used with SUBTOTALS in effect.

FIXING OR ALTERING THE REPORT FORM: (Please exercise caution)

.MODIFY COMMAND <FILEFORM.FRM> make sure the extension is used.

You are in the full-screen data-entry mode. Use the cursor keys for movement (^E, ^S, ^X, ^D). Now typing will overwrite while ^V will allow insert. ^V again will turn insert off.

^G will delete the character under the cursor.

^N will insert a new field at cursor.

^T will delete the field at cursor.

^Q quits but does not save the changes.

^W will save your changes to disk.

#### EPSON PRINTER CONTROL

If you want 132 column display on the printer, first MODIFY report from 80 to 132 (see Fixing or Altering the Report Form (above)), then:

.SET PRINT ON

.? CHR(15) (type this as you see it)

.SET PRINT OFF

Now when you want the report printed:

.REPORT FORM <FORM1> TO PRINT and your report will be in 132 columns.

.SET PRINT ON

.? CHR(18)

.SET PRINT OFF

reinitializes printer.

You may also send other printer control characters to the printer in a similar manner.

[ON]

[OFF]

• Doublestrike CHR(27)+CHR(71) CHR(27)+CHR(72)

Emphasized CHR(27)+CHR(69) CHR(27)+CHR(70)

Italics CHR(52) CHR(53)

Concatenation is accomplished like this:

.? CHR(27)+CHR(71)+CHR(27)+CHR(72)+CHR(52)

would give you Doublestrike and Emphasized in Italics. (you would probably never do this.)

# PI SIG NEWS

by Robert Golden

The members of the PI SIG met on Monday evening, January 5, at the WAP office. One member has applied for membership in the Apple Programmers and Developers Association (APDA) and others are expected to follow suit, as the APDA is becoming a source of information on the Apple IIgs. We are eagerly awaiting publication of the Apple IIgs Toolbox reference and have been discussing aspects of the IIgs as journal articles become available.

The considerable resemblance of the IIgs to the Macintosh was reviewed as a starting point to programming the IIgs. We understand that Apple Computer, Inc. will eventually support three languages for the IIgs: Pascal, C, and Assembly. The PI SIG made an important step, we believe, in deciding to focus our attention on the C language, as it appears to have the potential for greatest utility for general use by WAP members. Among the possible choices were (1) Assembly Language supported by the use of the Orca Assembler 65816, Roger Wagner's 65816 Assembler, now available; (2) TML Pascal which is expected to become available in a month; and (3) Light Spell which will become available in C and/or Pascal for the IIgs. An important consideration was the uncertainty of when Pascal language support would be available.

Ray Hobbs presented an informal tutorial on the IIgs, using the Macintosh pull-down windows by analogy. He demonstrated on a Mac how 'positioning the cursor by a "mouse" was the equivalent of typing in, or calling for the use of extensive subroutines on earlier Apple ]['s. Ray then emphasized that by the use of "event loops" and the creation of an environment populated with many pre-programmed routines, IIgs programming would then assemble these components of a program plus one's own routines to bridge the gaps that are sure to appear. From the standpoint of the non-programmer, this process is like getting an AAA trip ticket, in which blocks of short trips are joined together to create a longer trip from one city to another. However, beware of the detours.

The meeting finished with a general discussion on more technical details of the C language. ☺

## BEAGLE COMPILER STR\$ FUNCTION PATCH

by John R. Morton,  
Lansing Users Group

1. Boot the ProDOS Users.Disk.
2. Insert your COMPILER backup disk.
3. BLOAD COMPILER.SYSTEM,TSYS,AS2000  
<RETURN>.
4. POKE 20357, 48 <RETURN>.
5. BSAVE COMPILER.SYSTEM,TSYS,AS2000  
<RETURN>.

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# THE FAMILY HOME MONEY MANAGER: Part 9

## Working One's Way Through an Applesoft Program

by Brian G. Mason

This is the last article in this series. We have been on a long journey together. I hope everyone has enjoyed it and learned from it.

This month we will go back to our CHECKS 1/85 program module and go over the code for printing out the two end-of-the-year reports (Main Menu options 17 & 18). We could not cover these options before, since we had to know how our data was saved in order to print it out, and it is saved in our module EOM PROCED. Put in your disk and type "LOAD CHECKS 1/85".

### READING FROM A RANDOM-ACCESS FILE

```
3700 K = MO%:LE% = (20 * NC) + 40: L$ =  
STR$ (LE%): HOME : IF K < 7 THEN 3703  
3701 PRINT "DO YOU WANT TO SEE": PRINT:  
HTAB 5: PRINT "1. THE FIRST SIX  
MONTHS": HTAB 20: PRINT "OR":  
HTAB 5: PRINT "THE SECOND SIX  
MONTHS": INPUT "": C$ = VAL (C$):  
IF C < 1 OR C > 2 THEN 3700  
3702 IF C = 2 THEN 3800  
3703 GOSUB 300  
300 PT = 0: HOME : VTAB 20: INPUT  
"PAUSE AT END OF EACH PAGE?  
(Y/<RET>)": C$: IF C$ = "" THEN 303  
301 IF C$ < > "Y" THEN 300  
302 PT = 1  
303 PRINT : PRINT D$;"PR# 0": PR = 0:  
HOME : INVERSE : VTAB 10: PRINT  
" HIT SPACE BAR WHEN READY  
TO PRINT": HTAB 12: PRINT "<ESC>  
TO CANCEL"  
304 GET C$: NORMAL : IF C$ = CHR$ (27)  
OR C$ = CHR$ (155) THEN POP :  
GOTO 1500  
305 IF C$ = CHR$ (32) THEN PRINT :  
RETURN  
306 GOTO 304
```

We start with Main Menu option 17, printing the year-to-date detail. We can only get six months across a page, so we will give the user the option of which six months they would like to have printed out. We are working with the file we created when we closed out the end of the month called "YEAR'S BUDGET DATA" (FY\$).

Remember, this is a random-access file with each record consisting of one month's total for each budget category. And remember, when dealing with random-access files, you must know the length of each record. We set the length of our records to be 20 times the number of budget categories plus 40.

The first thing we do then, is set our variable K equal to the number of the current month, and we calculate the length of the records in our file. If the current month is before July, we do not need to give the user the choice of printing the first six months or the second six months. We only have records for the first six months, anyway, so we go directly to line

3703. If the user chooses to print just the second six months (C=2), we go directly to line 3800. The subroutine at line 300 is the one which allows the user to get their printer ready to print before pressing the space bar to proceed.

```
3704 PRINT OPS:FY$;"(L";LS");L";LS  
3705 ONERR GOTO 3900
```

The next thing we do is open our file. Remember, if we changed the number of budget categories during the year, we are going to have two different files, each with different length records, in which case, we may not be able to find the data we are looking for. We need to be prepared for this contingency. Thus the ONERR GOTO command in line 3705. Let's skip this for the moment and go on.

```
3706 HOME : VTAB 10: PRINT "PRINTING ";  
YDS: PRINT : HTAB 15: INVERSE :  
PRINT "FIRST SIX MONTHS": NORMAL:  
PRINT "HIT <ESC> TO CANCEL"  
3707 PRINT D$;"PR# 1": PR = 1  
3710 HTAB 30: PRINT YDS: HTAB 38:  
PRINT YRS: PRINT  
3715 PRINT TAB(17)"JAN. FEB. MARCH  
APRIL MAY JUNE": PRINT  
3717 K1 = K  
3718 IF K > 6 THEN K1 = 6  
3719 PRINT D$;"PR# 0"
```

We clear the screen and print out a message of what we are doing here. Then we divert output to the printer and print some headings on the paper. Next we set K1 equal to the current month, but if the current month is greater than 6, we do not want K1 to be greater than 6. Now we redirect output to the computer.

```
3720 FOR XX = 1 TO K1  
3725 PRINT RDS:FY$;"(L";LS");R";XX  
3730 FOR J = 0 TO NC  
3740 INPUT TL(XX,J)  
3745 NEXT J,XX
```

The next step is to read values into an array. We are going to look at each record in our file one month at a time. Then we are going to get the totals we saved for each budget category for that month. This will go on until we get to the end or until we run out of data, whichever happens first.

### HANDLING THE ERRORS

```
3900 IF PEEK (222) = 5 THEN 3915  
3905 GOTO 19999  
3915 IF J = 0 AND XX > 1 THEN POKE 216,0:  
GOTO 3746  
3916 GOTO 3780  
19999 Y = PEEK (222): IF Y < > 5 THEN  
POKE 34,0  
20000 IF Y = 254 THEN VTAB 22: HTAB 1:  
CALL - 958: PRINT "****ERROR -  
PLEASE TRY AGAIN. ENTER DATA  
HERE -->": RESUME  
20005 IF Y = 22 THEN POP : GOTO 1500
```

contd.

```

20006 IF Y = 9 THEN HOME : VTAB 10:
FLASH : PRINT "DISK IS FULL":
PRINT : NORMAL : PRINT "REMOVE
CURRENT DISK, INSERT ANOTHER
INITIALIZED DISK, THEN TRY AGAIN.":
GOSUB 28: RESUME
20999 PRINT "ONERR CODE = ";Y
21000 X = PEEK (218) + PEEK (219) * 256:
PRINT "ERROR AT LINE ";X: END

```

The normal error routines I believe we have all seen before. Let us look now at how we handle an END OF DATA error. If we attempt to get data from this file that is not there, we will get an END OF DATA error (#5). If there is some other problem with opening the file, we will be sent to the regular error handlers at line 19999. If we attempt to read totals from a month other than January, and there are none there, then we want to simply stop and print out what data we have got up to that point. But if we did not even get data for the month of January, then we have to simply break out of this part of the program and GOTO line 3785 where we check to see if we would be interested in trying to get data for the second half of the year.

```

3746 PRINT DS;"PR# 1"
3747 FOR J = 2 TO NC: PRINT LEFT$
(CTS(J),10);
3748 FOR XX = 1 TO K1
3750 C = TL(XX,J)
3755 T% = (XX * 10) + 8: GOSUB 70
3760 IF PEEK (- 16384) = 27 OR PEEK
(- 16384) = 155 THEN XX = K1:J = NC
3765 NEXT XX
3770 PRINT
3775 NEXT J
3780 PRINT CL$: POKE 216,0: PRINT DS;
"PR#0":PR = 0

```

Now we are ready to print the data to paper, so we direct output there in line 3746. We are not interested in the "CASH" or the "CHECKBOOK ACTIVITY" categories, so we start with J=2. The first thing we do is print the first category name, restricting the printout to the first 10 characters to preserve our column alignments. Then starting with January, we get the total for that category from the array, set our decimal tab position, and then print the amount. After checking to see if the <ESC> key has been pressed, we get the value for the next month. Then after we have gone through all the months, we get the value for the next category, and repeat the process all over again until we are done. Then we close the file, reset the error handler, and turn output back to the screen.

```

3785 HOME : IF K > 6 THEN GOTO 3800
3790 PRINT "THAT IS ALL THE DATA FOR
THIS YEAR":PRINT "HIT <RETURN> TO
RETURN TO MENU": WAIT - 16384,128:
POKE - 16368,0: GOTO 1500
3800 INVERSE : VTAB 10: PRINT "HIT SPACE

```

```

BAR WHEN READY TO PRINT SECOND
SIX MONTHS": PRINT "<ESC> TO
CANCEL": POKE - 16368,0: WAIT
- 16384,128: NORMAL: IF PEEK (-16384)

```

```

= 27 OR PEEK (- 16384) = 155 THEN
POKE - 16368,0: GOTO 1500
3805 POKE - 16368,0
3810 PRINT OP$;FY$;"(L";LS")L";LS

```

After clearing the screen, we check to see if the current month is after June. If it is not, we inform the user that there is no more data, and then WAIT for a keypress to return to the Main Menu. Otherwise, we allow the user to choose to print the second six months or to return to the Main Menu. If the user chooses to go on, we open our file, "YEAR'S BUDGET DATA" (FY\$), again to set the pointers back to the beginning of it.

```

3815 ONERR GOTO 3950
3820 HOME : VTAB 10: PRINT "PRINTING ";
YD$: PRINT HTAB 15: INVERSE : PRINT
"SECOND SIX MONTHS": NORMAL :
PRINT "HIT <ESC> TO CANCEL":
PRINT DS;"PR#1":PR = 1
3825 HTAB 30: PRINT YD$: HTAB 38: PRINT
YRS: PRINT
3830 PRINT TAB(17)"JULY AUGUST
SEPTEMBER OCTOBER NOVEMBER
DECEMBER": PRINT
3832 K1 = K
3834 PRINT DS;"PR# 0"
3950 IF PEEK (222) = 5 THEN 3965
3955 GOTO 19999
3965 IF J = 0 AND XX > 7 THEN
POKE 216,0: GOTO 3856
3970 GOTO 3885

```

We do pretty much the same thing all over again for the second six months as we did for the first six months, with a different error handler at line 3950, and different messages on the screen and titles on the paper. K1 can be set to the current month, whatever it is, now.

```

3835 FOR XX = 7 TO K1
3840 PRINT RD$;FY$;"(L";LS")R";XX
3845 FOR J = 0 TO NC
3850 INPUT TL(XX,J)
3855 NEXT J,XX
3856 PRINT DS;"PR# 1"
3857 FOR J = 2 TO NC: PRINT LEFT$
(CTS(J),10);
3858 FOR XX = 7 TO K1
386 C = TL(XX,J)
387 T% = (XX - 6) * 10 + 8: GOSUB 70
3875 IF PEEK (- 16384) = 27 OR PEEK
(- 16384) = 155 THEN XX = K1:J = NC
3880 NEXT XX: PRINT : NEXT J
3885 PRINT CL$: POKE 216,0: PRINT DS;
"PR#0":PR = 0
3890 HOME : IF XX = 13 THEN 1500
3895 GOTO 3790

```

The only difference in the routine to print the second six months to paper is in the tab expression where 6 must be subtracted from XX. When we are done, if we have printed December, and XX equals 13, we are taken immediately back to the Main Menu. Otherwise, we GOTO line 3790 where we inform the user that there is no more data before going back to the Main Menu.

contd.

## YEAR-TO-DATE SUMMARY

Now let us see how we handle option 18 from the Main Menu, printing out the Year-to-Date Summary. This routine starts at line 4000.

```
4000 GOSUB 5000:GOSUB 303
5000 HOME : PRINT "THIS ROUTINE
PRINTS A SUMMARY OF EXPEND-
ITURES FOR ALL MONTHS PRIOR TO
THE CURRENT ONE. THE CURRENT
MONTH MUST BE JANUARY, AND ALL
OF THE DATA FOR THE PRIOR YEAR
MUST BE ON THE DISK IN THE"
5005 PRINT "DISK DRIVE TO PRODUCE THIS
REPORT FOR THE ENTIRE
PRIOR YEAR.": PRINT
5006 PRINT "HIT <RETURN> TO PROCEED,
<ESC> TO QUIT."
5010 GET CS: IF CS = CHR$(13) THEN
RETURN
5015 IF CS = CHR$(27) THEN POP :
GOTO 1500
5020 CV = PEEK(37):POKE 37,CV-2:
PRINT : GOTO 5006
```

The on-screen explanation about how to use this routine contained in the subroutine at line 5000 was added as an afterthought. That is why it is tucked away there. Line 5020 shows another way to use the value for the current vertical cursor position. By going up two lines from the current position and then issuing a carriage return by means of the PRINT command, we are taken to the first column of the line above.

```
4001 LE% = (20 * NC) + 40:LS = STR$(LE%)
4002 K = MO% - 1 : IF K = 0 THEN K = 12
4003 GT = 0:PCTL = 0:BGTL = 0: FOR J = 0
TO NC:TTL(J) = 0: NEXT J
4004 ONERR GOTO 4200
4005 PRINT OPS:FYS;"(L";LS");L";LS
4200 IF PEEK(222) = 5 THEN POKE 216,0:
GOTO 4090
4205 GOTO 19999
```

Our first step is to ask the user to press the space bar when ready to print. Next we figure out the length variable we are going to use (depending upon the current number of budget categories), set K to the value of the prior month (the last month for which we have complete data), and make sure all our total variables are initialized to zero. We also set up our error handler. Then we open our file, "Year's Budget Data".

If we are taken by the error handler to line 4200, we check to see if it is an "end-of-data error". If that is the case, we simply close the file and then proceed with our processing. Otherwise we go to the regular error handlers at line 19999.

```
4040 HOME : INVERSE : HTAB 7:
PRINT YSS:GOSUB 310
310 NORMAL : VTAB 10: HTAB 16: PRINT
"PRINTING": VTAB 23: INVERSE : PRINT
"HIT <ESC> TO CANCEL": NORMAL
311 PRINT DS;"PR# 1":PR = 1: RETURN
4045 HTAB 30: PRINT YSS: HTAB 38: PRINT
YRS: PRINT
```

```
4050 PRINT SPC(40);"TOTAL"; SPC(6);"
AVERAGE"; SPC(3);"BUDGETED";
SPC(3);"PER CENT"
4055 PRINT SPC(16);"CATEGORY"; SPC(13);
"YEAR-TO-DATE ";K;" MONTHS PER
MONTH OF TOTAL": PRINT
4060 PRINT DS;"PR# 0"
```

At the subroutine at line 310, we print the message on the screen that there is printing going on, and then we switch output to the printer. At that time we print column titles on the paper and then switch output back to the computer.

```
4070 FOR XX = 1 TO K
4075 PRINT RDS:FYS;"(L";LS");R";XX
4077 FOR J = 0 TO NC
4080 INPUT TL(XX,J)
4085 NEXT J,XX
4090 PRINT CLS
4095 FOR J = 0 TO NC
4100 FOR XX = 1 TO K
4105 TTL(J) = TL(XX,J) + TTL(J)
4110 NEXT XX,J
```

Now to do some calculations. First we read in all the data from our file, getting the totals for each category for each month. Then we take these values and add together the totals for the year in each category (TTL).

```
4115 FOR J = 0 TO NC
4120 AVE(J) = TTL(J) / K
4125 IF J > 2 THEN GT = TTL(J) + GT
4130 NEXT J
4135 PRINT DS;"PR# 1":PR = 1
```

Then for each category, we take the total for the year and divide that number by the number of months to get an average so far for the year. Also, we accumulate the grand total for all the categories for the year. Now we are ready to switch output back to the printer.

```
4135 PRINT LEFT$( (CTS(2)),35);C = TTL(2):
T% = 45: GOSUB 70:C = AVE(2):T% = 56:
GOSUB 70:C = BUD(2):T% = 67:
GOSUB 70: PRINT : PRINT
4150 FOR J = 3 TO NC
4155 PRINT LEFT$(CTS(J),35);
4160 C = TTL(J):T% = 45: GOSUB 70
4165 C = AVE(J):T% = 56: GOSUB 70
4170 C = BUD(J):T% = 67: GOSUB 70
4172 BGTL = BGTL + BUD(J)
4175 C = (TTL(J) / GT) * 100:T% = 77:
GOSUB 70
4177 PCTL = PCTL + C
4179 IF PEEK(-16384) = 27 OR PEEK
(-16384) = 155 THEN POKE -16368,0:
J = NC: PRINT : NEXT J: PRINT DS;
"PR# 0":PR = 0: GOTO 1500
```

We print out our Income category first since it is separate from the expense categories and does not enter into the yearly totals and averages we will be calculating. In line 4179 we check to see if the user has pressed escape in order to get out of this routine and return to the Main Menu before going on.

```
4180 PRINT : NEXT J
4185 PRINT : PRINT TAB(15);"TOTAL";:
T% = 45:C = GT: GOSUB 70:T% = 56:
```

contd.

C = GT / K: GOSUB 70:C = BGTL:  
T% = 67: GOSUB 70:C = PCTL:T% = 77:  
GOSUB 70

4195 PRINT CHR\$(12)

4199 PRINT DS;"PR# 0":PR = 0: GOTO 1500

Finally, we print the totals: the total of all expenditures, the average total expenditure per month, the total expenditures budget, and the total of the percentages (which should be very close to 100%). When we are done, we issue a form feed, then return output to the screen and return to the Main Menu.

And that is it! Save what you have just done by typing "SAVE CHECKS 1/85".

We have worked our way completely through the budget program. You should now be able to put your Home Money Manager disk in your drive and type "PR#6" or "RUN BUDGET" and have a complete single-line entry, cash basis money manager for your use. I hope you have enjoyed the journey and have learned something along the way. I know I have. I also hope you will enjoy using the program, and that it is as useful to you as it has been to me.

(Ed. Note: Our thanks to Brian for this noteworthy and informative series of articles. Much effort has gone into this set of programs and we appreciate the opportunity to publish them.)

## STOLEN EQUIPMENT ALERT

The following memorandum was sent to the Pi Office on December 19 from Special Agent Kenneth P. Lord, Naval Investigative Service Resident Unit, Naval Air Facility, Washington DC 20390:

"Reference our phone call of 08December 1986. The following Apple items have been identified by the victim as having been stolen from his household goods shipment on/about 30Apr86. Your assistance in placing this information before your members will be greatly appreciated. Any positive response can be provided directly to me or Special Agent Jan Pryor at (301) 981-4422. Again, many thanks for your support.

- (1) Apple Time Card, Model 665-0101-B
- (1) Apple Super Serial Card, Model 673-8020-B
- (1) Apple Joystick, Model A2M202
- (1) AppleWorks Program with 3.5 disk and 5 1/4 disk
- (1) Apple Logo II Software, Model A2D4502
- (1) Print Shop Program
- (1) Apple Imagewriter Printer, Model A2P2059
- (1) Apple Numeric Keypad, Model A2M2003
- (1) Apple Extended 80-column Card, Model A2M2023
- (1) Apple Mouse II w/Interface Card, Model A2M2050, Serial No. 6432A11E00873
- (1) AppleWorks Software
- (1) Sony Color TV Remote Control, Model KV1221R

The victim stated he placed the last four digits of his social security number (1023) on the bottom edge of the cover of large pieces of equipment, and on the surface area of other pieces of equipment."

# 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.

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# PROFORTH ][

by Chester H. Page

PROFORTH ][ is a FORTH-83 implementation for the APPLE ][ family, using APPLE 80-column display. It operates under ProDOS; all ProDOS keyboard commands are available, the PROFORTH nucleus (and any application program) is saved as a binary file, and screens for application programs are saved as sequential text files. E.g., EDITOR is a text file containing the screens holding the definitions used in the EDIT program.

In a 64K computer, the system uses the area from \$9100 up; the nucleus dictionary uses \$800-\$2E8F, leaving 25 kbytes for applications, text files, etc. The data stack comprises 126 bytes, and the return stack, 256, although the bottom of the return stack is also used (from the other direction) for the terminal input buffer.

## STRUCTURE OF PROFORTH ][

The assembly source code (ProDOS Tool Kit Assembler) is patterned after the source code of the Washington Apple Pi public domain version of FIG-FORTH. Most FORTH implementations have transparent spots, such as unnamed (hence inaccessible) run-time procedures, and words that start as colon words but do not terminate in EXIT; they change to primitive object code in midstream (using ;CODE for the transition). All these transparencies have been eliminated in PROFORTH ][. Except for the basic system-building primitives that end in JMP POP, JMP PUSH, etc., all primitives end in JMP NEXT and most other words end in EXIT.

The words that start as colon words and change to machine code are the definitions of defining words {<name>s} such as COLON, CONSTANT, and DOES>. The generic execution procedure assigned to words defined by <name> is given in machine code. This transition is handled by ;CODE in FIG-FORTH; in PROFORTH ][, the transition is handled by (JUMP) which sets up an indirect jump to the parameter field of the following word by storing the CFA of the following word in the CFA of the word being defined. The second following word is a dummy EXIT. (All colon words end in EXIT.) The machine-code sequences are entered as primitives with dummy names. The names are dummies because these words are never called as high-level words; their PFA's are essentially assembler label addresses. One advantage of this structural change is that all machine code sequences are named primitives, so can be found using TICK. A greater advantage is that in various vocabulary compression schemes, addresses can be easily distinguished from parameter values, such as numbers and text characters. All non-primitive words except system parameters end in EXIT as a real or dummy terminator. DOES> includes a routine to compile EXIT at the end of all words defined by a <name> which itself was defined by CREATE...DOES>.

In the Washington Apple Pi version of FIG-FORTH, NEXT is an assembler label address near the end of the first primitive word, LIT. The NEXT routine was appended to the LIT routine, saving one JMP NEXT, and making the source code a little more "elegant". For mostly pedagogical reasons, I have set up NEXT as a separate dummy word, with NEXT

as an assembly label attached to the parameter field of NEXT. This is to make the routine available to a high level search, and separates it out for study.

Early FIG-FORTH implementations, such as WAP's, contained their own disk operating system for saving and reading "screens"—blocks of definitions. Direct read/write commands were invoked, DOS 3.3 was ignored. I believe this was done to make FORTH appear independent and self-sufficient, but the read/write commands still had to be tailored to the APPLE ][, so the "independence" was illusory. I believe that FORTH should be integrated with the host operating system; for the APPLE, it should use ProDOS for all disk operations and thus be usable with 5 1/4 inch floppies, 3 1/2 inch unidisks, and 20 MB hard disks, without program change.

For convenience in editing, FORTH programs are conventionally developed as 16-line screens, 64 characters per line, 1024 bytes per screen. Thus a screen occupies exactly 4 sectors, or 2 ProDOS blocks. Saving screens as separate files would be wasteful of space, because 1 block of overhead would be needed with each 2 blocks of data. Under ProDOS, however, there is a simple way of saving screens efficiently. ProDOS allows keyboard entries like

```
BLOAD FILE, A $9100, B 2048, L 1024, TTX
```

which gives fast loading of a portion of a text file directly to a specified area, starting at a specified offset (2048 bytes) and loading a length of 1024 bytes. Thus this would load the third kilobyte (screen 3 !) of the file. In PROFORTH ][, a whole set of screens, say a dozen screens defining the words needed for an EDITOR, or for a double-precision routine, are saved as an appropriately named text file, with only 1 block of overhead for each set of screens. Any desired set of screens can then be made available by suitably accessing the proper file; successive kilobyte chunks are called up by screen numbers.

## FEATURES

### (1) ProDOS commands

In ProDOS, the output intercept works through the Applesoft TRACE command; with Applesoft inactive, Ctrl-D will not call up ProDOS. In PROFORTH ][, however, any direct (keyboard) ProDOS command can be used by preceding it with "DOS", e.g.,

```
DOS DELETE <filename> <RETURN>
```

When not followed by a return, the command must be delimited by a quote mark, e.g.,

```
DOS PR#1" 1 10 INDEX DOS PR#0
```

and

```
: CAT DOS CAT" ;
```

### (2) Superfast screen listing and editing

The 80-column video memory is used as the edit buffer. After a screen is loaded (to the mass-storage buffer), the screen identification (file name, screen number) is printed, followed by the usual line numbers 0-15. The screen is then filled (essentially instantaneously) with the text by a memory move from the mass-storage buffer (>SCREEN ). This is at contd.

least an order of magnitude faster than the usual procedure of printing the text character by character. Similarly, line and character insertion and deletion are performed by memory shifts in the video memory. The customary routine involves memory shifts in an edit buffer followed by a "redisplay to end of line" or "redisplay to end of screen"; "redisplay" is a slow operation compared to a memory move.

After editing, the screen content is flashed back to the mass-storage buffer by SCREEN> , and then the buffer saved to the disk (at the correct position in the file).

### (3) Pathname prefixes

The desired screen file is accessed by entering PROGRAM, which requests a file name. ( On boot-up, this defaults to GENERAL.) Entering the name accesses the file for both SCREEN.READ and SCREEN.SAVE. (At any time, ?PROGRAM reports the name of the file in the access state.) Now, ProDOS requires complete pathnames, so a prefix must be added. In the case of 5 1/4 inch floppies, this will usually be just the name of the disk. Booting a disk will automatically store its name as the default prefix. If a disk is replaced, CAT will catalog the new disk and change the default prefix to the name of the new disk. The default prefix can also be changed with the command

```
DOS PREFIX <new prefix>
```

In the case of a large storage device, such as a hard disk, a subdirectory name (or chain of such names) may need to be added to the default prefix. If, for example, the disk has a subdirectory named FORTHFILES, this can be concatenated to the default prefix by entering

```
DOS PREFIX FORTHFILES  
making the new default  
/DISKNAME/FORTHFILES/
```

When you want a catalog of this subdirectory, don't enter CAT, but enter SUBCAT. This will list only the desired files and will preserve the default prefix. (CAT would change the default back to the disk name.)

### (4) Smart error messages

When FORTH is presented with a definition to be compiled, a mistyped word will not be recognized, and a NOT FOUND error will occur. When developing a program with a large set of screens, it is most annoying to have the LOADING process stop somewhere en route and proclaim "NOT FOUND", with no indication of what was not found, nor where the offending word was. In PROFORTH ][, the offending word is displayed as part of the message, e.g.,

```
CONSTNT NOT FOUND
```

Similarly, if a FORGET <name> is invalid because the name was mistyped, or in the protected area of the dictionary, the corresponding error message will be displayed, including the <name> which was entered.

### (5) Screen requests

Suppose a file contains 5 screens, and we enter 7 LIST. The response is "Screen # 5 is the top screen in file <name>". Similarly, if we try to EDIT screen 7 (by entering 7 E ), an empty screen will be supplied, and saved as screen 6 after editing. An attempt to force a larger number, for example by transferring a display to the buffer by entering SCREEN> (doing this below the display, not in it!) followed by 9 SCREEN.SAVE, will save the text as screen 6, and report "Screen saved as # 6 at top of file <name>".

Finally, when a program (application) has been developed, we usually wind up with unneeded screens. The desired screens are readily moved to the head of the line, and then the others removed by truncating the file at the desired point, say at the end of screen 11, by entering

```
11 TRUNCATE
```

This uses another of the features of ProDOS, the ability to set an end-of-file in an existing file, and release the space that was saved.

### (6) Program saving

After a set of program application screens has been loaded, or any other dictionary change made, the new program can be saved by entering SELFSAVE, then supplying the requested file name. This will save the current program as a binary file which can be run with BRUN <name> or -<name>.

### UTILITIES

The major utilities are the EDITOR, DECOMPILER, and STEP-TRACE.

DIS <name> decompiles colon words. Words that were defined by a <dname> which was itself created with DOES> have that <dname> identified, along with the number of parameters in <name>. A typical case would be a vector defined by ARRAY.

STEP-TRACE is operated by entering TRACE and holding down a key, such as the space bar, until OK appears. Then enter the word to be traced; each bar press will cause one step to be executed (hold down for TRACE). Any word or component below the FLOOR in the dictionary will be executed normally (without tracing); FLOOR defaults to the value in FENCE. To analyze only words defined subsequent to a given time, enter HERE FLOOR ! To see all the details of running a FORTH word, try 0 FLOOR ! The trace mode is ended by NOTRACE, and holding down the bar until NOTRACE itself has been traced.

The EDITOR was designed for use with an APPLE 80-column card. The cursor controls are

```
-> or CTRL-U  
<- or CTRL-H  
UP-ARROW or CTRL-K  
DOWN-ARROW or CTRL-J  
Delete character = CTRL-G  
Delete word = CTRL-T  
Delete line = CTRL-Y  
Insert line = CTRL-N  
Character insert mode = CTRL-V (toggles on and off)  
Clear screen = CTRL-X  
EXIT-SCRATCH (cancel changes) = CTRL-Z  
EXIT-UPDATE = CTRL-Q
```

(In some models of ][e, ESC is always "captured" by the 80-column card and cannot be used for EXIT-UPDATE). ESC enters the usual escape mode, with the inverse + cursor.

### MANUAL

PROFORTH ][ is available with a manual which not only explains the use and stack effects of every word, but also gives the detailed definitions of all colon words, and the source code for all regular primitives. (Irregular primitives are those needed to create the system from scratch, and are not usually used by programmers.)

(3)

# BEST OF THE APPLE ITEMS FROM THE TCS

by Euclid Coukouma

## MOUSETALK

FROM KIM BRENNAN ON 12/20

Of course the first thing I did when I got home was copy the program. Surprise! Mousetalk has its own copy routine for installation. So far, it is extremely easy to use (no surprise there). I like being able to use a program without looking at the manual. I am using it right now, so I haven't yet experimented with all the nuances. Still the installation was fairly simple and straight forward. I'll be curious to see if there are any major differences with it on a //c. Ah, Christmas is such a wonderful time of the year.

FROM DALE SMITH ON 12/24

The capture buffer is 33+K without any expansion. But /RAM is gone; I believe the program uses both Main and Aux memory, but a RamWorks, Z-RAM, or RamFactor type card should bring that capability back. BTW, do you get 32K only for expanded editing (.R command) or do you know something else? I only get 26K without expansion of the editor; and that's the size limit of my capture buffer.

FROM DALE SMITH ON 12/24

I don't believe /RAM will work for MouseTalk. I scanned through the code with ProByte's Byte.Zap and saw what appear to be error messages in the code. One of these, if I remember correctly, said the MouseTalk couldn't run from /RAM. I take this, and make a flying leap to the **\*\*tentative\*\*** conclusion that AUX memory is in use by the program. But, I am sure it will work off of memory expansion cards like Z-RAM, RamWorks, or RamFactor.

FROM KIM BRENNAN ON 12/24

Something I noticed today, while using Mousetalk. "Sessions" are stored as SYS type files. Obviously a SYS file should be executable AND THEY ARE! When a SYS session is run it starts Mousetalk and automatically dials the number assigned for that session. Pretty nifty, especially when using Bird's Better Bye which only shows prefixes and SYS files.

FROM STEPHEN WYATT ON 12/27

Mousetalk ONLY works for the //e and //c, cause I have the ][+.

FROM TOM VIER ON 12/28

Just got my MouseTalk yesterday and am very disappointed. Boy, do I dislike the Apple Interface! Very limiting. Maybe, if I memorize all the OA commands, I can skip all the menu stuff and what's where and just DO IT! So much flexibility is gone now. For example, I have to do a whole new session for each phone number. I guess I can put all the nos. in the macros of one session like I do now. Modem echo is turned off though. INSTALL is nothing like it once was. There is so much I can't change for myself. The biggest disappointment was the alleged full screen editor. Actually it's line oriented. It sticks a hard CR at the end of each line, like it or not. I was going to use MouseTalk as both Telecomm and

abbreviated Word Processor but the hard lines mess that up. All the file conversion utilities are gone too (ie BINFILEDUMP). Lee Raesly, "amen" to "Leave My Apple Alone!"!

FROM PAUL SCHLOSSER ON 12/28

Yes, MouseTalk has been disappointing to say the least. I've been unable to run it from a /RAM disk, or even get it to 'see' a /RAM disk for file handling. I've tried emulating slots other than S3,D2 and that doesn't work. Tonight I partitioned (locked out) the bottom 128K and loaded MouseTalk to /RAM (even renamed /RAM to /MOUSETALK) in both S3,D2 and S7,D1 and when you execute MT SYSTEM it gives the prompt, "Sorry, MouseTalk cannot be run from /RAM." Even scarier is that it's 'hung' on me twice, while in the editor. I'm going to call United Software tomorrow and complain about MouseTalk. I'll post their comments here.

FROM DANIEL HUGHES ON 12/30

I agree with Kim. This new program is 100 percent improvement on the old AEPro. At least you don't have to have a machine language brain to read the documents. Hear, hear.

FROM STEPHEN WYATT ON 12/30

I have a friend with a RAMWORKS III 1.5 meg card, and he runs MouseTalk from it all the time.. He also does everything else, e.g. autosave, macro, etc., in RAM. I'll ask him how he did it and leave a message here.

FROM KIM BRENNAN ON 12/30

Actually, Mousetalk is so easy to use that (except for Macros) you don't need the manual for regular work. Careful survey of all available options on the screen is fairly quick and has the capability for aborting mistakes. Also there is a built in HELP facility which gives a little extra hint on some of the options that may at first seem obscure. While I can't say that I have read the manual from end to end, it seems relatively straightforward. There is a large glossary in the back of the manual and a simple question area that covers some of the more common questions with their answers. Viva Rodentia!

## RAMFACTOR][+

FROM MIKE UNGERMAN ON 12/21

Well, I broke down and did it! Purchased a RAMFACTOR and the battery backup for my PLUS; sold the 128K clone at the Garage Sale. Right now, only 256K, but soon to be 1 MEG using 256K chips. Next year, perhaps on to 16 MEGs (Ha! not until the 1 MEG chips they use come down in price from \$33 EACH!). Anyway, I've been experimenting with the installation of AW on the RAMFACTOR. Lots of interesting quirks on a PLUS; problems with AE's ROM boot program and setting up partitions, but should get easier once I have more memory. Now the question: Does anyone know if any of the desktop accessories are supported on a PLUS by AE's AW patches. I'd hate to spend the money for a Pinpoint/MacroWorks/Autoworks etc. and not have them

contd

work. Anyone here gone through the growing pains I am starting with this kind of configuration? I'd like to learn what I'm up against (and no, I am not "upgrading" to an "e"/"c" or "gs"!!!!). ]['s forever.....

#### APPLEWORKS 2.0

FROM LOU PASTURA ON 12/23

Guess what just came in the mail! AppleWorks 2 Expander! In looking through the docs (even I read them once in a while) it looks like the Ramfactor on a ][+ may or may not work. (How's that for a definitive response?!?!?) Seriously, there is one reference to "Increased Desktop Size" that says "(for Ram Works & Z-Ram products)". Later on, when discussing Desktop Expansion it says, "The Desktop Expansion (over 56K) feature already built into Appleworks 2.0 requires one of the following cards: RamFactor Card (Apple //e only), Apple II Memory Expansion Card (Apple //e only), GSRAM or GSRAM Plus (Apple IIGS only). The enhanced version of Appleworks utilizes RamWorks or Z-Ram memory to expand the Desktop, enabling you to work with larger Desktop files...." Whether any of this means anything in your situation, Mike, is unclear. However, if you want to try it out prior to calling Applied Engineering to inquire and/or SCREAM (depending on your attitude at that point), please call me and we'll arrange to get together. It's probably a lot easier for me to bring you the disks rather than you bringing your computer here and since we're so close (I'm in Annandale) it's no trouble to drop by if that will help. (Besides, I want to know too!)

FROM MIKE UNGERMAN ON 12/28

Stopped by Shelly Kramer's today and picked up my extra 756K of RAM. I looked at the new AE disk, which he had just received too. It will only work on an Apple ][e! What a rip-off! I guess that all the mods Apple made to AW 2.0 were too much to try and convert to the ][+. The AE manual supports the + with two versions of AW: 1.2 for 64K only and 1.3 for 256K and up. I configured my partitions such that 512K was reserved for AW, 111K for a normal ProDOS RAM disk and 400K for a large DOS 3.3 volume. I copied both sides of AW 1.3 on the AW partition, booted AW and found that AE creates a desktop of about 319K after the program space is used. That's good for now. I'm using the 400K DOS 3.3 for this year's Howardsoft Tax work with last years program (although I understand that this years update is in ProDOS), and the 111K RAM disk for a basic boot into ProDOS 8 V 1.2 modified with the read vice write patch and a menu program. I'll probably call AE next week and ask if they have any intentions of supporting the Plus in further updates.

#### PASCAL (TURBO, APPLE & OTHERS)

FROM KAREN RALL ON 12/16

Turbo and Apple Pascal seem to be the top contenders. Each has its fans. I have used Apple Pascal and found it to have an excellent editor and very useful utilities such as graphics, sound, string handling capabilities available through UCSD Pascals. Another thing to consider is how you plan to learn the language. There are many good books available on Pascal, most seem to support UCSD Pascal conventions (Apple Pascal is a UCSD type with graphics and a few extra features).

FROM KIM BRENNAN ON 12/20

Instant Pascal is primarily designed for learning Pascal. It is nearly identical to MacPascal. It has the drawback that it is interpretive (which makes programs run somewhat slower) and that programs written within it do not run without it. Meaning you can not write a stand alone program with it. Obviously for the price of \$250 (or slightly less with discount) you can go several other ways than Instant Pascal.

FROM ROBERT B. CALHOUN ON 12/26

I wrote the Kyan review (and am not responsible for the end of it getting chopped apart!) and I like it because it is totally ProDOS compatible. Still, Turbo WILL be faster than Kyan because of the superior speed of a 6MHz Z80. (I've seen the Applicard for as low as \$49 from a mail order joint called BCE.) Kyan's shell is like UNIX and I like it a lot, plus it compiles to BIN files (SYS on demand) and will run stand-alone (almost...you need to put a library file on the disk...they let you do this.) They also give you a good manual and publish a semi-monthly newsletter. The current version is far better than the release version, and the GS version looks really great from its specs (release first quarter 87), but the price has gone up to I believe \$99 for the compiler and KIX, from about \$49. Oh, well. So get Kyan if you want a ProDOS compatible compiler, Turbo if you want a fast one. I personally can't see getting Apple Pascal...it is being discontinued, and I find its so-called operating system slow and restrictive. It's a matter of personal choice, but I like to use the same environment everywhere, and right now I run Appleworks, AEPro, and whatever else directly from the KIX shell, whereas Apple Pascal is in its own little world, and that world is shrinking.

FROM THOMAS VALLEE ON 12/26

In general I agree about Turbo. The simple programs I've written so far run so much faster—there's a whole order of magnitude difference. As you said much faster than Applesoft and faster than compiled Applesoft and much faster than Apple Pascal as well. We have Turbo on the IBM PC at work but I just don't have time to fool with it there. To the extent I have used it, at least for the simple programs I write, using Turbo on IBM PC and on Apple is virtually the same. I'm sure that if need be I could develop modules for a larger program on the PC at work using the Apple at home and easily transport and convert them for the IBM. Certainly for the price, I felt that the combination of Applicard, Wordstar and CPM with Turbo was a bargain.

FROM JOHN W. AILES ON 12/31

I read your message of 12/13 and all of the assorted replies and decided to toss my two cents in as well. I have used Instant Pascal, Apple Pascal and Turbo Pascal. Turbo is my first choice. When I first got Apple Pascal (Version 1.0!), it was GREAT. Having the capability to do what had only been done on a mainframe (and in fact, which I was at that time doing on an old Honeywell Mainframe) was OUTSTANDING. I loved the editor and the assembler was not half bad. I was hooked on UCSD Pascal. (In case you did not already know, the environment that we call Apple Pascal was developed by Prof. Ken Bowles and associates at the University of California at San Diego, hence UCSD Pascal; it

contd.

runs on numerous machines and used to be the cats meow in Pascal.) When I saw Turbo advertised in Byte magazine, I had just finished talking to a friend who had it on his IBM PC and he said it was outstanding. It was. Compilation speed so far outstripped Apple Pascal that it nearly tripped my productivity. Combined with that, I found that CP/M 3.0 (which runs on my ALS CP/M card) was significantly preferable to the UCSD system I had loved for so long—it was simply so much FASTER. Anyway, I quickly ported over every program I had running in Apple Pascal and translated it into Turbo. I have written several very large programs (6000 lines plus) and with overlays Turbo has handled them nicely. I just can't say enough good things about Turbo. The only potential liabilities are the fact that graphics and sound are not supported in the Apple version (though a very dedicated programmer could get around this by linking some assembly routines). Still, for my money, it is the way to go.

### GARBAGE COLLECTION

FROM ERIC RALL ON 12/07

If you are writing the program under ProDOS you can Call the ProDOS garbage collector with a PRINT CHR\$(4) "FRE". That Call should be executed before the Applesoft garbage collector goes to the Call on its own. If you are not under ProDOS then I might suggest getting an early copy of OPEN APPLE. Some time ago Tom Weishar published a fast garbage collector called "The Incinerator". It was written by Bill Basham. If for some reason you are having problems with the ProDOS garbage collection Call hanging the program during a disk input loop, you can Call the garbage collector directly. This IS NOT NORMALLY RECOMMENDED!! Direct Calls to unpublished entry points run the risk of crashing if you change versions of ProDOS or, in this case, BASIC.SYSTEM. But if you are intrepid and want to bang directly in anyhow, a CALL 41028 will directly Call the garbage man in ProDOS and after, return to your program.

FROM BRUCE FIELD ON 12/08

There was also a garbage collection routine published in Call-A.P.P.L.E. that runs under DOS 3.3. It was reprinted in Call-A.P.P.L.E. In Depth, Number One, All About Apple-soft. This was written by Randy Wiggington and runs quite fast. I can get you a copy if you need one.

### PROSEL

FROM DAVE HARVEY ON 12/09

The version I bought from Glen back in August of this year is version 2.1 dated July 2, 1986. ProSel is the same type of program as Catalyst. I use it for my 1 meg ram disk. Included on the same program disk is a backup program which I think is better than Apple's backup program. This allows you to backup a large ProDOS volume such as on a hard disk or RAM disk to floppies. The process of backup is very fast and simple. ProSEL's main advantage is that you no longer have to specify pathname and name of next program when quitting a program. One advantage of the backup program is that you can have a very large file on your ram disk that is bigger than you could get on a floppy, because the program saves onto floppies without regard to file sizes.

FROM TOM VIER ON 12/10

There is also a program called CAT.DOCTOR that recon-

structs directors and pointers and such. There's a bug-free alphabetizer, a program to consolidate used blocks on a sparse disk to speed access (called BEACH.COMBER), and probably other knick-knacks.

FROM DALE SMITH ON 12/10

For anyone interested here's Glen Bredon's address: Glen E. Bredon, 521 State Road, Princeton, NJ 08540

FROM WALT MOSSBERG ON 12/17

ProSEL is a truly sensational program for organizing and selecting files on either a hard disk or 800K 3.5" disk. It is far superior to Catalyst, allowing you to display 48 program choices on screen, selectable with either keyboard or mouse, and to arrange and/or group these choices however you wish, naming them whatever you wish. On my Sider, for instance, I have multiple customized autoboot versions of AE Pro which, when selected from ProSEL, instantly dial up MAUG (on CompuServe), our WAP TCS, and others. There are numerous utilities thrown in free with ProSEL, which alone are worth the \$40. One is the fastest disk copier I've heard of. Another is the fastest hard-disk backup and restore program in captivity. Most impressive is CAT DOCTOR, a full-blown FILER-type utility that leaves both Apple's FILER and COPY ][+ in the dust. And, ProSEL owners can get constant updates from MAUG, which can be EXECed in the presence of a special key file Glen includes with ProSEL.

### 3.5 DISK DRIVES WITH IIc

FROM TOM VIER ON 12/06

You can't use the Mac 800K drive with the //c or the pre-platinum //c (I don't know about the expanded //c). I have also heard it will not work on the GS (this could be just because you can't manually eject it like Apple 3.5 or UniDisk 3.5). I guess a chart would look like this:

Machine	UniDisk 3.5	Apple 3.5	Mac 800K
II w/3.5 card	Yes	No	No
II+ " "	Yes	No	No
//e " "	Yes	No	No
//e enhanced w/card	Yes	No	No
//c w/o 3.5 ROM	No	No	No
//c w/ 3.5 ROM	Yes	No	No
//c Mem. Expan. ROM	Yes	No	No
IIGS	Yes	Yes	?
Cripple MAC	No	No	No
Fat MAC w/MFS	No	No	No
Fat MAC w/HFS	No	?	Yes
MAC+	No	?	Yes

Anyone with DIRECT knowledge, please let me know about the "?"s!

FROM DALE SMITH ON 12/08

When I tried an Apple 3.5 / "platinum"(4100-series) //c combination, I could not get the //c to recognize the presence of the Apple 3.5. PR#5 came back with No Device Connected. My conclusion: It won't work—darned!!

FROM TOM VIER ON 12/07

I was afraid of that. The GS has plenty of ROM space to handle both the UniDisk 3.5 and the Apple 3.5. The //c does not. That means that 3.5 accesses (using the UniDisk 3.5) will remain as slow as the floppies on the //c....

# STOCK SIG NEWS

by Andrew D. Thompson

The December meeting consisted of four contributions: a sub-group report; sharing general information; presentation of a new approach to cycle analysis; and a plan to evaluate three methods for projecting selected indices of the New York Stock Exchange.

## 1. Mutual Fund Sub-Group

The November 26 meeting began with a discussion on market timing. On the national level, sub-group members noted the continued diversity of viewpoints. J. Granville, as of November 26, remained bullish and projected that the market would continue to rise through the end of 1986. Others such as Finnegan have remained bearish since March, while Charles Allmon has been largely in cash. Similarly, Mr. Fontain, director of the T. Rowe Price Capital Appreciation Fund, has reported that he also is largely in cash.

On the local level, Harley Wilbur reported his analysis of trin, which has remained bearish. Thompson's monitoring of the Fidelity funds indicated that between August 29 and October 31, Fidelity's clientele, reported to be primarily individual investors, have made massive shifts of their assets from select funds into more conservative money market and bond funds. Approximately 2.2 billion dollars have left growth and select funds while Fidelity money market funds have grown by 3.3 billion dollars over the two month period.

Wilbur reported that his performance index for 24 Fidelity select funds had Paper and Forest Products, Air Transportation and Energy among the best recent performers. Among the T. Rowe Price family, Capital Appreciation and New Era funds have ranked highest of 9 funds monitored over the past 12 weeks.

The February meeting of the Mutual Fund Sub-group will be on the 24th (Tuesday) at 8PM at the WAP office.

## 2. GENERAL SHARING OF INFORMATION

At the December monthly meeting, Wilbur reviewed two publications, "Technical Analysis of Stocks and Commodities" and "Wall Street Micro Investor" and pointed out the modest usefulness offered by each. Members noted that Robert Prechter, editor of "The Elliot Wave Theorist", had switched from bull in November to cautious in December. As of early December he projected a dip in early January but was currently advising subscribers to be fully invested by March.

## 3. A NEW METHOD FOR CYCLE ANALYSIS

Peter Kasper and Steve Rienhart presented the results of software which they have developed for doing cycle analysis on the Mac. They illustrated its results with a volatile gold mutual fund and for the S & P 500 Index. Their proprietary software uses 1000 data points, which allows the identification of cycles over a period of several years terminating with the most recent closings. Their research with the gold fund identified a 45-week pure harmonic cycle which projected a short-term continuance of the current downward trend in price. Their method uses a digital Butterworth band pass filter and additional artificial intelligence techniques to reduce the noise. The unique approach, Kasper and Rienhart claimed, results in no lag time in identifying turns in market prices.

Their research with the S & P 500 Index turned up a 12 to 13 week cycle whose projection showed no hint of any downward trend. By using weekly data from 1975 to the present, findings pointed toward a somewhat sideways trading market to prevail for approximately the next six months followed by a strong move to the upside.

Rienhart indicated their methodology began with their professional work with detecting acoustical signal vibrations. Their primary contribution has been the creation of a lag-free filter which then allows projections to be made with vastly diverse data ranging from securities and sonar to electrocardiographs. With regard to stock market applications, Kasper said he favored using this method in rising markets with selected wide-swinging securities, be they a gold mutual fund, futures, an index or individual stock.

## 4. FUTURE MEETINGS FEATURE A "FILTER-OFF"

In response to the Kasper/Rienhart presentation, Irv Lowen and John VanHorn agreed to an empirical test of projections based on their respective three filter methods. All parties agreed to present at the January 8th SIG meeting their market projections for the subsequent month. These projections and methodologies will be evaluated and discussed at the February 12th meeting.

Members or guests who want to make presentations at future meetings may call Ron Grognet (296-5444) or Ben Fogle (469-5822). Information on the mutual fund sub-group may be obtained from Andy Thompson (270-6790). ☺



Our December meeting was held at the Washington Ethical Society, and featured a discussion of instrument creation using additive synthesis techniques. In additive synthesis, one starts with a simple sine wave and adds harmonics to create the desired complex wave. Bill Bittle included a demonstration of various instruments on the Alpha Syntauri synthesizer, plus modification of existing instrument sounds.

Music SIG will be presenting the April monthly WAP program, and volunteers were solicited to take part in the musical events.

The February meeting will be held on the second Saturday at 1:00 at the Dolly Madison Library in McLean, Virginia. Call me at (301) 490-7484 for details/directions. ☺

# VIEW FROM THE HILL: What's Happening to BASIC?

by Rich Norling

BASIC was the first language used to program microcomputers, and it is still the easiest computer language to learn, remember, and use. But a lot has happened since the first BASIC interpreter was written for a little computer. BASIC is growing up.

I recently had occasion to obtain and read a copy of the new draft proposed standard for the BASIC language. The new BASIC standard was developed by a committee working under the American National Standards Institute, Inc. (ANSI). The members of the committee came from industry, universities, and government. The draft proposed standard was completed on April 1, 1985, and is expected to be published officially later this year.

## How Complex is the Language?

The first versions of BASIC were implemented when even little memory chips were very expensive, and the machines were really tiny (how would you like 8K or 16K of RAM?). So, naturally, the first versions of BASIC were also small. They contained only the statements and functions that were really essential for writing programs.

Now that RAM chips are bigger and cheaper, and the machines have become more capable in every way, it is natural for programmers to want programming languages to increase in capability to match the hardware. If the existing languages don't grow to keep up with the hardware, they will be replaced by newer languages. The BASIC language has grown rather slowly up to now, causing a number of programmers to experiment with Pascal or other languages.

BASIC will still be easy to learn, easy to use, and easy to remember. The new standard adds to BASIC many of the best features of Pascal, without the awkwardness of Pascal's syntax. (Lest you accuse me of being biased against Pascal, I should mention here that I do the majority of my own programming in an enhanced version of Pascal).

What BASIC gains is power, breadth, and new options for the programmer. New hardware capabilities will be handled within the BASIC language, and the BASIC programmer will have more choices of simple and direct ways to do things that used to require more complicated code.

## New Capabilities

The earliest versions of BASIC did not contain any commands to handle graphics or disk files, for a very simple reason—the machines on which BASIC was first implemented did not have graphics capability or disk drives (yes, Virginia, they really did store programs and data on cassette tapes—very awkward, and slow as blazes).

The Applesoft BASIC built into the ROMs of the Apple // family gained graphics commands very early in its life, but the disk file commands are still handled by the operating system (DOS 3.3 or ProDOS) instead of by the language itself. On the Macintosh (and many other machines) the disk file commands are part of BASIC, which does the talking to the operating system for you behind the scenes.

The new BASIC standard includes a full range of statements and functions to handle files, devices, and graphics.

Inclusion of these subjects in a formal standard should encourage the people who implement BASIC on different machines to write their implementations in similar ways. That will make it easier to learn the differences between different versions of BASIC, and will also make it easier to move BASIC programs from one machine to another.

In addition to files and graphics, the new BASIC also contains matrix operations and the ability to handle real-time programs. Want to fill a 3-dimensional array with a single value? With a BASIC that meets the new standard, you can do that with one simple statement instead of having to write three nested FOR/NEXT loops.

## New Programming Features

Almost every part of the BASIC language gets increased flexibility and ease of use under the new standard. If I tried to mention them all, Bernie would be justifiably upset because this article would fill the entire Journal.

Let's mention just a few. You can dimension an array as DIM A(1950 TO 1990) instead of being stuck with a lower bound of 0 or 1 for the array. You can choose whether to supply arguments to trigonometric functions in radians or angles. You can choose strict ASCII or native (alphabetical) comparisons for strings. Formatted output, of course. Chaining from one program to another is explicitly provided for.

In the new BASIC you can use multiple-line IF/THEN/ELSE/ELSEIF/ENDIF constructs. You can define both single and multiple-line functions. You can have subprograms with local variables and parameter passing (by value or by reference), and you have control over whether or not each subprogram has access to the main program's global variables. And yes, if the BASIC you are using complies with the standard you can call subprograms and functions recursively (that is, you can invoke a subprogram or function more than once in nested code and BASIC will correctly remember the local variables for each invocation).

Another control structure that comes into BASIC (from Pascal) is the SELECT CASE statement, which allows you to write much clearer code for multiple branching statements. The ON/GOTO and ON/GOSUB statements do the job, but are hard to read and provide less flexibility than SELECT CASE. An example of a SELECT CASE statement, where A\$ is the variable determining the branching:

```
SELECT CASE A$
CASE "YES"
  b=1
CASE "NO"
  b=2
CASE ELSE
  b=3
END SELECT
```

Isn't that code much easier to read when you're hunting for bugs than the traditional ON/GOTO statement?

## How Much Will I Have to Learn?

The first official standard for "minimal BASIC" that was approved in 1978 required only 39 keywords in the entire  
contd.

BASIC language. Learn only 3 keywords a week, and in three months you would be a true expert about BASIC. What a breeze!

Applesoft BASIC has a vocabulary of 98 words, plus the keywords you need to imbed to handle disk files through DOS 3.3 or ProDOS. The new BASIC standard prescribes a vocabulary of about 250 words. Do you have to learn them all? No!

If you already know one version of BASIC, you could start writing programs in a new BASIC right away. If some little bit of the syntax for statements you already know has changed, you'll benefit from the improved error handling in newer versions. Once you get comfortable in the new environment, then you can start exploring the additional statements and functions that give you new power and freedom.

What if you are a beginner? Well, BASIC is still the best language for beginners because it behaves with a little common sense. For instance, you can tell BASIC to print a number without specifying the exact format of the number, and BASIC will print it. So you can get a program running without learning everything first. Later on, when you've had time to learn about formatted printing, you can specify the exact format for the number if you want to.

You can write simple BASIC programs after learning only a few key words. The way to start is by learning the first few words and using them. Then you can expand your knowledge of the language to include new features as you need to use them in your programs.

#### Where Can I Get It?

Now for the bad news. There is no implementation of BASIC that fully meets the new standard. There are, however, some implementations that come close.

Microsoft BASIC has been evolving fairly slowly, and is still pretty far from the standard. Microsoft finally added multiple-line IF/THEN/ELSE statements in version 3.0 that began shipping for the Macintosh last month.

True BASIC is probably closest to the standard (perhaps because one of True BASIC's authors, Dr. Thomas Kurtz, chaired the subcommittee that wrote the new standard), but differs in some important details. I find particularly irritating True BASIC's requirement that you always type the word LET for replacement operations (you have to type "LET A=1" instead of just "A=1").

The Macintosh BASIC that Apple Computer wrote and then did not publish officially was very close to the standard while providing an extremely comfortable programming and debugging environment. If you are lucky enough to find a copy somewhere, enjoy it. It does not implement the matrix or real time parts of the standard, and its graphics tend to be closer to the Macintosh QuickDraw graphics than to the optional graphics part of the new standard.

The new BASIC standard is still not widely known, since it has not been officially published. I had to call California and then write to New Hampshire in order to find out how to get a copy (it turned out that I could purchase a copy of it here in Washington, once I knew whom to contact). Publication of the standard should generate additional pressure on existing publishers of BASIC to upgrade their implementations to include features in the standard. In addition, you can expect to see the arrival of new versions of BASIC that implement all

the powerful features the standard describes.

Rich Norling is coauthor of *StatWorks™* and *Cricket Graph*, and the author of a new Macintosh application called *Pict-O-Graph™*. He wrote the book *Using Macintosh BASIC*, published by Osborne-McGraw/Hill. Rich is President of Language Systems Corp. ☺

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# PASCAL NEWS

by Robert C. Platt

The new year brings news of increased support through APDA and tales of my trip to CalTech.

**Apple // Tools Available Through APDA.** Apple used to make a number of valuable library units available either as separate products or as items that only developers could license from Apple. These products include: the "Pascal 1.3 Device Support Tools" (which allow device drivers to ATTACH to the p-System and should include a ProDOS Access Unit); the "Desktop Toolkit" and "Filecard Interface Toolkit" (which support a user interface similar to Appleworks.) Apple has now sent these items to the Apple Programmers and Developers Association for sale to its members.

**TML Expands Line to Cover IIGs.** TML's latest ads announce a version of its 2.0 Pascal compiler for the IIGs. Objects are supported. I have yet to see anyone using the IIGs version, so check availability before you order. TML joins Pecan in offering IIGs Pascal implementations. Of course, Pascal 1.3 will also run on the IIGs, but does not support native mode 16 bit operations. Other Pascal vendors are likely to throw their hats into the ring as well.

One nice feature of TML's IIGs compiler is that it supports calls to the gs toolbox in a manner similar to its support of traps on the Mac. For example, if you wish to call the moveto procedure as code 58 in toolkit 4, you would declare: Procedure MoveTo(x,y: integer); tools 4, 58; This feature makes assembly language "glue routines" unnecessary. The current TML IIGs compiler requires the Apple Programmer's Workshop. TML plans to offer a IIGs Pascal compiler which will operate in a window environment separate from APW, and a cross-compiler to permit the Mac to generate compiled programs for the IIGs.

**TML Pascal and MacApp.** TML is planning version 3.0 of TML Pascal for this spring. It will offer conditional compilation and constant expressions. With these new features, TML will be able to compile MacApp, Apple's fill-in-the-blanks application generator. TML Pascal will continue to generate MDS format .rel files. TML's goal is to be source code compatible with MPW Pascal, but not support MPW's object code format.

There is a bug in TML Pascal 2.1: the compiler can't handle situations where it can't find .rel and .upas files.

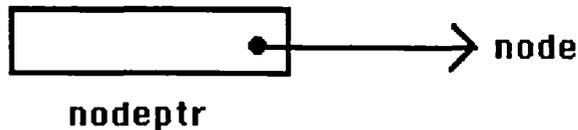
**Pecan Group Purchase.** Not enough people contacted me about doing a group purchase of Pecan's Pascal or Modula-2 compilers. Therefore, everyone should proceed on their own at the \$99 mail order price.

**p-System at CalTech.** The undergraduate computer labs all run the p-System, mostly on HP 9836C "chipmunk" computers. (Upperclassmen use more powerful models nicknamed "gerbil" and "bobcat".) Two students, Chris Stassen and Glenn Gribble, have written their own powerful screen editor for the p-System called *caged* in Pascal and assembler. Two other students, Dave Gillespie and Peter Alfke have written an impressive unix-like shell for the p-system which supports I/O redirection, passes arguments to programs, and

retains a command history for subsequent recall and re-execution.

**Pointer Variables.** One of the most powerful features of Pascal is the pointer data type. Pointers allow you to refer to areas in the computer's memory through other variables rather than by using a large number of scalar variables or creating a large array. Pointers therefore allow you to build a complex data structure without arbitrarily setting an upper limit on its size at the time you write your program.

The following program illustrates this concept with a game that should be familiar to DOS 3.3 users. The DOS 3.3 System Master Disk had a demo file called ANIMALS, which allowed you to teach the Apple about distinguishing characteristics of individual animals. After answering selected questions, the computer guesses the animal you are describing. If your animal does not match the one already in the data base, the animal is added along with a new question that separates it from the guessed animal.

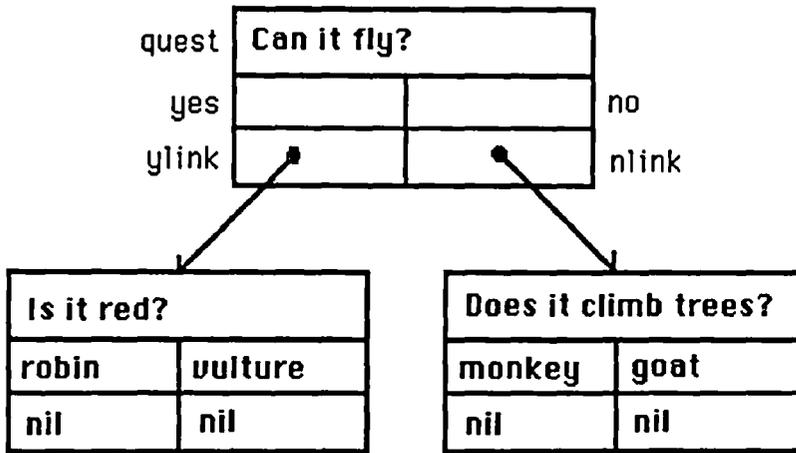


In general, pointer variables store the location of data rather than the data itself. However, to be consistent with Pascal's strong type checking, Pascal insists upon knowing the data type which is pointed to (called the *base type*.) In our sample program, the pointers are used to point to a *record* of type *node*. Therefore, each pointer variable is defined to be type *nodeptr* (although I could have chosen any other legal name.) Type *nodeptr* is declared as  $\wedge node$ ; The little hat (shift-6) means that *nodeptr* variables point to nodes and are not nodes themselves. Pascal also uses a notation which allows your program to talk about the pointer variable and the object to which it points separately. If *p* is a pointer variable, then  $p^\wedge$  is the object that *p* points to. Pointer variables have one built-in constant, *nil*, which is the value of a pointer which doesn't point to anything.

Unlike normal variables which are allocated when their procedure is activated, pointer variables can be used to refer to dynamically allocated variables. Calling the procedure *new(p)*; will allocate another variable of the base type and set the pointer variable *p* to the address of that new variable. Dynamically allocated variables allow our program to handle as much data as will fit into the computer's memory without worrying about arbitrary array dimensions.

The idea of the sample program is to build up a data structure of questions and possible follow-up questions or answers. Because each question can be answered yes or no, two different branches can be taken on each question. The following diagram looks like a tree whose branches keep on splitting in pairs. Such data structures are therefore called "binary trees."

The program keeps on adding nodes to the tree as the user adds animals to the game. However, the program needs to be able to trace a path along the tree each time the user tries out  
contd.



another animal, so we need a pointer to the start of the tree. The pointer variable *root* serves this purpose in our game program. In order to kick off the game, procedure *Init* starts off the tree with a node for the question, "Can it fly?"

The only other procedure is called *guess\_n\_add*, which is used to avoid unnecessary duplication of code between the yes and no branches of the if statement which processes the user's answers.

```

Program animals;
type animalname = string[12];
nodeptr = ^node;
node = record
    quest:string[25];
    yes :animalname;
    no :animalname;
    ylink:nodeptr;
    nlink:nodeptr;
end;
var root:nodeptr;
    p :nodeptr;
    ch :char;
    done:char;
Procedure init;
begin
    new(root);
    with root^ do
        quest:='Can it fly?';
        yes:='sparrow';
        no:='lion';
        ylink:=nil;
        nlink:=nil;
    end;
end; {init}
Procedure guess_n_add(var s:animalname;var
                    link:nodeptr);
var q:string[25];
    newone:animalname;
begin
    done:=true;
    writeln('It is a ',s);
    writeln('Is this correct?');
    read(ch);
    if ch='n' then
        begin

```

```

        writeln('Give me a question to
                distinguish your animal from ',s);
        readln(q);
        new(link); {add an element to tree}
        with link^ do
            quest:=q;
            writeln('For a ',s,' is the answer yes
                    or no?');

            read(ch);
            writeln('What is your animal?');
            readln(newone);
            if ch='y' then
                begin
                    yes:=s;
                    no:=newone
                end
            else
                begin
                    yes:=newone;
                    no:=s
                end;
            ylink:=nil;
            nlink:=nil
        end; {with link^}
    end; {if ch='n'}
end; {guess_n_add}
begin {animals}
    init;
    repeat
        writeln('think of an animal and I will guess
                what it is');

        p:=root;
        done:=false;
        repeat
            with p^ do
                begin
                    writeln(quest);
                    read(ch);
                    if ch='y' then
                        if ylink=nil then
                            guess_n_add(yes,ylink)
                        else p:=ylink {move down tree}
                    else
                        if nlink=nil then
                            guess_n_add(no,nlink)
                        else p:=nlink;
                    end; {with p^}
                until done;
                writeln('Do you wish to play again?');
                read(ch);
                until ch='n';
            end.

```

# THE FUTURE OF AMERICAN BUSINESS— THE U.S. IN WORLD COMPETITION: A Book Review

by Joseph A. Hasson

The Future of American Business - The U.S. in World Competition by Marvin Cetron with Alicia Pagano and Otis Port (New York: McGraw-Hill Book Co., 1985), 239 pp.+xxix, \$15.95.

The main thesis of this very interesting book is that the United States has been outdone in world markets. In the 1950's and 1960's, "when manufacturing, mining and construction furnished a third of all jobs, no one dreamed that America's mighty industrial empire could be whittled down so quickly. "But", the authors say, "it is happening—and with a vengeance that too few Americans yet comprehend." By the year 2000, only eight percent of America's jobs will be in manufacturing—one third of its present level. By 2015, jobs in manufacturing will be down to four percent of the total work force. The changes implicit in these figures can be very unsettling; yet neither government nor business have confronted or come to grips with this portentous upheaval. To cope successfully with the issues implicit in this change requires ingenuity and cleverness but, most of all, enlightened policies.

Our crisis reflects past mistakes—some egregious failures in perception by management who were out for quick short-term gains and misguided greed on a scale never before experienced or witnessed. It is mind-boggling to this observer that foreign industrialists—e.g. Japanese—have been telling us what U.S. managers of large industrial firms have been doing wrong!! There is an irony in this situation which is exceedingly difficult to accept. One is reminded of the famous book by the French writer, Jean-Jacques Scrivan-Schreiber, *The American Challenge* (translated from French, 1979) where he expressed European fears over the dominance of American technology. The shoe is on the other foot now; but the sources of our fears are largely in the Far East.

This book covers a spectrum of different topics and areas: computers and semi-conductors; biotechnology; the service economy; a brief survey of each of our major competitors in an age of high technology, from West Germany and Yugoslavia in Europe to Latin America in our Western Hemisphere to Africa, Southeast Asia and the Far East, including Japan, South Korea, Singapore and Taiwan. It is a fascinating chronicle of what the future may hold for us—to the extent that human imagination can discern outlines of the future. The implications for the drastic adjustments that will be required are horrendous. We know from past experiences that such structural adjustments can be highly disruptive and weigh on different segments of our society unevenly—some being winners and others losers. Break away, then, from your keyboards, your bits and bytes, your complex programming languages and take some time to read this book. It could help you distinguish the forest from the trees in a fast moving era. Developments that, in an earlier age, may have taken decades are now being telescoped into a few years. Change can be painful in and of itself; but compressing adjustments

into a short time span can increase the pain—especially, if we are ill-prepared for them. Through all this trauma, we must be able to retain a sense of proportion, of cherished and humane values, of concern for those less fortunate. Otherwise, results can be severe social disruption which is already occurring.

I shall spare you an extended recitation of all the marvelous changes that the genius of the human mind and spirit are likely to bring forth. Human creativity that can work these miracles can certainly produce a milieu whereby man can convert instruments of war into plowshares, abolish hunger, pestilence and improve the quality of human life. I focus only on those developments that will affect computers, the special interest domain of Washington Apple Pi readers. Some of those will be familiar to you; others may not.

The authors of this book note that the "microelectronic revolution has barely begun." By the 1990's, microchips will be produced with so many transistors that one little chip will have more data-processing power than today's mainframe computers. These superchips will start out costing about \$300 each and end up at about \$3.00 each—or one percent of the original price. Computer and communication technology will merge and computerphones will immediately translate foreign languages into English; or vice versa. In factories, computerized robots and machine tools will control industrial processes with greater speed and accuracy than people. Jobs will disappear: 4.2 million people will be displaced; no more than 2.5 million new manufacturing jobs will be created. The new jobs will be so different that displaced workers stand little chance of qualifying for them without going back to school for one or two years. The best paying jobs will require insight and imagination—qualities computers lack. A vast retraining program will impact immensely on our educational system. The number of self-employed people will more than triple by the 1990's. In corporations and other large organizations, top managers will resort to computers for a myriad of management functions, decimating the ranks of middle management. New efficient software will be produced to restore the hardware-software cost ratio which has been badly skewed in favor of the denominator.

The nation will be locked in an international struggle for productivity. This not insignificant factor will impact heavily on our economy which will become more service oriented. Since productivity increases in services are generally small and since the early '70's may even have been negative, there have been discernible changes in standards of living—within societies and among countries. Big increases in productivity in the past have come in manufacturing where we have stumbled. It averaged about 2.8 percent per annum in the 1948-73 period and declined to 1.3 percent per annum over 1973-81. Only in the last three or four years have we returned to our long-term trend line. Meanwhile, other countries have come up fast and the productivity gap between the U.S. and

contd.

them has been greatly narrowed, eliminated and we have even been bested in some areas. In addition, a finished product will contain components made in several different countries. They will be assembled either abroad or in the U.S. In computers, few chips now sold by U.S. companies do not cross one national boundary at least once: designed in California; fabricated in Scotland; tested and assembled in the Far East. So many high-tech plants have been built in Scotland that it has become known as "Silicon Glen." Not only are microchips shipped half-way around the world and back, video terminals may come from Korea; disk drives from Japan, Singapore or Bombay; keyboards from Taiwan. Hence, national boundaries are being obliterated. The world is becoming a "global village." "Made in the USA", as a slogan, has been stripped of much real meaning and is an inaccurate portrayal of the truth. The upshot of these widespread and traumatic developments will be that without hard thinking, intelligent policies and drastic, yet effective actions, the U.S. could slip economically more in the 1990's than it did in the '70's and has in the '80's.

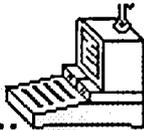
A race is on between the United States and Japan. The Japanese deliberately tilt the scales to give their firms an advantage. First, they practice "industry targeting" which means they set goals of market penetration selected industries are to achieve. They help to achieve those goals by providing helpful subsidies to Japanese firms. There is deliberate price undercutting in order to gain a minimum share of a foreign or world market. Second, they make it difficult for foreign firms to penetrate their domestic markets by raising numerous non-tariff barriers. In a word, they follow unfair competitive practices. The semi-conductor industry, dealing in integrated circuits (IC's), etched out on the silicon chip, is regarded as the crude oil industry of the twenty-first century. The degree of circuit integration determines the speed at which computers run; but in addition, this integration makes possible more powerful and still smaller computers. In the past couple years, the transistor count on integrated chips went beyond 100,000, ushering the age of VLSI (very large-scale integration). This has permitted more than one million instructions per second (mips). Before 1990, IC's with more than one million transistors will be produced, a stage of development to be known as the 2VLSI (very-very large scale integration). By 1990, the transistor count will rise to more than 10 million (the 3VLSI or very-very-very large scale stage) with operating speeds of up to 100 mips or more. By the turn of the century, the industry may have reached the stage of 4VLSI chips with 100 million or more transistors and speeds of 1,000 mips. The human brain is capable of processing information at the incredible rate of 100 quadrillion operations per second. Still, an assemblage of 3VLSI chips may come close to reaching the speed of the human brain, according to the authors. Add to that high speed, the ingredient of artificial intelligence—self-learning machines—and the homo sapien may have constructed a "gadget" that could excel him in "brain power."

The Japanese were able to capture the largest share of the 64 K market by 1979 and up to 70 percent by 1981. Japanese firms in the business now hold a lead in the 256K chip market. The competition is ferocious and, given the huge financial resources at the disposal of the Japanese, there is

doubt as to the ability of American firms to fund the required effort to keep up. There is danger, then, that a structural change could occur in Silicon Valley, the heart of the American semi-conductor and superchip industry. The competitive advantage can surely pass to the Japanese and, with it industrial supremacy, especially, in the information technology business. This supremacy is a major objective of Japanese economic policy. The author argues that large segments of the Japanese work force, especially of women workers, are exploited in order to maintain the dominant position of "zaibatsu" firms. Japanese strategy for dominating this critical industry, he argues, is to infiltrate it with computer components and peripherals - products with high value, low margins and standardized designs - embedded in foreign computers. This strategy, the author labels "the termite strategy." Components are Japanese; products are labeled American. In carrying out this strategy, dominant Japanese firms, almost immune from any financial pinch, belong to the zaibatsu. Each is a multicompany trading group and associated with it is a special type of bank which can satisfy the groups' financial requirements at interest rates about half those charged by U.S. banks. However, Japan has internal social and institutional problems with which it must cope in order to maintain its growth momentum. In addition, it is encountering increased competition from other Asian countries.

Among other Asian countries, South Korea has the most ambitious plans for gaining a share of the electronics-computer market. It already has four large conglomerates which are spending large amounts in this area. Between 1983 and 1988, they will have invested something under \$2 billion in this sector and several hundreds of millions more are projected over the ensuing five years. New firms in Korea are receiving help from abroad, including IBM, Hewlett-Packard, Microsoft, Honeywell and AT&T, and are expected to become active in the production of computer components. This is occurring in an economy that has experienced growth rates of 10 percent and more per annum, a drastic shift from an agricultural to an industrialized base in a few short years and is planning continued expansion. Singapore has initiated significant steps, including the build-up of a computer-trained core of professionals, to get into the act; it is laying a foundation for the production of software. The threat to the high-cost software industry in the United States could be serious. Not only will the U.S. industry have to get its costs down but it will also have to enhance its software so that it is more easily understood by large numbers of less sophisticated purchasers. It just does not make sense to purchase a software package and, then, have to buy additional books written by others that lead one through the opaque areas of the original program. Fortunately, there are developments in American software production that recognize these problems. Not only Singapore but also India, Japan, Hong Kong and Taiwan have designs on a share of that market. Taiwan has a government-supported Institute for Information Technology, a software R&D center and is subsidizing the production of integrated circuits. Despite considerable efforts, the prospects are that Taiwan will not be able to compete effectively against Korea.

In a future article, I will attempt to evaluate the role of computers and computer-oriented technology in the foreign  
contd. on pg 46



Every year at this time (I am writing this article on January 2) I resolve to get my computer reference material organized. I have a wealth of data, all of it somewhere just out of reach. Well, this year I succeeded—all my Apple ][ references are in bookcase1, my Mac references are in bookcase2, IBM references in bookcase3 and music references in bookcase4. I have catalogued software, books and articles, and I can finally see the glasstop of my desk. The rest of the furniture is stacked in a pitiful pile in the corner. Having completed my cataloging chores, I decided to go over my magazine subscriptions—do these publications still fill a need for me? After all, I have learned a lot about computers since I began most of those subscriptions. Have the magazines kept up with me, or are they just dust collectors? And so I reviewed all my subscriptions with an eye toward culling the lackluster and renewing the goodies.

In completing these chores, I found that I had done a few reviews. First, in my cataloging, I used most of the features of FILEMAKER PLUS, a major DBMS update from Forethought, Inc. (no, I don't use the IBM for my own databases). Next, in reviewing my subscriptions, I found that I had reviewed no less than 12 periodicals—three to four issues each. I thought that it might be a good idea to pass along what I found to my fellow WAP members:

**FILEMAKER PLUS**, by Forethought, Inc. (\$295), a database management system for the Mac/Mac Plus.

A short while ago, I wrote an enthusiastic review of FILEMAKER. This is a follow-up on FILEMAKER PLUS, a major revision of Forethought's earlier winner. The basic operation of FILEMAKER PLUS remains unchanged—mouse or keyboard-controlled data entry, retrieval, formatting and printing. The facilities that the user has at his or her disposal and the control that he or she can exercise over the data, from entry to retrieval and printing, has been expanded in all areas. In data entry, for example, the process remains essentially unchanged (command-N to enter a new record, or click on a field to edit) but now new records will be automatically sorted into the database if the user wishes, and global field replacement and automatic entry of user-specified data is available. In addition, fields can be checked for unique or existing values, and file importing facilities have been expanded to allow field shuffling prior to import. On the output side, FILEMAKER PLUS now allows nonstandard paper sizes to be selected, so that custom forms or labels may be printed. This includes printing multiple records across, so that printing three-up labels is a snap. Templates for various output formats are included with FILEMAKER PLUS, a nice touch.

Additionally, data may be previewed at actual size, with scrolling to see the entire record, or reduced to all fit on one screen. Moreover, multiple records can now be viewed simultaneously. Other output formatting features include the ability to repeat fields (the same data shows up in two or more places on the report), text sizing, alignment, layering, overlay fields and partitioning of report formats—you can move anything virtually anywhere on a report. Lines and boxes

may be created and positioned, and output may be sent to a word processor, such as Microsoft Word. Moreover, lookup files may now be employed to make third-file creation from existing files simple (a natural for creating a parts replacement database for third-party inventory)—to facilitate the use of lookup files, FILEMAKER PLUS now allows up to eight files to be open simultaneously. Another file management enhancement is file compression during save operations.

Database management packages live on their ability to retrieve data easily and rapidly, and FILEMAKER PLUS has included features to enhance its already potent data retrieval capabilities. Fields may now be indexed on multiple words. User-specified records may be omitted during browse operations, thus decreasing time spent in browsing nonrelevant information.

Although not graphically oriented like FILEVISION, FILEMAKER PLUS now allows picture fields with scaling available (but not mandatory) as well as the usual cut and paste between applications or files. It is not difficult to make professional-looking reports with FILEMAKER PLUS.

The features outlined above are probably enough to warrant an upgrade from Forethought (Lotus Development brought out a 1-2-3 major upgrade with significantly less enhancements) but FILEMAKER PLUS also offers a new online click-on help facility, improved and expanded manual and macro capability. Although there is not enough space to describe each enhancement fully without writing a tutorial on FILEMAKER PLUS (the manual is over 300 pages), a few words about the macro feature are in order. FILEMAKER PLUS macros are called *scripts*, and consist of stored menu commands. As such, they fall short of a language *a la* dBASE III, but are capable of automating many of the tasks you would ordinarily do with FILEMAKER PLUS. In general, if you can do it with the mouse, you can put it in a script. Since there are no script logic commands (IF-THEN-ELSE, GOTO, DO WHILE, etc.), you cannot create a *system*, but given a set of data, you can automate browse, layout and report printing operations.

Since Forethought has gone this far, I would like to see just a couple of additional enhancements to the package—graphics tools for creating (not just importing) pictures and a full fourth-generation language for creating systems. The latter is really the thing that put Ashton-Tate on the top of the DBMS heap—there are countless business systems written in dBASE on the market today (I have three of them myself), and the aftermarket sales assure Ashton-Tate of continued dBASE III sales. Forethought could put itself in much the same position with a full DBMS language. For now, though, the package still looks like the most power and ease of use for the dollars spent in database management on the Mac.

**TWELVE COMPUTER MAGAZINES**, (A+, BYTE, Capitol PC Monitor, Creative Computing, Dr.Dobb's Journal, Hardcore Computist, MacTutor, MacWorld, Nibble, PC Tech Journal, Softalk, WAP Journal)

Before proceeding to the review, I should outline the

procedure that I used to compile my data. Remember that I was doing this for my own benefit, and although I tried to be objective, well, I never read gothic romances and I love science fiction! The procedure went as follows:

First, I collected several issues (3-4) of each magazine covering the period 4/85 to 4/86 or as near to that as was available in my library—I didn't want the most recent issues because these magazines frequently make predictions, and I wanted to check out their batting average. Next, I read each magazine (over 40 of them!) from cover to cover, to get an overall "feel" of the publications. This also allowed me to jot down a few notes on the editorial slant and overall "pitch" of the periodical. The next step was to devise categories of article types and tally each magazine's contents. Since the articles tended to cover the waterfront (12 publications, remember), I made fairly broad categories. These are listed below:

1. Editorials - This includes both editorial and correspondence columns. It really represents an "opinion" type of column.

2. Lists - This category includes club/organization directories, calendars of events, and so forth.

3. New Products - New product announcements. No reviews.

4. Review - I broke this category into three sub-categories for books, hardware and software. As in all my categories, I counted articles, not products. This column, for example, would be counted once for FILEMAKER, as software and once for the 12 magazines, as books.

5. Business - This was my broadest category, covering everything from business profiles to legal aspects of computing to how to run your own business. I also lumped education in here.

6. Trends - This category includes market and technological trends and forecasts.

7. Application - This category catches all articles which contain full, stand-alone programs with accompanying source code.

8. Technical - This represents such columns as Q&A, Tips, How-To, program fragments, articles on how to use applications, programming practices, utilities and generic methods of problem-solving with computers. My Button-Down Apple series would go here, for example, along with Dave Morganstein's series on EXCELING on the Mac.

9. Construction - This category holds all articles on do-it-yourself construction projects.

Finally, after tallying the articles, I counted the total number of pages in the magazine (excluding covers), along with the number of pages of advertising. For this purpose, I added quarters, thirds and half-page ads in as fractions of a page to arrive at advertising space as a percentage of total space. My figures may be slightly inflated, because I counted blow-in ads which were bound in place as a full ad page (nuisance value). Those that dropped out of their own accord I didn't count. I also noted the target audience by level of expertise and computer covered.

A short blurb on each magazine and a comparison chart follows. The magazines are listed in (my opinion) order of level of expertise expected of the reader.

**MACWORLD:** Macintosh coverage for beginners. The

slickest periodical in terms of graphics; in addition to the booming 63% of space devoted to ads, another major portion was picture fluff. What results is the fewest (7.3) articles per 100 pages of magazine of all reviewed. And that includes 3 articles which are editorial or list, essentially throwaways, since the editorials display an appalling lack of knowledge of either business or computers (even worse than the Washington Post column, which is bad). On the good side, reviews are grouped by subject, which makes them more valuable as a comparative tool for prospective buyers, and how-to-use applications articles are generally good.

**SOFTALK:** Now-defunct beginner-to-intermediate coverage of Apple products. Articles slanted toward computers in business/education and budding hackers. Articles mostly text, with some good technical coverage. Editorials predicted everything correctly except the magazine's demise.

**CREATIVE COMPUTING:** Also now-defunct general microcomputer coverage for intermediates. Articles, mostly text, slanted toward product reviews and new product announcements. Technical articles more oriented toward using, rather than programming the computer.

**A+:** Intermediate coverage of Apple products. Similar to Creative Computing, but with less reviews and more "how-to"s. Also, more articles on Apple computer internals and languages. Editorials generally good, non-technical.

**CAPITOL PC MONITOR:** IBM PC coverage for intermediates. The journal of the Capitol PC Users' Group, heavy on lists and editorials, with the rest of the magazine generally devoted to "how-to"s and product reviews. This publication led the (successful!) fight against copy-disabling of IBM-PC software nationwide.

**NIBBLE:** Two intermediate magazines, one for Apple, the other for Mac users. This publication is very heavy on applications, with technical articles on programming and some "how-to"s thrown in. Editorials are issue oriented. A good bet for budding hackers and those who want some cheap, usable applications.

**WAP JOURNAL:** Apple and Mac coverage for advanced intermediates. Like the Monitor, the Journal is heavy on lists and editorials, with reviews and technical articles making up the rest of the publication. Compared to the Monitor, however, the technical articles tend to be more technical, and there is a heavier content of reviews.

**BYTE:** General microcomputer coverage for advanced users. BYTE is more slanted toward engineering types, being hardware-oriented. Editorials address technology trends. Being general in coverage, BYTE is a good place to find out where a given computer is likely to find its niche in the marketplace. It is also a thick publication, but 60% of that is ads.

**HARDCORE COMPUTIST:** Apple coverage for advanced hackers. Originally devoted solely to breaking copy-disabling schemes, Hardcore has migrated to a technical magazine on Apple internals. Very light on ads, this one contains almost nothing but technical and application articles.

**MACTUTOR:** Macintosh coverage for advanced programmers. This publication is devoted entirely to applications and programming techniques in almost every language implemented on the Mac. It also gets the award for the least amount of space (7%) given over to ads.

**DR. DOBB'S JOURNAL:** General microcomputer cover-

age for advanced programmers. DDJ contains a mix of articles, but the slant is always toward programming. Reviews are of system tools compilers, for example. DDJ is a "theme" publication, with issues devoted to particular languages, chips or operating systems. Editorials are technical, no-nonsense.

**PC TECH JOURNAL:** IBM PC coverage for advanced programmers. The most technical publication reviewed here, like DDJ is devoted to programming. Articles cover system tools, utilities and expansion of the MS-DOS operating system on IBM PC, XT and AT computers. Also like DDJ, this magazine is "theme" oriented (text processing, graphics, database design, etc.). Reviews cover more hardware than does DDJ, though.

The adjacent chart provides a side-by-side comparison of the article distribution in these twelve magazines.

	Com-puter	Level	Pages			Edito-rial	Lists	New-prods	Busi-ness	Tech-trends	Reviews:					
			Tot	#Ads	%Ads						Books	Hardw	Softw	Tech	Appl	Const
MACWORLD	Mac	Reg	189	119	63	2.33	0.67	1.33	1.00	0.00	0.00	1.00	2.33	4.67	0.67	0.00
SOFTALK	Apple Droids	Reg	110	74	67	2.33	0.67	2.00	4.00	0.33	0.00	1.00	4.00	4.67	1.00	0.00
CREATIVE COMPUTING	All	Int	111	56	50	1.67	0.00	3.67	1.67	1.33	1.00	6.00	3.67	2.00	2.00	0.00
A+	Apple Droids	Int	189	127	67	3.33	0.00	1.67	1.67	0.33	0.33	3.00	5.00	4.67	0.67	0.00
CAPITOL PC MONITOR	IBM	Int	43	14	33	4.00	8.33	0.33	0.67	0.00	0.67	0.00	5.00	5.33	0.00	0.33
NBBLE	Apple Droids	Int	127	59	47	3.00	0.00	1.00	0.33	0.00	0.33	0.00	1.33	2.33	7.00	0.00
WAP JOURNAL	Apple Droids	Int	72	13	18	4.25	11.50	1.25	0.25	0.50	1.50	2.50	8.00	13.75	1.25	0.00
BYTE	All	Adv	464	278	60	2.00	1.00	3.00	0.00	1.75	3.00	5.50	5.25	10.25	1.00	1.50
HARDCORE COMPUTIST	Apple	Adv	35	9	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	2.00	0.00
MACTUTOR	Mac	Adv	60	7	12	.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	7.00	0.00
DR. DOBB'S JOURNAL	All	Adv	129	65	50	2.67	0.00	1.00	0.00	0.00	0.00	0.00	0.67	3.00	3.00	0.00
PC TECH JOURNAL	IBM	Adv	208	125	60	2.00	1.00	1.00	1.00	0.00	1.00	1.00	3.67	2.33	3.33	0.00

## D PUB SIG NEWS

by Steven Payne

A score of Desktop Publishing enthusiasts braved wintry winds to attend the regular dPub SIG meeting on January 7th. The meeting began with a brief demonstration by Ron Moore of how to refill LaserWriter cartridges with regular Canon toner, and a discussion of companies such as INFOTEK which offer this service (even though the current issue of *Publish!*—which also mentions Bernie Urban—claims it cannot be done). Chairman Thomas Piwowar then reminded us that all meetings during the coming year are scheduled for the first Wednesday of each month at 7:30 P.M. in the PEPCO Building at 19th and Pennsylvania Avenue, NW. Unfortunately, Mark Canter will be unable to present GraphicWorks 1.1 at the February 4th session, so instead we will have demos and discussions of various spelling checkers and related programs, including MacLightning, MS Word 3.0, Spellswell, Thunder, RightNow, Hayden Speller, Macspell, and Mac-Hy-phen.

As for other announcements, Tom noted that the inaugural meeting of a new IBM Desktop Publishing SIG, organized by Mary Stanley, will be held at 7 P.M. on March 4th at the STSC Building, 2115 East Jefferson, Rockville, MD. CAP '87, a conference on Computer Aided Publishing, is scheduled for February 10th-12th at the Sheraton Washington Hotel; for more information call (301) 294-8710. "Dr. Thomas" is also speaking on desktop publishing at an ASAE Conference (1575 I Street, NW) on February 17th and 18th. (Those for whom money is no object may likewise be interested in the Software Institute of America's conference, March 16th-17th, at the Dupont Plaza Hotel; the organizers can be reached at (617) 470-3870.)

Tom reported that he has received an offer to train trainers for Ventura Publisher on the IBM PC, and asked for volunteers to talk in upcoming meetings on any interesting projects in which they are involved. Tom himself is currently converting the weekly journal "Roll Call" to desktop publishing format. Further reports covered the present status of the brochure on WAP and the dPub Sig, as well as the DC

Desktop Publishing Directory, both projects still in process. Once again there was a call for volunteers to help transport the overhead projector from and back to the Pi Office for the monthly meetings. Tom demonstrated how to recover "lost" PageMaker files using Fedit and Edit. Finally, since not all of those who planned to present font editor programs could attend, the "Battle of the Font Makers" was postponed, and we turned instead to a spirited discussion of the pros and cons of ReadySetGo! 3.0. In future meetings we hope to cover drawing programs, such as CricketDraw, Mac 3D, and a new program from Adobe reported in InfoWorld. Come join us, with suggestions of your own!

### Future of Am. Bus. contd from pg 43

trade pattern of the United States and demonstrate in greater depth not only the growth of this specialized trade but also its sources of competition. The storm clouds of international competition are gathered. The magnitude of the U.S. trade imbalance, while showing signs of improving, remains ominously large. Clearly, we need to get "our house in order" if we are to retain our competitive edge in some sectors of our economy and regain it in others. The electronics industry, with semi-conductors, chips and superchips and computers is up for grabs. To assert its technological superiority, the U.S. will require better performance in the future than experienced in the past. In the words of Arthur Toffler, the age of Future Shock is now. This fascinating book will prepare its readers for added shocks now on the horizon.



# MacNovice Column

by Ralph J. Begleiter

## An Easy First Project With Excel

Sure, it's true. You were advised when you bought your Macintosh Plus that "Excel" by Microsoft was the most powerful spreadsheet software available for the Mac. Knowing you'll want to do some financial calculations at home or work, you bought the program. Now you're familiarizing yourself with your Macintosh—but you're aching to do something productive with the spreadsheet, too. Here's an easy-to-do project which will simultaneously help you get acquainted with your new computer and with the basics of working with a spreadsheet. And, it'll create a professional-looking expense account report you can use right away!

Remember, the object of this exercise is not to create the most sophisticated spreadsheet in the world, but to demonstrate how easily MacNovices can be working productively at their new Macs. Follow me step-by-step to build this document, which you'll find useful for a long time to come. Don't forget to **SAVE** your work frequently, to avoid problems if there's a power failure or some other problem.

Here's what your spreadsheet will look like:

Your Company, Inc.		Make check Payable to: _____		Your Name _____					
EXPENSE REPORT									
Trip Purpose: _____				Week Ending: _____					
Date:	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Other	TOTALS
City:									
Expense Item:									
Breakfast									\$0.00
Lunch									\$0.00
Dinner									\$0.00
Hotel									\$0.00
Taxi									\$0.00
Tips									\$0.00
Telephone									\$0.00
Transportation									\$0.00
Entertainment									\$0.00
Parking									\$0.00
Laundry									\$0.00
Newspapers									\$0.00
Mileage									\$0.00
Travelers Check Fee									\$0.00
Currency Exchange Fee									\$0.00
Miscellaneous									\$0.00
<b>TOTALS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Currency Exchange Rates:		US\$ 1 =		Sub-Total from Page 1:					
		US\$ 1 =		Sub-Total from Page 2:					
		US\$ 1 =		Sub-Total from Page 3:					
		US\$ 1 =		<b>GRAND TOTAL:</b>					<b>\$0.00</b>
		US\$ 1 =		Advance:					\$0.00
		US\$ 1 =		Due Company:					\$0.00
		US\$ 1 =		Due Employee:					\$0.00
Entertainment Expenses:									
Date	Item	Place	Amount	Purpose, Guest, & Business Relationship					
Miscellaneous Notes:									
Date Submitted: _____		Page 1		Signed: _____					

Begin by **OPENing** Excel and starting with a fresh **NEW** worksheet. Set up the headings on your expense report as follows. Click in the first block (A1), in the upper left corner of the sheet. (In "spreadsheet-ese" these blocks are called "cells." That's what they're called in your software instruction manual, too.) Type the name of your company. In Block G1, type the phrase "Make check payable to:" In Block I-1 enter your name. In A-3 enter "Expense Report" and in A-4 type "Trip Purpose." In block I-4 enter "Week Ending."

Jazz-up those headings by selecting them again and choosing appropriate **ALIGNMENT** and **STYLE** options from the **FORMAT** menu. You might decide to cast your company name in italics. "Expense Report" probably should be bold. And you can even draw a line under your name and the space for "Week Ending" by making choices in the **BORDER** section of the **FORMAT** menu.

Working down the page, you come to the heart of your expense report, the section which will accumulate individual expenses and summarize them. Skip to Row 6. In block B-6

enter "Sunday;" in C-6 "Monday;" in D-6 "Tuesday" and so forth, remembering to create a column for "Other" in block I-6. In block I-7, enter "TOTALS." In row 7 (A-7) enter "Date." Directly beneath it, in A-8, enter "City." And next, in A-9, enter "Expense Item."

Rows 10 through 25 should contain all of the categories of expenses you normally incur. Copy your company's official form, if you like. But remember, this is your spreadsheet, so you can add or delete items to customize it to your needs. If you regularly buy newspapers as a part of your job, enter a line for them. Of course, the standard items, such as "Hotel," "Taxi," and your meals should all be listed.

Skip one row when you've finished entering your expense categories, and in the next row (let's say it's row 27) enter "TOTALS" again in block A-27. Skip another row and enter "Currency Exchange Rates" (if you often travel abroad) in A-29. In the next block to the right, B-29, enter "US\$1 =." Now click in B-29 to **SELECT** that block and **DRAG** your mouse down about four blocks to B-33. Release the mouse button and move to the **EDIT** menu. Choose "Fill down" from that menu and watch those four blocks magically fill with identical "US\$1 ="s! Now skip one row again and click in A-35. Enter "Entertainment Expenses."

In the next row, in A-36, type "Date." In B-36 enter "Item;" in C-36 enter "Place." Now skip one block and click in E-36. Type "Amount." In the next block to the right, enter contd.

B27	=SUM(B9:B26)					
Exp (Excel) Spreadsheet						
1	A	B	C	D	E	F
2	Your Company, Inc.		Make check Pa			
3	EXPENSE REPORT					
4	Trip Purpose:					
5						
6		Sunday	Monday	Tuesday	Wednesday	Thursday
7	Date:					
8	City:					
9	Expense Item:					
10	Breakfast					
11	Lunch					
12	Dinner					
13	Hotel					
14	Taxi					
15	Tips					
16	Telephone					
17	Transportation					
18	Entertainment					
19	Parking					
20	Laundry					
21	Newspapers					
22	Mileage					
23	Travelers Check Fee					
24	Currency Exchange Fee					
25	Miscellaneous					
26						
27	TOTALS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

you've done in B-27!

To create the SUM formulas for the rows (summarizing each category of expense) start in block J-10 (the "Total" block for "Breakfast"). Again, enter in J-10 the formula "=SUM()." Between the parentheses, click the mouse. Then DRAG the mouse from B-10 to the RIGHT all the way to I-10, encompassing all the "Breakfast" blocks. Release the mouse button and press the ENTER key to enter the formula.

Repeat this procedure for each of the expense category rows in your expense report, down through "Taxis," "Hotels" and so forth. Or, SELECT (by DRAGging) all the vertical "Totals" blocks (J-10 through J-27) and choose FILL DOWN from the EDIT menu. Excel will automatically enter the correct summation formula in each block, imitating what you've done in J-10!

Next step? Tell your spreadsheet to enter its numbers in the form of dollars. Click in block B-10 (adjacent to "Breakfast" again). DRAG the mouse (with the button pushed) DOWN and TO THE RIGHT to block J-27. You've SELECTED the "business" section of your spreadsheet. In the FORMAT menu, choose NUMBER. When your choices appear, select the line which looks like this: \$0.00. That tells Excel to make all the numbers in those blocks into dollars with two decimals.

There's one more important "working" area of your spreadsheet. It's directly below block J-27. You'll want space to include sub-totals from other expense reports covering other weeks. You'll need a "Grand Total" of those sub-totals, and you'll want the spreadsheet to automatically inform you how much the company owes you, even after that meagre advance the boss issued.

Fill in the blocks between H-28 and J-34 like this:

Formulas for each of these blocks are easy. Block J-31

\$0.00	\$0.00	\$0.00	Crosscheck:	\$0.00
Sub-Total from Page 1:				
Sub-Total from Page 2:				
Sub-Total from Page 3:				
<b>GRAND TOTAL:</b>		<b>\$0.00</b>		
Advance:				
Due CNN:		\$0.00		
Due Employee:		\$0.00		

(the "Grand Total") is a SUM of blocks J-27 through J-30. Block J-33 ("Due Company") is the SUM of J-32 (the "Advance") minus the "Grand Total" (J-31). And The "Due Employee" block (J-34) is the SUM of the "Grand Total" (J-31) minus the "Advance" (J-32). Don't forget to designate all these blocks (J-28 through J-34) as dollar figures, too, by using the NUMBER menu.

Admittedly, your spreadsheet doesn't look so hot yet. It's time to do a little polishing. Enter the OPTIONS menu and choose FONT. For the most pleasing results on a standard page, choose GENEVA 9 as your font. But feel free to experiment. You can always make changes easily. Next, select certain of the blocks in which you entered text, such as the "Totals," days-of-the-week, "Currency Exchange Rate," and "Entertainment Expenses" blocks. Using the FORMAT menu, choose STYLE and select BOLD. This will make those text blocks stand out from the crowd. You might make the "Grand Total" block—including the total itself—BOLD for emphasis.

You might also choose to surround other areas of your contd.

"Purpose, Guest & Business Relationship." Depending on how often you "entertain" on trips, skip a few lines to allow for the usual number of entries. (The number isn't critical, because with your Mac, you can always INSERT more rows later on.) Let's say you skip six rows.

In A-43, type "Miscellaneous Notes." Now skip down to row 49. In order to comfortably fit the expense report sheet on one standard page, you'll probably have to keep it within about 50 rows. (This depends on what size FONT you choose later.) Click your mouse in block J-49. This will be the last block in your printed spreadsheet. Now return to the top-left corner of the spreadsheet (called "Home" in the lingo) by scrolling the scroll boxes at the bottom and right of your screen. Hold down the SHIFT key and CLICK your mouse in block A-1. Your entire screen should turn black, indicating you've "selected" the entire spreadsheet. Next, choose BORDERS from the FORMAT menu, and select OUTLINE when you're given the choice. Your expense report will be instantly surrounded by lines creating a box around it.

Now for some detail work, to make your spreadsheet do your work for you. Return, with your mouse, to block B-27. It should be at the foot of the "Sunday" column in the heart of your spreadsheet. Click in B-27 and type "=SUM()" in the block. Look in the "formula bar" near the top of your screen. You'll see that formula entered. With your mouse, inside that formula bar, click between the parentheses. Now click your mouse in block B-10, right under the word "Sunday" and to the right of "Breakfast." While holding down the mouse button, DRAG the mouse straight down the column to block B-26—just above the block in which you're entering the formula. Release the mouse button. Press the ENTER key. Excel has automatically created a formula which tells your computer to add up (SUM) all the numbers ("values") in the "Sunday" column.

Repeat this procedure for each of the other days of the week in your spreadsheet, plus the "Other" and "Totals" columns. Or, SELECT (by DRAGging) all of the "Totals" blocks (B-27, C-27, D-27, E-27, etc.) and choose FILL-RIGHT from the EDIT menu. Excel will automatically enter the correct summation formula in each block, imitating what

spreadsheet with boxes, or outlines, using the **FORMAT** menu and the **BORDER** commands. You could highlight the "Grand Total" and "Due Employee" areas this way. You could set-off the "Currency Exchange Rate" area or "Miscellaneous Notes" section as well with outlines. To bring your text blocks into alignment, choose **ALIGNMENT** from the **FORMAT** menu to align all the expense categories **LEFT** and all the dollar-figure blocks **RIGHT**. Experiment with **ALIGNMENT** on the other text blocks to see which look the best to you.

Finally, expand and contract the column widths (A through J) to accommodate their contents. Column A should probably be about 16 characters wide (use the **FORMAT** menu or simply **DRAG** the column lines left or right with your mouse). Columns B through I should be narrower, say 9 characters wide. But Column J will have to be wider (say 11), since "Totals" are likely to use more decimal places than individual expense items. Be sure to use the **FORMAT** menu to set the dollar, alignment and style formats of the other sections of your expense report, such as the "Entertainment Expense" and "Miscellaneous" areas. Use the same techniques we've applied above.

Before printing your Expense Report sheet, choose **PAGE SET-UP** from the **FILE** menu. Set the margins at zero (you can change them later, if you like), and enter the following in the "Footer" area. (Follow this exactly to achieve an attractive alignment of the footer.)

&LDate Submitted: \_\_\_\_\_ &CPage &P&RSigned

The Ampersands ("&") give Excel its instructions to align the following words **LEFT** ("&L"), **RIGHT** ("&R") or **CENTER** ("&C"). The characters "&P" tell Excel to automatically insert the correct page number.

Of course, you can "glitz" your spreadsheet as much as you'd like. And you can always make improvements. With a little experimentation—and without even using some of the more powerful Excel features, you can create an immediately-useful Expense Report format in a short time.

You should test your expense report format by entering some imaginary numbers, watching to see if they're totalled correctly. If not, recheck your formulas carefully. It's well worth doing now before you actually begin using this format. In fact, one good way of creating an automatic test is to add another block to your spreadsheet (block K-27, adjacent to the intersection of the "Totals" row and column). Enter a **SUM** formula which will **SUM** row 27 **ACROSS**. This will serve as a "Crosscheck" against the vertical summation you have in block J-27. If the sums in J-27 and K-27 don't match when you enter figures, you've got a problem in your formulas somewhere which needs correction.

SAVE the finished product with a name such as "Expense Format." Then, when you create an Expense Report, choose **SAVE AS...** and give the filled-in report a new name, perhaps including the date. That way, your format will always be blank, awaiting your next occasion to use it.

If you have a spreadsheet program other than Excel, the principles used here are the same. And for a really dressy looking Expense Report, complete with your company logo or other graphics, check out the MacNovice column in the July 1985 issue of the Washington Apple Pi Journal! ☺

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pfs: Workmates(f,r,p,w)	170	Reflex	71

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Math Rabbit	29	Statworks	101

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Leather Goddess/Phobos	29	Toy Shop	46

#### Programming

Enh. Terrapin LOGO 3.0	70	MacForth II	79
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### .....New, recently published software.....

#### APPLE

#### MACINTOSH

816/Paint	40	Bond:View to Kill	29
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# DEVELOPER'S VIEW... MacWorld Expo, San Francisco...

by Jim Lanford

Since most WAP members probably did not have the opportunity to go to MacWorld Expo held in San Francisco from January 8-10, 1987, I thought I'd fill you in on some of the highlights. Although there were no new Apple announcements, it was a good show.

**Optical Disks, Write Once Read Many (WORM).** Lo-DOWN has introduced two WORM disks for the Macintosh. One is rated 400 MegaBytes and the other 800 MegaBytes of storage. These optical disk drives have removable, two-sided (flipable) cartridges. This gives the user one half of the rated storage on line at one time. For example, the 400 Meg drive uses a cartridge which holds 200 Meg per side. The drive can only read one side of the cartridge. This requires the user to manually flip the cartridge when data on the second side is required.

This introduction is good news for those of us who have been waiting for this technology to be implemented on the Mac. Document archival and retrieval systems such as Digi-Base demand this type of technology.

These optical disk drives appear as standard HFS hard disk volumes to the Mac. Those programmers reading this might wonder about the Finder wanting to be able to write and maintain (erase) the disk directory information and hidden desktop file on that volume. Obviously, write once technology does not allow this. The LoDOWN WORM drives come with a special driver that requires a standard hard disk on which it maintains the directory and desktop files needed to allow the Finder to operate the drive correctly.

**Scanners and OCR.** There were many document scanners at the show. DEST has been making scanners with OCR for many years. These used to only work with dedicated word processors such as the WANG. Six months ago, DEST began shipping a SCSI version for the PC. At the show, they announced the Mac version. It is the same unit with different software. It will scan both pictures and text. And it will do OCR which is formatted for MacWrite. Unfortunately, the demos were SLOW.

Abaton has a flat bed scanner made by Ricoh. Abaton will also do OCR with their special add on computer with a Intel 80186 inside. (Can you say IBM PC in a small box?) LoDOWN was showing a Canon scanner with their own label, but it was not running or hooked to a Mac.

**PostScript support.** There were a number of products which have various levels of PostScript support. As most of you know, PostScript is the page description language used by the Apple LaserWriter. The programs can be broken down into 5 categories: image to PostScript conversion (Adobe Illustrator), embedded code (Ready Set Go 3.0), intermediate PostScript output (Cricket Draw), Interactive over AppleTalk (Post Haste) and PostScript previewing. Bill Bates of Knowledge Engineering (the author of JustText) was demonstrating his "work in progress": an unnamed program which accepts PostScript commands and displays the result on a Radius Full Page Display instead of the LaserWriter. Adobe's Illustrator was announced at the show. The program converts a graphic

image into PostScript commands. Micro Dynamics announced our new product, PostHaste. PostHaste is an interactive utility for programming PostScript over AppleTalk.

**68020 add-on boards.** Levco dropped the price of the Prodigy 4 to about \$4000. They also announced the Prodigy Prime. The Prime is a stripped down Prodigy 4 and lists for \$1995. It has a 68020 processor with 16MHz clock and comes with "only" 1 Meg of RAM, expandable to 32 Meg. The 68881 math co-processor is optional. BechTech was showing their \$2000 68020 add on card. It has a 12 MHz clock and 4 Megabytes of RAM. BechTech claims that because of memory wait states, the performance of their card is about the same as "other" faster 68020 add on cards.

**ComputerWare of Palo Alto** (our favorite mail order Mac software store) had a innovative idea. They had a video crew interviewing and filming software vendors demonstrating their software at the Expo. I assume that they can then use this informal tape to train their sales people.

**The hard disk shake out.** There were fewer hard disk manufactures in evidence at this show than there were last summer. DataFrame is shipping their ultra-fast XP drives. DataFrame owners who do not want to upgrade should still get the latest formatting utility from their dealer or download it from someplace such as CompuServe. Re-formatting with this utility will speed up your DataFrame's transfer rate.

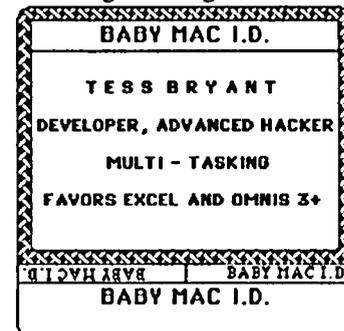
The hard disks made by Jasmine were competing on price. Their 20 MegaByte drive still sells for \$600 and they had an 80 MegaByte drive for the low price of \$1380.

For those who know what a dip switch is, the "Late Fall 86" BMUG newsletter has an article on how to build your own SCSI drive. If you have to buy the parts, a 20 MegaByte drive will probably cost as much as a Jasmine. But if you happen to have a used hard drive left over from a PC upgrade, you could probably put it on the SCSI port of your Mac for under \$400 (or less if you have a power supply and case).

There is a shareware program called SF&I which will format a SCSI disk drive and install the correct driver for "auto boot" on the Macintosh Plus.

**SideKick 2.0.** Borland announced Sidekick 2.0 This version has a spreadsheet and an outliner as DA's as well as improvements on the other DA's. Eventually, we won't ever have to leave the Finder—everything will be desk accessories.

**MacLabeler use.** We met a woman at the show with a 6 month old infant in a stroller. Her husband had made the following ID badge with MacLabeler. It makes me wonder what other uses for the program people have.

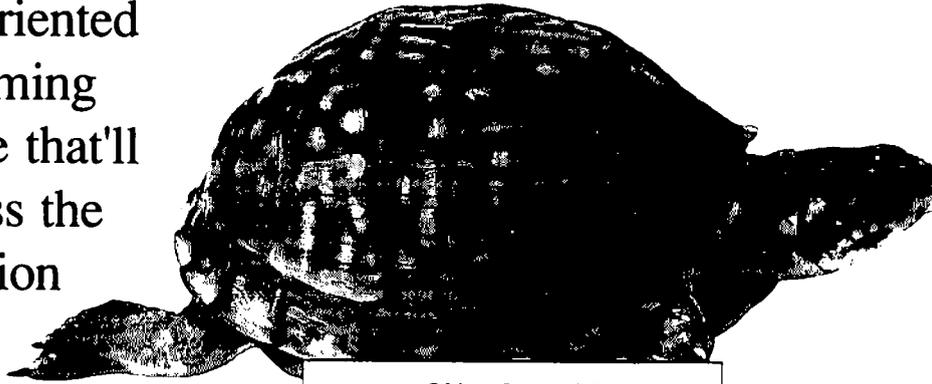


**Email over AppleTalk.** The two Email systems we were deciding between were Inbox by Think Technology and InterMail by InterNet. Both are in use at Apple and now have similar features. At first glance, In-

contd. on pg 61

# Introducing Object Logo.

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Minimum system requirements for Object Logo: 512K Macintosh with 800K drive or any external disk drive.

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\* Elections will be held by mail ballot to determine new officers for 1987.

### New FAC Meeting Location, Date and Time

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

### Apple II Upcoming Programs

February 14 - PageWorks-IIgs and PageMaker-Mac  
 March 14 - To be announced

## HOTLINE MEMBERS

Lynn R. Trusal - (301) 845-2651  
 Scott Galbraith - (301) 865-3035  
 Kurt Holter - (301) 663-4199  
 Bruce Taylor - (301) 371-6181

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

The SIG MAC of the Frederick Apple Core will continue to meet on the fourth Tuesday of each month at the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, MD at 7:30 PM. At least through March, we will continue to meet at this, our regular location. There is a possibility that we may meet with the Apple II group (see above) after March, but this will be determined prior to the April meeting, and a postcard will be mailed to active members of the SIG informing them of any future changes. Mac owners in the local Frederick area are welcome. Call Lynn R. Trusal at (301) 845-2651 for details.

### SIG MAC Upcoming Programs

February 24 - Demo of BBS Up- and Down-loading  
 March 24 - Apple IIgs Special Demo

# MACINTOSH BITS AND BYTES

by Lynn R. Trusal (Frederick Apple Core)



## Mac Meets the VAX

(...and the winner is... both of them!)

Much of the initial criticism of the Macintosh (and microcomputers in general) was from long-time computer users who cut their teeth on mainframes. To them, microcomputers were toys for playing games but not for doing serious work. Unfortunately, these users were often the MIS directors of corporations and government offices. It has only been in the last five years that microcomputers have finally grudgingly been accepted as useful, powerful adjuncts to their big brothers. Indeed, the power and sophistication of today's microcomputers surpasses that of minicomputers of a number of years ago. I still encounter the VAX mentality, which is that all applications should be run on a VAX with the power and control centrally located. Many MIS directors apparently feel the power and control that they once held exclusively slipping from their grasp. With computer power now available in microcomputers, there is less need to have central minicomputer facilities under the control of one MIS director.

VAXes that I have encountered are often very busy and

therefore slow. How many times are users apt to tolerate the on-screen message "network congestion" or "down for maintenance?" I oppose running applications such as word processing, graphics, and spreadsheets on minicomputers when they are better run on microcomputers. Minicomputer software is often less user friendly and sophisticated than their microcomputer counterparts. I recently learned that a government research activity had purchased a VAX and researchers had to use dumb terminals to do word processing and graphics on VAX based software. These programs were cumbersome and not user-friendly. One user complained that the manual for the programs was 4 inches thick and that every time he hadn't used the software for awhile, he had to relearn it all over again. He marveled that within minutes I could enter raw data into Excel and quickly prepare a finished graph using Cricket Graph and the LaserWriter. Has the computer revolution passed these people by?

By now, you may have the opinion that I don't like VAXes, but that would not be true. Both micro- and mini-computers have their place. There is no reason that  
contd.

microcomputers and especially the Macintosh cannot co-exist and communicate with VAXes in the same working environment (see my WAP Journal article, May, 1986, p. 62).

Recently microcomputer software vendors began to release VAX versions of their popular software, Word Perfect, Inc., a VAX version of the popular Word Perfect word processing program for MS-DOS computers. Not to be outdone, Odesta Corporation will soon release a VAX version of its Helix database called Helix VMX. This was discussed in recent articles in *InfoWorld* (October 6, 1986 and November 24, 1986) and *Digital Review* (October 27, 1986). Basically, this version (VMX) of Helix will reside on the VAX and will be accessed by Macintoshes connected to AppleTalk and bridged to the VAX by a Fastpath Ethernet-to-AppleTalk bridge (Kinetics, Inc. of Walnut Creek, CA). Alisa Systems (Pasadena, CA) developed the software that will allow the Mac to implement AppleTalk network protocols on the VAX, running the VMS operating system. Alisa has also developed a product that will allow Macintosh users to employ the VAX as a file server and as print spooler for the LaserWriter printer. According to Daniel Odesta, the company's founder, "Helix VMX represents the integration of three industry standards: the visual applications environment and shared information capability of Helix, the technology of the Macintosh graphic interface, and the departmental processing and communications capability of the VAX architecture." Companies will be charged a license fee of \$450 per Macintosh or licensed according to the company's particular VAX installation. Fees will start at \$7,500 for a MicroVAX II and range up to \$20,000 for larger VAX systems. The Ethernet bridge to FastPath will cost \$2,500. This is the first Macintosh application that will actually reside on the VAX, but I predict it will not be the last.

Alisa Systems' AlisaTalk will also allow individual Macintosh computers to network together over Ethernet to the VAX. This system enables the Kinetics FastPath to make the VAX look like another AppleTalk network. AlisaTalk allows a Macintosh user to create and use Mac-format files on the VAX and also supports Interbridge from Hayes Microcomputer Products, Inc. This will allow remote AppleTalk networks to connect into an Ethernet network. AlisaTalk will be available soon for \$3,750 per VAX and \$2,250 per MicroVAX.

Kinetics has also been working on a Small Computer Systems Interface (SCSI) box which will connect Macintoshes directly with Ethernet but at a speed 10 times that of AppleTalk, while still using AppleTalk protocols. This product will use standard Ethernet protocols and will connect the Macintoshes either directly to Ethernet through the SCSI port or use the Kinetics gateway onto Ethernet.

I welcome this sort of integration for several reasons. First, it will not only open up the power and storage capability of the VAX to the Macintosh but it will also make the VAX a more user-friendly environment for microcomputer users who need its capabilities. Perhaps most important, it can only help gain acceptance for the Macintosh in the corporate MIS offices which have largely ignored it until recently.

#### Chapter 11 Claims Another Victim

Micah, Inc. has filed for Chapter 11, joining Sunol,

Davong, Northeastern Software, Assimilation, and other suppliers of Macintosh products. Corvus Systems has not filed for Chapter 11 but is walking a tight rope. This does not mean that companies filing for Chapter 11 are out of business, but they are protected from creditors while they attempt to reorganize and become viable again. Micah is now owned by Solitaire Corporation, which buys bankrupt and near-bankrupt companies with private investors' funds. Micah's disk drives are manufactured by Software Logistics Corporation, which is also known as Logistix. Although no one knows what this will eventually mean for Micah or other Chapter 11 companies, it does point out the volatility of young, startup companies in a cut-throat business like computer retailing. This is more obvious with suppliers who produce products exclusively for the Macintosh compared to companies like AST and Iomega, which are also manufacturers of IBM and other MS-DOS compatible systems. The volume of sales for Macintosh-only products is often not enough to allow such companies to survive. Keep this in mind when buying hard disks and other major computer peripherals from companies which haven't been in business long.

#### Portable Macintoshes

If you attended the October WAP meeting, you saw Jim Burger demonstrate a portable Macintosh made by Dynamac Computers of Golden, CO. It strongly resembled the portable Grid lap-top computer considered the Mercedes of MS-DOS portables. There are actually three companies making portable Macs. They are Colby Systems, of Fresno, CA; Dynamac Computers of Golden, CO; and Intelitec Systems of Fairfield, IA. The cost of these portables is very high, in the range of \$7,000, and makes Grid's portable look like a Ford from the standpoint of cost. The reason for this is very simple. These portable Macs are not clones, but the real McCoy. Since Apple uses a proprietary design for the Mac, these companies must buy new Macintoshes to get the mother board with its proprietary ROMs. They then discard the rest and repackage the main circuit board in a brief-case design with an amber (Dynamac) flat panel display. This same approach was used by a company that wanted to allow the Amiga and Atari to run Macintosh software directly by using the Macintosh ROM's.

Apple has not made a decision on selling the Macintosh ROM directly to these third party manufacturers, but there is a rumor that a portable Mac is in development from Apple. If Apple is really developing its own portable Macintosh, I would not make book on the company agreeing to sell ROMs to third-party vendors. William Campbell, Apple Vice President, strongly hinted in a recent *InfoWorld* that Apple would fight such efforts, while John Sculley is quoted as saying, "We haven't decided about selling boards, but we haven't ruled it out. It's not a religious issue." Time will tell!

A more recent issue of *InfoWorld* stated that Apple has sanctioned the Dynamac and is selling Macintosh Pluses at a discount to Dynamac for production of their portable. They are also continuing discussions with the other two manufacturers about licensing agreements. Apparently, Apple has decided not to sell motherboards to these manufacturers and still requires them to purchase entire Mac Pluses from which they produce the portables.

contd.

## 512K Enhanced Macintosh Versus Macintosh Plus

I am often asked what decision I would recommend about whether to purchase a 512K enhanced Macintosh or the Macintosh Plus. The difference in price is only about \$300, and the first question I would ask is how important this price difference is for the buy decision. If \$300 makes the difference between whether or not you can afford a Macintosh in the first place, then get the 512K enhanced or look for a used 128K or original 512K Mac. A used 128 K Mac should sell for about \$600 to \$900 depending on condition. A used 512K Mac might go for about \$200 more. If the real decision is between a new 512K Mac or the Macintosh Plus and \$300 more is not a problem, I would recommend the Plus without question. The 512K enhanced includes the new ROMS and double-sided disk drive but not the new keyboard, the SCSI port, or the extra 512K of RAM. The new keyboard may not interest you, especially if you have a separate numeric keypad or don't need one, but the extra memory and SCSI port will become very important if you keep the computer any length of time. To get another 512K of RAM, a numeric keypad and a SCSI port for \$300 is a real bargain.

The SCSI port is now the only way to go (figuratively, not literally) to hook a hard disk up to a Mac Plus. I predict most internal hard disks will be discontinued in favor of cheaper and easier to repair external SCSI hard disk drives. The speed of the SCSI hard disk is the same or almost the same as an internal hard disk and speed is no longer a reason to opt for an internal hard disk. The SCSI port also seems to be the interface of choice for an number of CD-ROMS that will be coming onto the market. This will become more important in the coming year. Note that SuperMac Technology is selling a SCSI port for the 512K Macintosh. It plugs into the existing ROM sockets and can be installed in about 10 minutes. It lists for \$299 or \$99 if purchased with a Data-Frame hard disk drive. This would be one way to add SCSI capability to an existing 512K Macintosh.

Although 512K or RAM was a lot just one year ago, it isn't now! I cannot run both *Excel* and *Cricket Graph* at work because both need 300+K of RAM, and I only have a 512K Mac on my desk. *Pagemaker* also requires about 512K of RAM and, even with one megabyte of RAM, you are often restricted to just two programs running in Switcher. Newer Macintosh programs will only require more memory and not less; the easy expandability of the Macintosh Plus from 1 meg to 4 megs also makes it attractive.

Finally, I think there is reason to believe that when Apple releases the "open" Macintoshes in early 1987, the 512K enhanced will be discontinued. This is just my opinion, and it is not based on anything I have read, but I think I would be willing to put some money on it (no phone calls please!). A statement made at the November WAP meeting tended to confirm this opinion. The small price differential, the wide acceptance of the Mac Plus, and the introduction of two new models will further reduce the demand for the 512K enhanced. Remember, the Lisa became the Lisa X/L and shortly thereafter became the Lisa that "no longer exists." This is another reason to choose the Macintosh Plus over the 512K enhanced, if you have the choice.

## Apple's Bottom Line for 1986

Apple has again recorded record profits for 1986. Earnings were up 151% for the year and 47% for the fourth quarter. Overall sales for the year were flat but did increase 25% in the fourth quarter. Revenues for 1986 dropped slightly to 1.902 billion dollars from 1.918 billion dollars in 1985. This is in contrast to earnings per share which rose 141% to \$2.39 per share compared to \$0.99 per share in fiscal year 1985. The strong fourth quarter was attributed to increased sales of the Macintosh in the business market and the continued strong performance of the Apple II in educational markets.

At a recent meeting between Apple and financial analysts, Apple predicted a strong fiscal year for 1987, with a 20% growth rate predicted. If true, Apple will end 1987 with about \$2.25 billion (that's "B" as in Boy) in revenues. Analysts were cautioned, that high R&D costs would cut into profits for the quarter ending on March 27, 1987.

## The Tempest "in a tea pot" Macintosh

What is a "Tempest Macintosh" you ask? According to a recent article by Stuart Silverstone in the *Government Computer News* (October, 1986), the term "tempest" has no special meaning but was coined to refer to secure electronic equipment. Such equipment must be free of electronic emissions that could be intercepted by individuals outside the intended organization. The requirement for tempest computer equipment is largely limited to certain organizations of the U.S. Government, such as the Central Intelligence Agency, National Security Agency, and government contractors with classified government contracts. For some time, there have been tempest IBM's, Zeniths, and other MS-DOS computers available at higher prices than their non-tempest counterparts. The large increase in price is due largely to shielding requirements and modified electronics.

Apple computers have been late getting into the tempest market, but a tempest 512K Macintosh is now on the National Security Agency's Preferred Products List, which means it complies with tempest specifications. The tempest Mac is produced by Systematics General of Sterling, VA, and marketed by Falcon Microsystems of Landover, MD, which is Apple's marketing and distribution channel in the federal government. The computer weighs 26.7 lbs, costs \$5,945, and differs from the normal 512K Mac by the addition of another 400K disk drive mounted in the side of the case and a shielded movable keyboard. A retrofit of an existing 512K Macintosh is available for \$4,360, while a tempest Image-writer-compatible printer lists for \$2,835. Tempest local area networks use fiber optic cable to prevent emissions. The other alternative to the purchase of tempest equipment is to shield the entire building. This was done at one of National Security Agency's new buildings by encasing it in copper to ground it to prevent spurious electronic emissions. There is currently no tempest Macintosh Plus or LaserWriter, although the laser printer is expected to be on the market by the end of the year.

## New Version of Microsoft Basic (3.0)

Microsoft has announced a new version (3.0) of its Microsoft Basic. It is called Microsoft Basic Interpreter version 3.0 and offers the following new features: support for the Macintosh Toolbox, a runtime interpreter, support for HFS, improved support for the LaserWriter, SADD function, and contd.

Block IF/THEN/ELSE/END IF is supported.

The BASIC Toolbox Library lets you access over 140 toolbox routines including resources, regions, scroll bars in windows, and command keys in menus. The Runtime Interpreter can be distributed with programs requiring basic without paying runtime fees. If I understand this correctly, it allows the user to run the particular application requiring Basic without actually having Basic, but it doesn't give you the capability to use this Basic to do actual programming. I hope that is not only correct but clear.

Microsoft is providing a free update if you purchased any version of the Microsoft BASIC interpreter on or after October 1, 1986 and charges a fee of \$25 if the purchase occurred before that date.

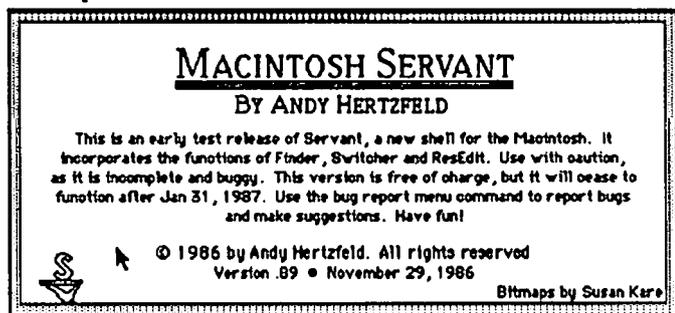
### New Version of Microsoft Excel (1.03)

Microsoft has also announced an updated version of its original Excel spreadsheet for the Macintosh. This version is 1.03, which might tell you that it is a very minor upgrade. The rule of thumb is that a major upgrade increases one whole number (1.0 > 2.0) while a minor upgrade increases by tenths (1.0 > 1.1). The same logic says that version 1.03 would be a very minor upgrade such as fixing one or two major bugs without adding any new features. Version 1.03 of Excel appears to be more of a minor upgrade and includes the following new features. First, it removes the copy protection and now fully supports the HFS. It is also able to find linked worksheets that are in different folders. Other features include support for large-screen monitors, full compatibility with version 5.0 of Switcher, and support for the Motorola MC68881 floating-point coprocessor. I think version 1.1 would have been a more appropriate designation!

If you purchased Excel after September 1, 1986, the update is free; if you purchased it before this date, the fee is \$25. You may specify 400 or 800K disks. All registered owners of Excel should have received this information by now.

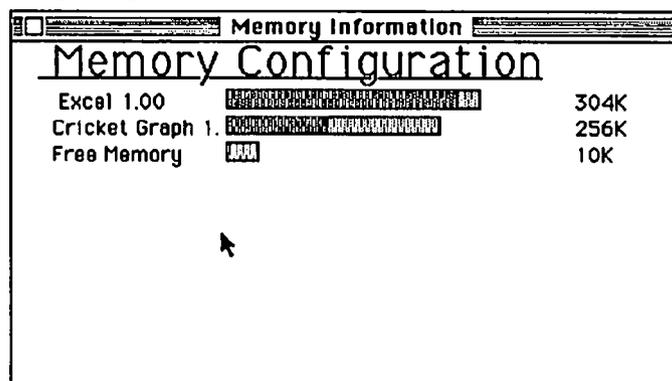
### Servant Version .89

After version .79 of Servant expired on Halloween, I was anxious to try out the next version. The newest version (at the time this was written) was .89, which expires on January 31, 1987. This means that version 1.0 has still not been completed. Each new version is apparently good for a two-month period.

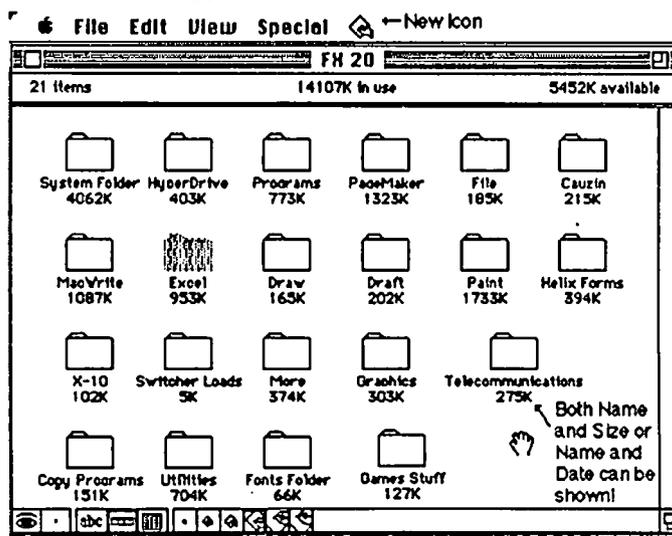


Andy Hertzfeld has made the following changes. He added a "Servant Tips" section accessible under the "apple," which lists some shortcuts and gives hints of the future. There are still a number of options that are not implemented yet, such as Get Info, background printing, downloading, scripting, rearranging, etc. Andy has also added the "memory configuration" option of Switcher, which shows how much of the total

memory is allocated to each open program. Servant evidently automatically assigns the minimum necessary amount of RAM for each open application (i.e., Excel 304K) without user participation.



Andy has also added a new menu icon which appears in the upper right corner of each menu similar to the "window" command in Excel. Any application open on the desktop can be brought to the front by selecting this icon and choosing the application from the list. This is a nice addition because individual open windows don't have to be downsized on the screen in order to click on an application that you wish to become the new open window. It is also possible to see both the name of a file and its size or creation date at the same time. The file or folder name is on the first line and either the date or file size appears on a second line.



Andy also added a "performance monitor" option (I haven't deduced what it does as yet). It is now possible to see, not only the name of a file or folder on the first line, but also the size or creation date on the second line under the title. In version .79, it was only possible to see one item at a time. This version of Servant only works with the new 128 K ROM's of the Macintosh Plus or Enhanced 512K Mac.

I don't know when Andy will finally release version 1.0, but when he does, I will review it here.

*Lynn R. Trusal is a Major in the U.S. Army and a research physiologist with the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD.*

# Softviews by David Morganstein



This month's installment describes two Laser spoolers, one distributed by MacAmerica and the other by Infosphere. If you are not familiar with spooling software, its purpose is to save you time by reducing the delay you experience during printing. Most printers (dot matrix or laser) take a relatively long time to print on the Mac during which time you can get a cup of coffee while your expensive computer does nothing more than feed data to a printer. Printing several pages of graphics on the LaserWriter can take 10 to 20 minutes! This situation is even worse in a network environment where several people are trying to print simultaneously. Not only must each wait for their own file to print, in addition, they must wait for those who obtained the LaserWriter's attention first. A spooler works by rapidly accumulating the "printed" copy in a file (usually on a hard disk) and then feeding it to the printing device at the slower pace that most of them travel. It maintains this dialogue with the printer "in the background", automatically, while you move on to some other task. Before describing these two packages, I will mention that neither provides assistance with programs that use special drivers to print to the LaserWriter. For example, they will not help when using a program like Aldus' PageMaker.

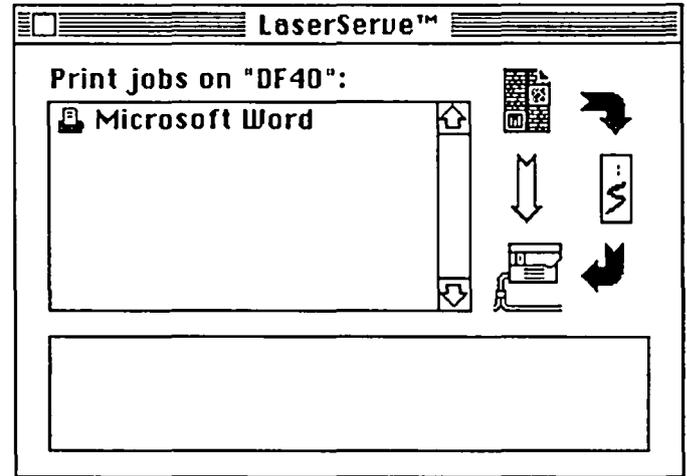
Since January begins a whole new tax season, those who use their computer for business purposes may want to know about MacInUse, a utility for keeping track of the hours spent on your machine. It automatically records the amount of time spent in each application and allows you to add a comment on each usage.

**LaserServe.** Infosphere, the folks who bring you MacServe, the AppleTalk disk server (reviewed in our August 1986 issue), have released a spooling utility. To be blunt, it does a fabulous job! Not only does it spool to the LaserWriter, it works with an Imagewriter equipped with an AppleTalk network card, as well. The software consists of a desk accessory to install in the system and a program to be placed in the system folder. The desk accessory is not needed to run LaserServe but offers a number of useful options which improve the spoolers usefulness, notably, changing priorities of files waiting in the print queue, checking the status of the printer and activating/de-activating the spooling action.

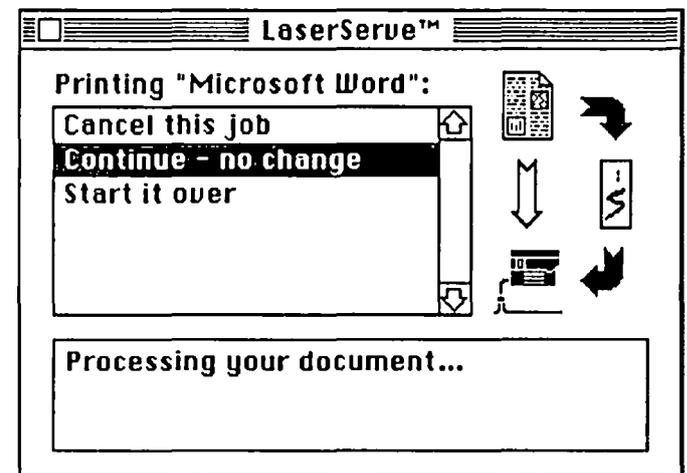
Perhaps my only complaint is that the program is copy-protected and must be installed from the master disk; however, the master is never required after the one-time installation. To use LaserServe, each Mac on the network must be configured from a unique serially numbered disk. This restriction insures that Infosphere is justly compensated for each copy used but does imply that the cost for spooling goes up linearly with the number of Macs equipped with the spooler software. Alternate solutions to the spooling problem are provided by a hardware buffer box which precedes the LaserWriter on the network. All machines on the network feed to the buffer box

first and from there, onto the Laser. These boxes are expensive and don't offer the redundancy of multiple copies of LaserServe, but you may want to consider them if you have a lot of Macs hooked together. As far as I know, Infosphere is not offering a site license for LaserServe.

When you access the LaserServe DA, a new menu appears and you are greeted by the following dialog box:

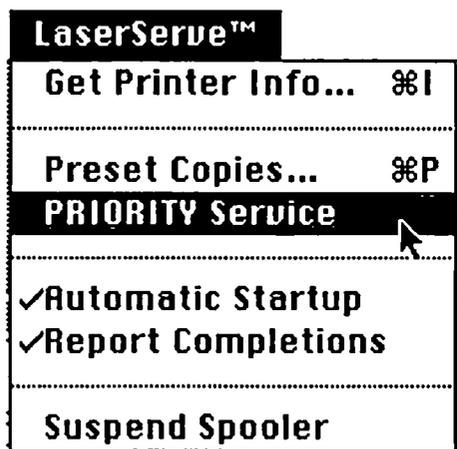


The upper left part of the box contains the names of any print jobs currently awaiting their time on the (in this case) LaserWriter. This list is obtained by clicking on the "piece of text" icon appearing in the upper right corner. The black arrows indicate the flow of printing as the user has set it. Here, the dark arrow from the text to the Data Frame 20 icon indicates the path for spooling. To stop printing temporarily but continue accumulating printable material, the dark arrow from the hard disk icon to the printer can be clicked off. To print directly without spooling, the arrow connecting the text and the LaserWriter is selected. As shown in the screen shot below, messages supplied by the spooler appear at the bottom of the text box. A number of actions on any of the files in the spooling queue can be taken by clicking on the name of the job. The following options are then presented:



contd.

You can cancel the job, let it continue or start it over. Pulling down the LaserServe menu you will see:

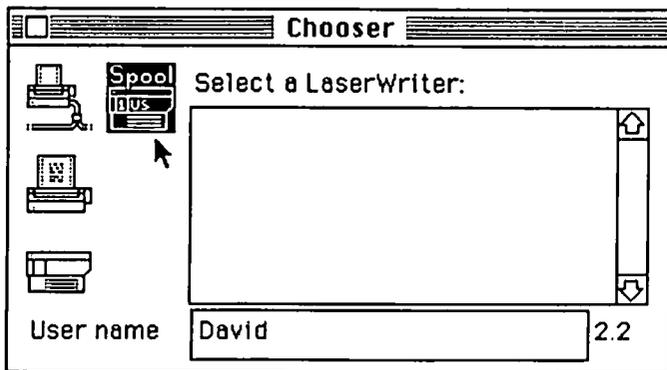


From this menu you can obtain the status of the printer, set the number of copies you want, request priority service, insure that LaserServe starts up automatically, ask for feedback when the printing is completed or suspend the spooling action.

One limitation of LaserServe deals with the number of files which can be spooled at any one time. This limit affects the document size that can be handled from certain applications due to the way those applications print. Infosphere has an upper limit which is hardwired in the program. At the time of this review it was set at 16 files but some consideration was being given to increasing this to 32 or 64 files in the print queue.

The accompanying manual is concise and leads you through the steps needed to install and use the spooler. Once installed, it is virtually self-operating. Infosphere, 4730 SW Macadam Ave., Portland, OR 97201. Phone (503) 226-3620. Price \$125.

**LaserSpool.** MacAmerica distributes a laser spooler that takes a slightly different approach. Their package consists of a desk accessory and a replacement for the LaserWriter driver stored in your system folder. Installation consists of using the Font/DA Mover to insert the DA into the system and of copying the new driver into the system folder. To select their spooler, you use the Chooser DA to select their new Laser driver instead of Apple's.



The first time you use their spooler, you must give a command-F to activate the driver. (Users of the Apple

LaserWriter may be aware that issuing a command-F causes the output to be stored as PostScript, the language spoken by the LaserWriter computer, in a text file). Thereafter, all material printed will be routed through the MacAmerica spooling function. You can tell that LaserSpool is working by observing a message "Creating PostScript File" which appears after you have given the usual "OK" to print. The only way you can tell that your printing is finished is through the selection of the LaserSpool DA. If you here a beep when you select it, the printing is done. Otherwise, the standard dialog box familiar to LaserWriter users will appear, informing you of the status of the LaserWriter. You can cancel a printing operation after you have requested it by selecting Command and clicking on the mouse button.

LaserSpool offers few of the LaserServe options. Spooled files can not be accumulated for later printing at a time of your choosing. It does not offer a notice of file print completion. As mentioned earlier, it spools only to the LaserWriter, offering no assistance to the Imagewriter II equipped with an AppleTalk card. You can 'cancel' a print job in process, by issuing a command-click but you must know which of your queued files is being printed at the time to know which is being cancelled. This method only allows you to cancel the one currently being printed, not ones in the queue.

The rather brief nine-page manual describes the steps needed to install the LaserSpool driver. If you have not yet set up your LaserWriter, the manual describes the steps needed, though this material seems somewhat superfluous since owners of the LaserWriter received Apple's manual describing these steps in much greater detail. The manual also tells you how to cancel the printing of the current print job and how to de-activate the spooler should you need to do this.

LaserSpool does work. I have tested it with Excel, Word, Paint and Draw. I found it a little unsettling to use, due to a couple of strange occurrences. For one, a short, straight text document occasionally took quite a long time to print, even though the LaserWriter had no other users at the time. After I issued a print command, and a short time later selected the LaserSpool DA, I was greeted with a message "Idle". Apparently, this message appears before the print job has been sent to the LaserWriter. Second, on a few occasions, the file never printed. The next day I found the PostScript file still on my hard disk never having been sent to the LW. Except for these few strange instances, however, it did the spooling job. MacAmerica. Phone 714-779-2922. Price \$100.

**MacInUse.** If you need to keep track of how your computer is used, you should check out MacInUse. Easily installed, it creates a data file with records containing a description of the program used, the amount of time it was used, whether the use was business or personal, as well as a lengthy comment of your choosing. It is easy to install, working in the background. It builds its data file in a folder of your selection. The default location is the System Folder. The file it creates can be read by a word processor, or by a spreadsheet. The program even comes with an Excel macro which automatically tallies up the entries and displays a bar chart!

For example, the following Word template is included in  
contd. on pg 72

# ADVANCED EXCEL GRAPHICS USING SCATTER PLOTS AND TREND FUNCTIONS

by Audri G. Lanford, Ph.D.

This month I'd like to answer an Excel graphing question that I've been asked by a number of clients and WAP members. It involves how to plot a continuous independent variable. Excel makes many assumptions about how graphs should look based on the kind of data that is supplied. However, in the case of a continuous independent variable, these assumptions typically don't lead to the desired graph format. In this article we'll examine three features of Excel that are related to this problem: how to graph a continuous independent variable, when to use scatter plots, and how to create and graph a trend line.

**Example:** Let's say that you have two variables that you want to plot over time. For example if you are an economist, you might be interested in the effect of the change in the money supply on the change in GNP over time. Change in the money supply (M-1) is your independent variable, X. It is a continuous variable. Change in GNP is your dependent variable, Y. Figure 1 presents some fictional data for 1971 to 1979.

	A	B	C
3	Year	M-1	GNP Change
4	1971	0.5	10.00
5	1972	2.75	17.00
6	1973	1.75	12.50
7	1974	3.75	10.00
8	1975	4.5	17.50
9	1976	4.6	19.00
10	1977	2.5	12.00
11	1978	6.5	15.00
12	1979	7.75	17.00

Figure 1

This seems like graphing the data should be fairly straightforward. But, there are a number of problems. Let's say that we just select cells A3:C12, click on New under the File menu, choose the chart option, and click OK. You'd get a chart like Figure 2.

This is obviously not what we wanted. Excel assumed that we have three dependent variables: year, M-1, and GNP, and that your independent variable was not labeled (so it created the X-axis labels of 1, 2, 3, etc.). The Y-axis is labeled using the scale of largest of the dependent variables: in this case, year.

There are two steps to achieving the desired result. First, since we want M-1 to be the independent variable, it must be

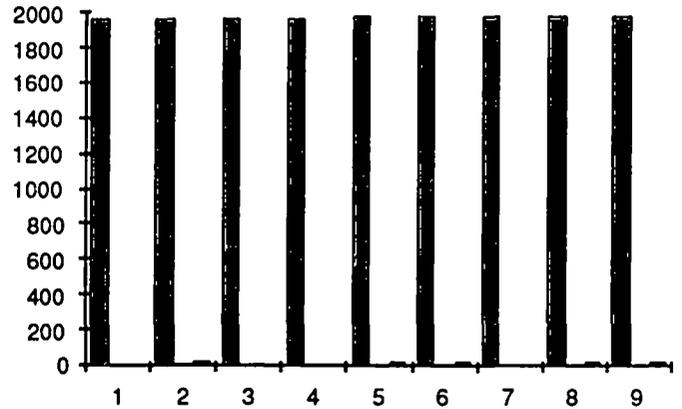


Figure 2

the first column we select. If we select cells B3:C12 and create a chart in the same way that we just did, we get Figure 3.

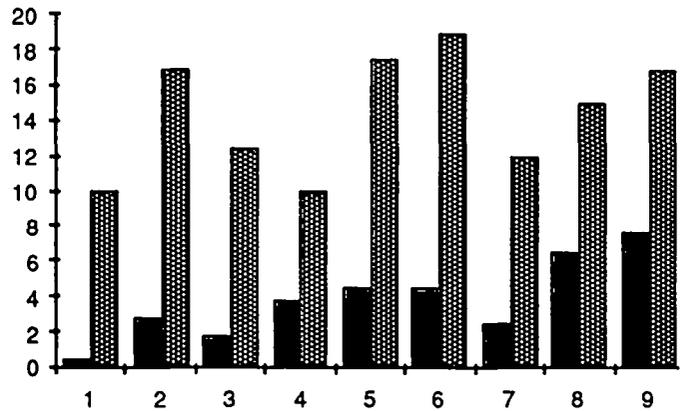


Figure 3

This is still not what we wanted. Excel now assumed that we have two dependent variables: M-1 and GNP, and that our independent variable was not labeled (so it created the X-axis labels of 1, 2, 3, etc.). The Y-axis is still labeled using the scale of largest of the dependent variables: GNP change.

Second we must get around the way Excel deals with continuous independent variables. Select cells B3:C12, but this time copy them to the clipboard. Select New from the File menu, but this time double click on Chart. This will bring up a blank chart menu. Now use Paste Special under the Edit menu. The key here is to click on Categories in First Column (see Figure 4).

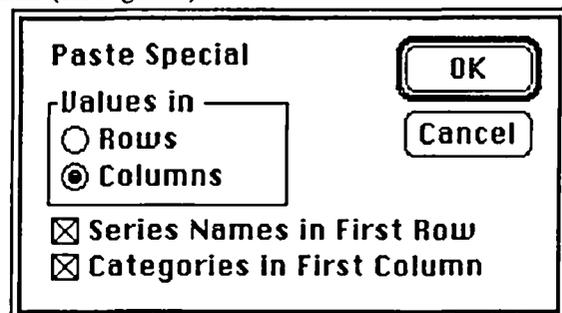


Figure 4

contd.

When you click OK, you get a column chart that shows a relationship between your two variables: M-1 and GNP change. And the X and Y axes are almost correct. However, we certainly do not want a column chart. A line graph is much more appropriate with a continuous independent variable. Therefore, it seems like the chart format that we want for this graph is a line chart. Let's see what happens when we select Line from the Gallery menu and select the first option to connect the points. Figure 5 is the result.

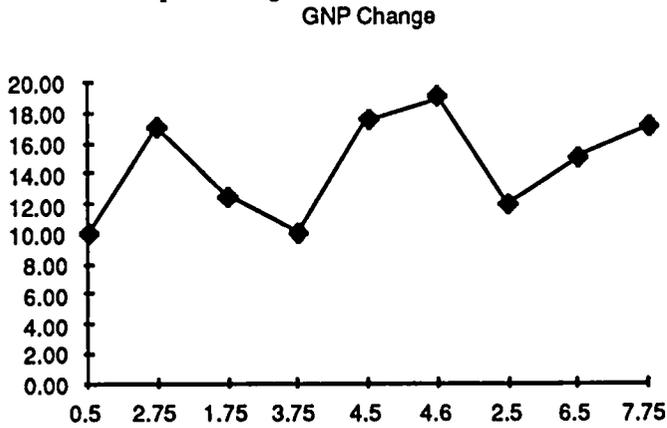


Figure 5

The independent variable is still being treated as if it is categorical rather than continuous but in a different way. Now, the X-axis has each value of M-1 listed as it occurs, rather than M-1 starting at 0 and rising.

The solution to this problem is to use a Scatter plot rather than a line graph. Select Scatter from the Gallery menu and choose the second option to connect the points. Figure 6 presents the results.

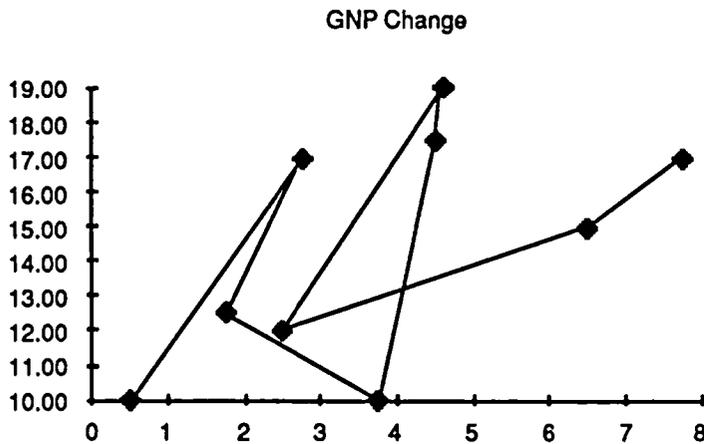


Figure 6

This chart finally solves our problem. Now all that is needed is to improve the appearance of the chart by labeling the axes, adding a title, etc. Since most readers probably know how to do these things, I leave this as an exercise (to paraphrase my old math textbooks).

Note: If you need this kind of chart often, you can create it as your preferred type of chart by selecting Set Preferred Format under the Chart menu. Future charts created during this session will then have this format.

Regression Analysis: Let's say that we want to add a trend line to our chart. We want Excel to calculate the predicted value of GNP change for each data point based on the

M-1 value using regression analysis. We then want to plot this trend line as part of our graph. First, we need to calculate the predicted GNP Change value for each year. This is done using the Trend function. The form of the Trend function is =TREND(Y-array,X-array,x-array)

where Y-array and X-array are the Y and X values of the items in the data set. The x-array argument is optional; it is used for creating predicted values outside of the independent variable range (X-array). We do not need an x-array in this example.

To calculate the trend function, first select cells D4:D12. In cell D4 type:

=TREND(C4:C12,B4:B12)

This tells Excel to calculate a trend function with C4:C12 as the dependent variable array and B4:B12 as the independent variable array. Next hit both the command and enter keys together. This is very important because Excel then calculates the trend for the entire selected region-- in this case, cells D4:D12. The result is displayed in Figure 7.

	A	B	C	D
3	Year	M-1	GNP Change	Regression
4	1971	0.5	10.00	11.5107485
5	1972	2.75	17.00	13.4844144
6	1973	1.75	12.50	12.6072295
7	1974	3.75	10.00	14.3615992
8	1975	4.5	17.50	15.0194878
9	1976	4.6	19.00	15.1072063
10	1977	2.5	12.00	13.2651182
11	1978	6.5	15.00	16.7738575
12	1979	7.75	17.00	17.8703386

Figure 7

Now all we have to do is add this trend line to our graph. The easiest way to do this is to create a new chart. Select cells B3:D12, copy them to the clipboard, select New from the File menu, double click on Chart, Paste Special from the Edit menu (and remember to click on Categories in First Column), and finally, if you haven't changed the preferred chart type as described in the Note above, select Scatter from the Gallery menu and choose the second option. The result is displayed in Figure 8. I have added a legend to label the data and the regression line.

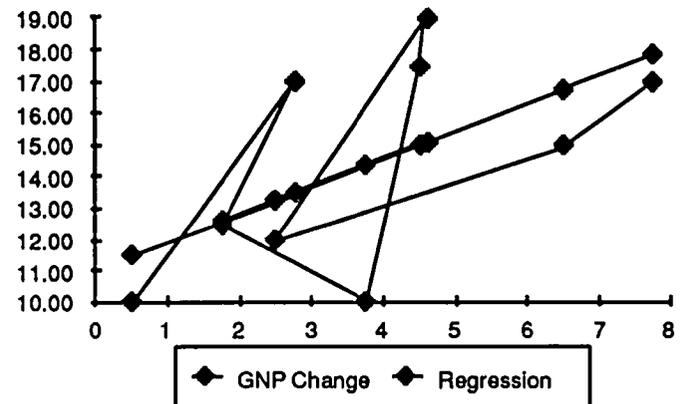


Figure 8

contd. on pg 61

# PRO3D : A Review

by Terry Monks

Pro3D is a surface modeling 3D graphics program produced by Enabling Technologies, who gave us the earlier program Easy3D. The program allows the user to create three-dimensional objects relatively easily, to display them on the screen from various angles, and under different lighting conditions, and to print them on the Imagewriter and the LaserWriter, generating either MacPaint files, PICT files or Postscript files. This is the "professional" version at \$349 of a program which costs \$99 for the non-professional. Since I have not seen Easy3D; I have to take their word for the extra power that \$250 buys you.

The software comes on one diskette, and is not copy protected. There are a few examples on the diskette, and a 245 page manual, of which the first 90 pages are a 'Guided Tour' tutorial. On launching the program the user is confronted with what appears to be a complicated screen format, as shown below. In fact the writers have taken all the icons that we might have expected to see in a column on the left-hand side, and distributed them around the edge of the center window, where the images are built. I can see some good reasons for doing this, but still would have preferred something more like the usual, Cupertino-blessed interface, with the name at the top of the window, and the tools clustered.

The first column is really a scroll bar that changes the degree of perspective applied to the display of the objects in the window: this affects the apparent distance between the observer and different parts of the screen. As the eye is moved up and down, the value changes, and a corresponding number appears in the text box. Similarly, the rightmost column is another scroll bar that changes the ambient light values. The hands stretching the iron bars are used to compress or expand the image along the appropriate axes, and the four curved arrows in the middle of the sides are used for rotation in two planes. The circular arrow in the upper left corner is used to revolve the image in the front plane. The pencil, upper right, is used to force a redrawing of the whole scene, the lower left icon allows you to resize the drawing, and the house icon, returns you to 'home' with the original orientation and size. There are 8 different lighting setups available under the Light menu, and you can set your own lighting effects by varying the brightness of four light sources. Pressing the mouse within the center window, allows you to move the image around with the familiar hand icon.

The first figure shown demonstrates the 'Camera' mode, but it is often more useful when composing a scene to have what is known as the 'Four views' option in effect, as shown in the second figure. Here the camera view is still available at top left, but we can also display the Top, Left and Front views, or even Bottom, Right and Back.

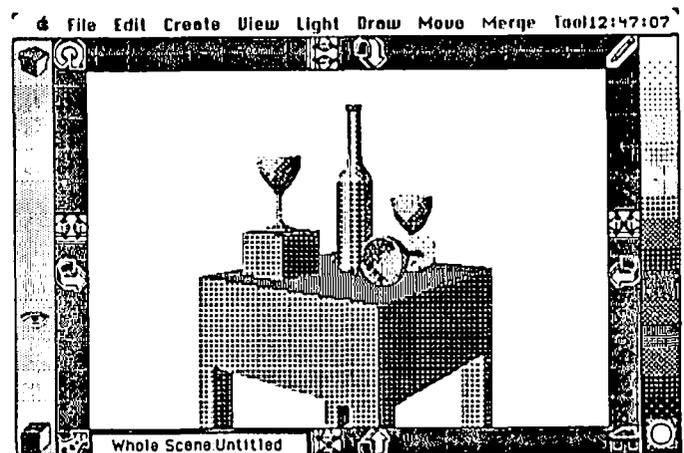
All the above options let you choose the display options for objects that have already been created, but the most challenging part of the problem is creating the objects in the first place. Pro3D has some 'canned' objects that you can use—a cube, a wedge and a four spheres, and you can do a lot by combining these basic shapes, since each object in a scene can be rotated and resized independently. When you have brought shapes together in the way you like, the shapes can

be combined into one object with the Merge option. Objects can also be 'cloned', 'aligned' and 'mirrored' very easily.

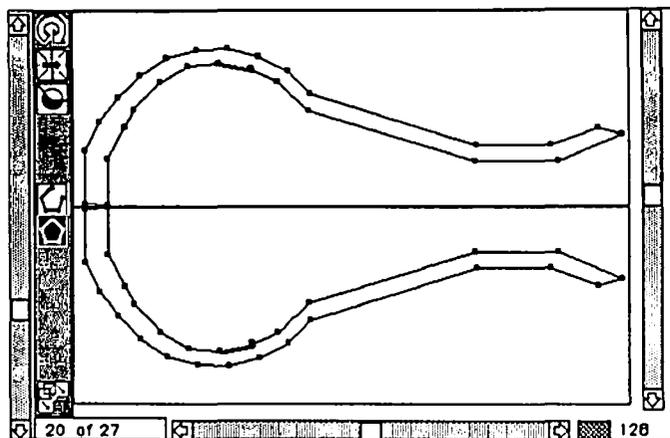
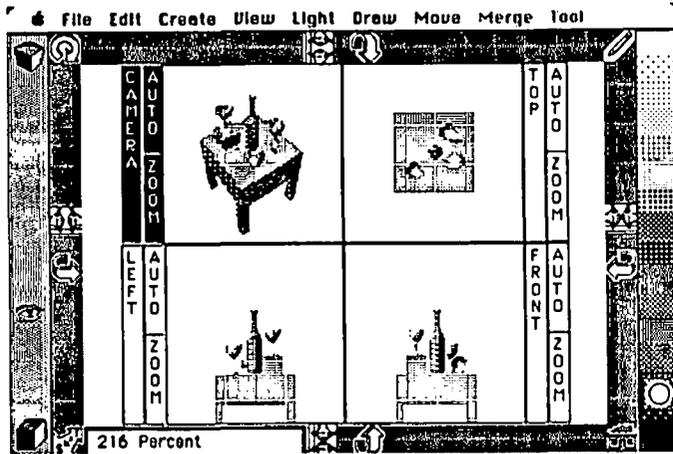
It would be very tedious to make complex shapes from the available building blocks, and Pro3D overcomes this problem by providing two 'Power tools'—the Lathe and the Profiler. The Lathe is used to produce objects that are symmetrical about one axis, such as the bottle and glasses in the samples. It has similarities to MacDraw, and the useful feature that the outlines created by the Lathe and the Profiler may be saved independently of the objects themselves. Serious users would build themselves a library of manipulation in the creation of complex shapes. There are a few samples provided, including a 'basic' House shape, and several Chess pieces. The Lathe is quite easy to use, but the Profiler took me a few tries before I got the hang of it. The examples given in the manual are quite good and well explained, but there was one operation that I never mastered (embossing). Charitably, I will claim the error was mine, but it still mystifies me.

Combining objects by merging appears to be well done. There is an 'anti-matter' feature which lets you combine objects with—well, holes, actually, so that you can make shapes with space inside them. This process can be quite slow, but the results are worth it. In fact the whole program is far from speedy, as soon as you start dealing with complex object shapes, but since I know a little about what is involved in hidden-line algorithms, I was not dissatisfied. It is all so much easier to work with than the 'old' way of defining each polygon with three dimensional coordinates.

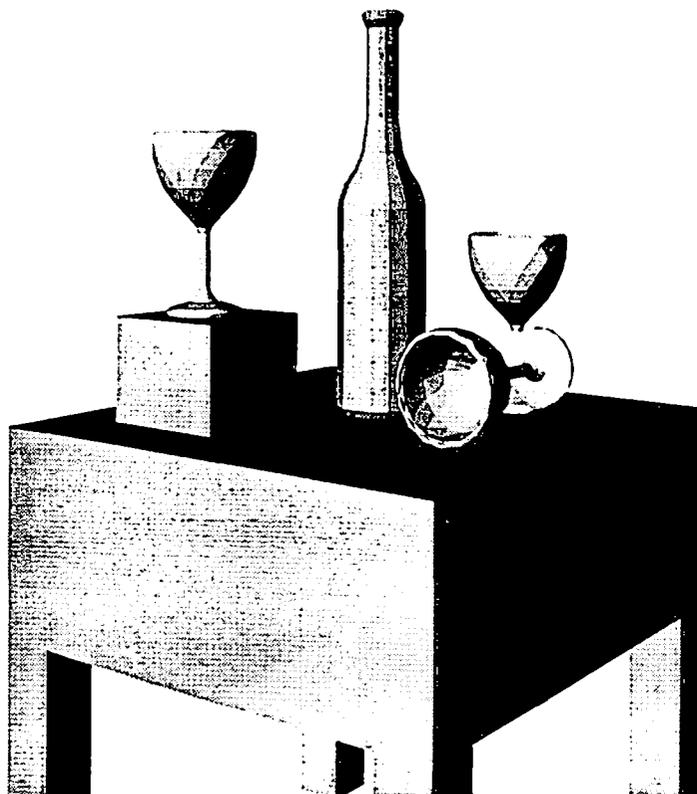
There are many more features involving shading, appearance and manipulation which I have not covered. The question that remains for me is: what market is this program intended for? The box claims that it is intended for 'the designer, engineer, architect, artist and desktop publisher', but I am not sure. The final output is quite good, especially using the Postscript option on the LaserWriter, but the fact that each surface is made up of small polygons is still apparent. Even the best output would require some enhancement using a Paint or Draw program before it could take its place in a professional publication. However, the program works well—I did not get one bomb—and is reasonably intuitive, if a little beyond the hobbyists' price range.



contd.



Using the Latha to form a Vase



## Developer's View contd. from pg 50

box seems to have a slightly nicer user interface. But InterMail supported zones, internet transmissions, and a server which runs in the background. Inbox now also has these features but InterMail seems to be ahead in the useful features race.

The main difference which caused Micro Dynamics to choose InterMail is their attitude towards developers and customers. They will customize the interface of the mail system, and add custom message types for a reasonable fee. InterNet can do this easily since their whole system is comprised of system parameters, as well as the usual information in resources. The heart of the system is modularized drivers. If you are a developer, InterNet will supply you with the necessary information to call the drivers from your own program. This will make adding a serial server to DigiBase very easy.

The creative LaserWriter name of the month was seen at Apple: "Mr. Goodbar". When you print, the standard printer status window gives the name binding message "Looking for Mr. Goodbar". Send in your favorites and we will pick one each month to share.

### Companies Mentioned:

Intermail: Internet 617/965-5239

Inbox, Think 617/863-5595

WORM: LoDOWN 408/438-7400

DataFrame XP, SuperMac Technology 415/964-8884

Direct Drive 20, Jasmine 415/621-4339

68020, Beck-Tech 415/548-4054

Prodigy Prime, Levco 619/457-2011

OCR: Abaton 415/463-8822

PC Scan, Dest 408/946-7100

Illustrator, Adobe 415/852-0271

Ready, Set, Go-3.0, Manhattan Graphics 800/634-3463

Computerware, 800/235-1155

Jim Lanford is the architect of MacLabeler™, DigiBase™, PostHaste™, and other "yet to be announced" software for the Macintosh. 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., a D.C.-based consulting firm specializing in custom Mac software and advanced training. ☺

## Advanced Excel Graphics contd. from pg 59

We can of course improve the appearance of this chart by labeling the axes, modifying the point at which the axes cross, adding a title, labeling the data points with the correct year, etc. But we have now accomplished the hard part of creating our graph.

This article has demonstrated how to use three Excel features: how to graph a continuous independent variable, when to use scatter plots rather than line graphs, and how to create and graph a trend line. Although these are features that are most likely not used every day, they can, at times, be very useful.

Audri Lanford is the CEO of Micro Dynamics, Ltd., a Washington, D.C.-based consulting firm specializing in Macintosh software development, consulting, and training. ☺

# I AM MOVING TO TEXAS: MAPMAKER REVIEW PART II

by Jo Ann Goldberg

In last month's review, I discussed selected features of the MapMaker program and reviewed the initial steps in creating a map in the MapMaker program tutorial. The concept of a map-making program capable of all that MapMaker provides is superb. But, as I mentioned last time, the program has problems. This time, I will point out some of the wonderful tricks the program performs.

Here's a quick reminder about the program. MapMaker 2.0 provides you with the ability to create your own maps of the US as well as 176 other countries. The program was developed by Daryl Scott and is sold through Select Micro Systems of Yorktown Heights, New York. Mapmaker requires a Macintosh or Macintosh Plus computer with a minimum of 512K RAM and a single disk drive. (List price for a set of 4 disks is \$295. Additional data disks of zip code, marketing areas, and census tract data are also available.)

MapMaker offers an extensive set of map files, similar to clip art files, including individual maps of the US 50 states. Individual states can be depicted by county as well. The program also includes maps of ninety Major Metropolitan areas, map files of 176 world countries, and 169 world capital cities.

Once you have created a map, you can then use a wide range of 1980 US Census data (household income, population density, labor force distribution, to name a few) and world population statistics provided on the accompanying disks to express data relationships in the maps. For example, when I select the US State map file, I am presented with a map of the country with state labels, and a legend which I can later modify. I can then select, for example, a US Census population density file, to represent through map shades and symbols population differences between states. MapMaker also enables you to create your own data base or import pre-existing data bases from a range of other programs.

The program works on a principle similar to any graph program. But, in this case, data categories are represented by differences in shades or symbols rather than high or low bars or fat or thin pie slices. I am interested in examining how my income level changed as I moved from state to state.

Let me now take you through the steps of creating a data map. As a fictional example, I decide that it is now time to move from Washington, D.C. to one of the 6 states where I had once lived. I want to move to a state where the prospect of earning a high income is greatest and where I will be in close proximity to other states I enjoy visiting. Mapmaker will enable me to combine income and travel considerations in a single image. (Of course, if you are interested only in comparing data from a few locations, MapMaker will not be a useful tool. I use this example only to illustrate features of the program.)

After opening MapMaker, I select "Create Map From Boundaries" from the Display menu. I am then presented with a list of maps to choose from, including the US 48, Europe, and Africa. I choose the map of the US 48 states.

This is where the fun begins. Once having a map of the

US 48 states, I then select "Enter Values" from the Assign menu. The value file then displays a dialog box for each of the 48 states. I could enter data from as many as 30 different categories for each state. Thus, I could enter data on state population density, per capita income, along with tax rates for each state. I could have assigned values to all 48 states. But, for this example, I am interested only in creating one data set, my own average annual income, for 6 states. I click through each state value box as it is presented, stopping only at the 6 states I am interested in. For each of those states, I enter my average annual income and move on to the next. After entering values for each state, the program returns an image of the US 48 to the screen.

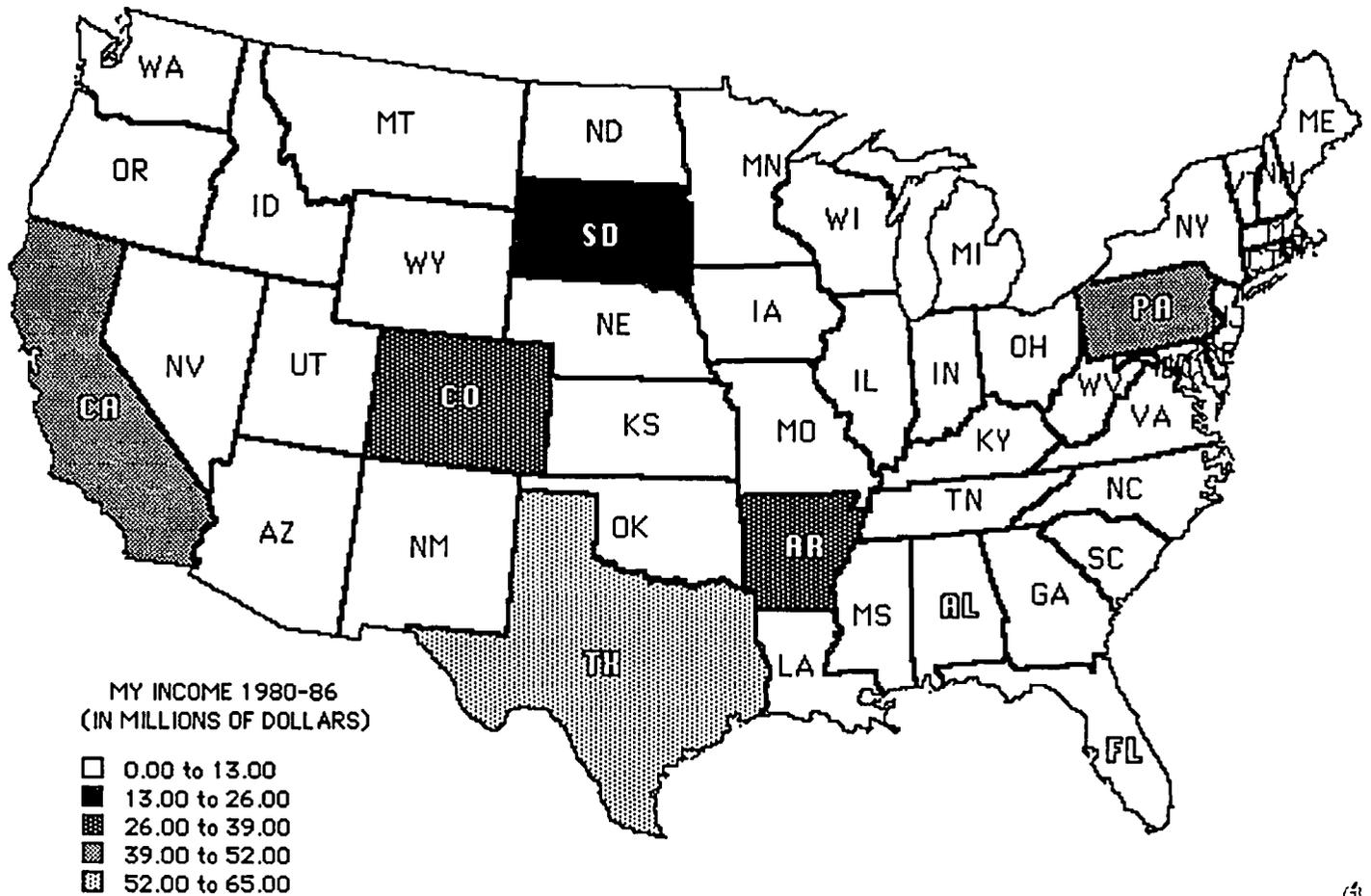
MapMaker automatically presents a legend with 5 data categories. Once I assign the values, MapMaker calculates the range between the highest and lowest value (my annual incomes in this case) and divides by the 5 data categories. I can modify the legend by creating as many as 35 different data categories, changing legend symbols and patterns, or moving the legend to a different location on the page. For the current example, I retain the 5 data divisions.

In the sample map, 6 states—Arkansas, California, Colorado, Pennsylvania, Texas, and Wisconsin are highlighted according to the patterns assigned to legend divisions. States for which no data is entered have been left blank.

The sample map was fun to make. And, thanks to MapMaker, I think I'm moving to Texas. (*Editor's Note: This is a typical problem which can arise from using outdated census data for our maps. If you are thinking of moving to Texas, you should get more current info on employment and income. Contact Bob Platt, for the most up to date source!*) I also think I would like MapMaker to enable its users to create more visually effective maps. My map is "good enough" to serve as a quick rough draft of a final report. The next generation map program should enable the user to immediately reach final draft form.

MapMaker is a very interesting and powerful program concept, filled with attractive features, and fun to play with. MapMaker is a program which requires the combined skills of a graphic artist, a typographer, a manual writer and editor, as well as the many computer skills of Daryl Scott. It is the combination of all these talents that will make MapMaker reach its full potential. It is the potential of the program that I await with interest and enthusiasm.

contd.



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# BEST OF THE MAC ITEMS FROM THE TCS

by Bill Baldrige

(Contd. from last month)

## Other Hardware

RICK ROBINSON ON 10/25

My only problem with the Mac Plus was the CRT. It was mounted crooked at the factory. It seems most Apple monitors have this property. I still have trouble getting my USR 2400 modem to work @ 2400B all the time; not sure if modem, computer, or phone line problem.

RICHARD BROSNAHAN ON 10/25

I want to upgrade my Mac Enhanced to a Plus. I can wait awhile, but I really want to do an upgrade the fewest number of times. What I am thinking about is upgrading to the meg of memory AND the addition of the 68020 chip. Does anyone out there have an inkling on whether that will be an option? It seems a likely upgrade path for Apple, but maybe they want to only put that chip in their new machine. The Levco deal is too darn expensive, but darned interesting. Also, I read somewhere that a 68040 is in limited production. !!

DAVID GURSKY ON 10/25

Don't hold your breath for an Apple upgrade to the EMac/Mac+ that would include a 68020. In all likelihood, it will be an option on the next Mac, but Mac+ will be as far as the current box goes.

TOM VIER ON 10/27

Am I having deja vu over the IIGS when I think back to the Mac'84? No room on disks or RAM once you get all the system stuff in place?

RALPH HORVATH ON 10/27

We have three Mac Pluses and two Enhanced Macs. The Enhanced Macs have been trouble-free. We occasionally experience burps from the hard disks on the pluses, but nothing serious so far. We, too, have found that the CRTs are often not installed acceptably straight, and have called on our service agreement with Falcon to make an adjustment (successfully). Occasional system errors are ignored rather than called in for diagnostics; they happen about once a week to one of the machines, but usually on a Mac Plus. I also have an Enhanced Mac at home, and it has been trouble-free.

FRED SEELIG ON 10/29

I put on the survey that the power supply had failed. This is only an assumption. My CRT is flickering. I have read that this is a problem characteristic of the board containing the video/power supply circuitry. This is my diagnosis, not the shop's. I am scrambling to shop for either AppleCare or the cost of a failed PS/video board. Right now it looks like AppleCare will be \$125 and labor/parts (thru Frederick CP) will be \$30+\$115=\$145, so AppleCare seems cheaper. It seems that PS/video failures are characteristic of upgrade Macs. Mine was upgraded from a 128 to a Mac+ and have noticed screen wobble and momentary flicker. My feeling is that this is Apple's problem. I paid \$1100 for the upgrade. It should be Apple's nickel to fix a design defect that was their fault. Recalls are in order, as with American car companies. BTW, I was planning on doing the very same thing you are presently doing with this survey. Can you share results? I

would like to incorporate these findings in the next column for the WAP Journal. Would like to do so, with your permission, unless you or someone else is planning on writing about it for the Journal. We need to make this information public, and then show Apple that Mac users with high loyalty to their Macs are NOT PLEASED with this state of events. Thank you for taking your time to run this survey. It's about time that this was done.

## Misc. Programming

TML Pascal

CHRIS KLUGEWICZ TO ALL

I've heard opinions both ways about this, maybe somebody here can clarify: Will TML Pascal from TML Systems run successfully on a 128K Mac? As the man on the commercial says, "Thank you for your support."

JIM RHODES ON 06/30

According to MacUser, July, page 132, TML Pascal requires 512K.

Xlisp 1.6 Source

MARLON NELSON ON 07/19

Can someone tell me where I can get the source code for the Xlisp found on SigMac disk #39?

NIR WICKRAMASINGHE ON 07/21

The fastest way, I think, is to write to David Betz, with a Mac disk + postage. His address is on the XLISP docs, as is his phone number. He replies promptly; I can attest to it, since he sent me XLISP1.6 directly in response to a request from me before I saw it on a WAP disk.

BASIC on Mac

RICK ROBINSON ON 07/22

I would be interested to here from anyone who uses BASIC on his Mac. I would like to compare all the BASICs available. I have sort of reduced my choices down to ZBASIC by Zedcor, Inc & MS BASIC by Microsoft. I understand that Zbasic is compiled & MS basic is not. Since I learned BASIC on an Apple II+, I would like to use a compiled BASIC now that I have a Mac. If everyone could relate their experience along these lines, I would be very appreciative.

BRUCE FIELD ON 07/27

MS BASIC is slow, but it is very complete and works with the Mac Toolbox pretty well. CLR Libraries are available for complete Toolbox usage. I recently saw a letter in a Mac magazine criticizing ZBASIC as very buggy. I'd wait until I saw a complete review from someone I respected. But if you want to buy it and tell me how it is that would be great. I keep moving back and Forth (pun intended) between languages, but I'm still most productive in MS BASIC.

"How To" Tip

BOB MASSO ON 07/24

There is a new book out from Hayden Press, entitled "How to Write Macintosh Software" by Scott Knaster. (\$29.00). I'm only up to page 75 (of 490) but would already recommend it contd.



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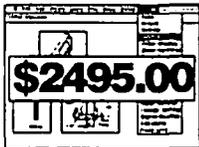
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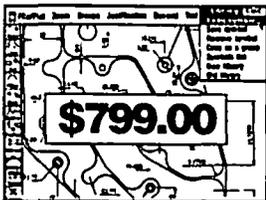


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for clarity. Its explanation of resource purging, and shifting of resource blocks by the heap manager is the 1st one I have read that I understood 1st go-round. And its tips on how to write efficient code without tripping over moving resources is clear, as well. Not a stand-alone book, but a good companion to your book(s) on how to program on the Mac in the prog. language of your own choice.

#### Packed Arrays

JAMES DONNELLY ON 07/31

Is it possible to find anywhere anything like a real DEFINITION of a packed array? What in the world is it?

DAVID GURSKY ON 08/01

Jim, Oh my god! Packed arrays! Fortran! Real Programming! Many many many moons ago, a packed array referred to one where more than one data element was contained in a cell. (Please bear in mind we have since left the Mac world and are now referring to Dec-10s and Multics). A typical example of a packed array is a character string. Since words of memory on Dec-10s contained 36 bits instead of 8, nor could the Dec-10's memory be addressed in a byte-oriented fashion (as say a Data Gen'l Eclipse), one would pack as much as possible into one word (9 characters/2 words). Now the Mac is not a 36 bit machine. The underlying structure is 16 bits/word, and is addressable on a byte by byte basis (I believe, if not, it can be kludged) and hence the notion of packed arrays does not really apply. I think. I'm not an expert on programming Macs and this paragraph is mostly inference based on knowledge of other 16 bit machines (specifically DG Eclipse). What does this have to do with flashing menus though?

JAMES DONNELLY ON 08/03

David, Thanks for the information. I didn't mean to intrude on the flashing menus discussion (which has been gripping, I grant you) but I thought that by using a different subject heading I was signalling a digression. Actually, my question about packed arrays was in fact prompted by Mac considerations of a sort. The term is sprinkled around Inside Macintosh with no explanation that I could find. I have three Pascal texts, but I guess they're all too elementary. Two of them go so far as to list "arrays, packed" in the index, only to inform us in the indicated passage that packed arrays are "beyond the scope of this book." From what you say, I gather that they're not only beyond the scope but beside the point.

BOB MASSO ON 08/08

James, packing vs unpacking of arrays still applies, even on the Mac. As David said, an unpacked array (or record, or whatever) has its components starting on word boundaries, a packed version keeps the components compressed to only the space actually required to represent the data. Thus a PACKED ARRAY [1..16] OF BOOLEAN requires only two bytes (one 16 bit word) of storage, whereas an ARRAY [1..16] OF BOOLEAN requires thirty two bytes (eight 16 bit words) of storage on a 16-bit machine. The advantage to packed arrays therefore is lower storage requirements. The advantage to unpacked arrays is speed, as machines need to extract out and unpack individual array components to use them. Note however that declaring packing of an array whose elements are word-sized is redundant.

#### Organizational Tools

FRED SEELIG ON 11/03

Does anyone out there have More? Does More still have a

slide show option like ThinkTank does? If so, can graphics be imported easier than with ThinkTank? I find ThinkTank (version 1.0) incredibly useful but incredibly irritating in that it does not work with any Switcher that I have, even Switcher 5.0b. Hope Servant takes care of that bug. MORE sounds like the best and most useful productivity tool to come out in a long long time.

PAUL CHERNOFF ON 11/04

Fred, MORE does have a slide show feature (it does not lack anything which ThinkTank has), and it will work with Switcher, but you better have a Mac+. MORE takes up lots of room. By the way, I had ThinkTank 512 and bought MORE, and never regretted it. Ignoring the bells and whistles, I find MORE much more efficient to use.

#### Pascal Programming

RICHARD BROSNAHAN ON 10/13

OK. I might as well start this thing. I am taking Pascal at school and my program that I am working on bombs the Mac. I have to reset! Pain in the butt. Anyhow, why does it do that? Here is an attempt at uploading the listing. program project2; var milea, mileb, fuela, fuelb, miles, best, mileage, mileagea: real; dataIN : text; begin reset(dataIN, 'data'); {data2 is the external data file in text form} mileage:=0.0; best := 1.0; readln(dataIN, milea, fuela); while not eof(dataIN) do begin read(dataIN, mileb, fuelb); miles := mileb - milea; mileagea := miles / fuelb; milea := mileb; writeln('Mileage ', mileagea : 3 : 5); end; close(dataIN); end. Hmmmm, strange deal here. Someone ate the first two letters of most of the lines. Let's see if I can fix it. Yep, most is fixed. Understand folks that I am a BEGINNING programmer and probably made some big errors. I mostly want to know why I dont just get a run time error instead of bombing the machine. I am using MacPascal 2.1 with finder 5.3/system 3.2. Thanks loads.

MICHAEL HARTMAN ON 10/21

First, since you have such a wonderful debugging tool as MacPascal, you should have turned trace on and discovered what line the bomb was occurring in (it's usually not the first). My guess would be that your problem is with your Read statement inside the While loop. Shouldn't it be a ReadLn? The second time through you're going to be trying to get real numbers out of a carriage return. Another possibility is that your data file does not have the text formatted properly. Some Pascals (don't know about MacPascal) require that real numbers have decimal points in them, and will choke trying to read them if they don't. Also, your input file is a vanilla text file, isn't it (not a formatted MacWrite or Word file)? And finally (maybe the bomb is in the first line) is the file named 'Data' as the code says or 'Data2' as the comment says?

RICHARD BROSNAHAN ON 10/24

I fixed it. With help. Thanks. The problem was the Read. It should have been readln, as you suggested. I have no problems with reading an integer, as it will automatically convert them. It now runs. Let me tell you, I was a bit frustrated. Thanks a whole lot. I am really enjoying this programming. Pascal is the first programming I have ever done, and I think I made a good first language choice. What do you suggest for a good Pascal compiler on the Mac. TML has gotten good reviews but now there is Lightspeed Pascal. Any ideas?

MICHAEL HARTMAN ON 10/25

We discussed this quite a bit at the last Pascal Interest Group contd.

meeting. Every Pascal out has its advantages and disadvantages (surprise!). The choices are TML, Lightspeed, Turbo (soon), and MPW (beta now, real later). (And who knows, maybe one day there'll be Step-Lively, announced for over a year.) If you're just getting started, I really recommend working with MacPascal for some time yet. In a couple of months you'll have a better idea of what features will suit your own development style, and also Turbo and MPW will be available for examination. The release of MPW is going to lead to a lot of changes in Mac programming environments with its new .Rel file format and the availability of MacApp.

**RICHARD BROSNAHAN ON 10/25**

Thanks. I will do as you suggest and sit tight for a while. I do like the MacPascal debugger system. I also have access to the U of M Mainframe and can write Pascal on that. I think that is plenty of confusion for me right now. I stand advised.

#### Printers

**CHUCK ROTH LISBERGER ON 10/25**

A friend of mine has a Mac Plus and is interested in a typewriter which has the capability of serving as a letter quality printer for the Mac. Anyone out there who has such a setup? Any brand suggestions? Price? Thanks.

**BERNIE URBAN ON 10/27**

Check the back of your Journals and look for the ad on the Anderson Jacobson printer. Word can drive it.

**LARS HOEL ON 10/26**

When my Imagewriter died the other day, I tried to press an Okidata 92 into service for use with my Mac Plus. Am having no luck, even after expert advice from Jay Heller and Okidata Tech Support. Does anyone in WAP use this combination? Does it work for you? What are your DIP switch settings? Lars Hoel (NYC) 212-289-5747, or leave reply here.

**DOUGLAS BOWERS ON 10/28**

I use an Okidata 92 successfully with my Mac Plus, but I bought it with an Okidata Mac board that makes it ImageWriter compatible. If you have a "regular" Oki, then this might not be much help, but the switch settings are off-on-off-off-off-on for the 8 DIP switches. By the way, Oki's Mac board doesn't work too well with the latest Imagewriter driver, so I still use the first driver that Apple issued.

**RICK ROBINSON ON 11/01**

I believe your friend would be better off if he purchased a dedicated L.Q. printer for the Mac+. Also, he should test any device, other than an Apple Imagewriter, before purchasing it. Make sure it does EVERYTHING desired of it; accept no promises. Daisy Wheel printers are queer beasts, and very particular. My advice: PROCEED WITH CAUTION.

#### Rumor Manager

**JERRY OPPENHEIMER ON 11/0**

As one about to purchase a Mac I am shocked to find the general lack of info on all of the boards on this conference. I had gotten the impression that the Mac contingent of WAP had gained control, so to speak, of the Journal. It seems there are more Mac articles than //e articles. So I was hoping that now that I was going to join the 'Mac Generation' this conference would be loaded wth info. Not so. How come?

One thing I'd like to see is a conference for professional writers, journalists, etc who are turning to Macs and can exchange info.

**LLOYD SWIFT ON 11/06**

I agree, Jerry, there needs to be a conference for writers, not just for "word processors" which, of course, tends to discuss the software rather than the craft. The software (and hardware) is important and fascinating but there is such a thing as exchanging views about substance.

**BERNIE URBAN ON 11/06**

No way has the Mac contingent gained control of the Journal! As the Iigs becomes more available, you will see much change in its contents. Problem seems to be that there are not too many rumors to spread right now plus the fact that many Mac users have not found their way here. Like your idea re writers conference... are you available to stir up interest by SYSOPing a board? Not too much time and effort is needed and besides it can be entertaining. We have several writers and journalists as members.

**JERRY OPPENHEIMER ON 11/06**

I'd be interested in trying to get a group together for meetings rather than SYSOPing, which I'm not up for. The writer's group could meet after the monthly WAP meeting or whenever. Any thoughts on promoting this idea?

**JERRY OPPENHEIMER ON 11/06**

I agree, Lloyd, but I think there is also much value in hardware and software info exchange as part of any writer's group we might form. Years ago I had been a member of a small Kaypro Users Group that was made up of mostly writers, freelance and staff. Not only did we exchange tips on latest software, helpful hints, hardware info etc, there was a lot of good exchange on agents, markets, etc. This is the kind of thing I'd like to see—a typical meeting devoting say 30 minutes on some new word processor or speller, a bit of time devoted to hardware and then a general discussion.

**DAVID GURSKY ON 11/07**

Boy! The WizOp goes away for a couple hours and look what happens. First off, guys, there used to be more information on Macs on the BBS, but it was lost when we switched to the new multi-conference system (unlike Apple // people, who fortunately kept most of their message threads). So this place will be a bit more barren then you've been lead to believe until more messages are present. Now regarding a "writers" board. There are two places already on on the Mac Conference where you could start exchanging ideas: DPub and Word Processing. Just do what you did here! If you have a question to ask, statement to make, etc., leave a message on one of those two boards. If you really get a fire going on a certain area, I'll have Lee Raesly create a new board out of one of the spares here, or it could be on another conference entirely. Glad to see you're all taking an interest in the goings on here!

**DAVID GURSKY ON 11/07**

Jerry, I think you may have missed my point slightly. While this is not true really of the DPub board, it is of the WP board, and that is, it can take whatever direction the users want! By using WP as a spring board for ProWrit, you, me, and everyone else involved can see if there is a demand for such a board (with all due respect to your enthusiasm). If so, when I have the boards rearranged in a few months (certain contd.

boards on the Mac Conference don't get much use, as you may have noticed. I intend to consolidate them in January. Likewise, if I've seen certain subject areas overwhelm existing boards, I'll have them split off). This is the approach I'd like you to take for awhile. That being said, would you like to be SysOp on the WP board? This could help you in promoting messages relevant to the needs of professional writers, and thus we can gauge interest among the BBS users.

#### Software Misc.

DAVID GURSKY ON 10/20

Does anyone out there have experience with or comments about the various LAN packages out there for the Mac (notably MacServe and TOPS)? I mean ANYTHING. Criticism, biases, experience....

BERNIE URBAN ON 10/22

As an inveterate NUT worker... We are going to test extensively TOPS at the office with hopefully a PC, Mac, Mac+, Iigs, LaserWriter and Hard Drive. It will be demoed at Saturday's meeting. David Morganstein has much experience with MacServe and is now reviewing TOPS.

DAVID MORGANSTEIN ON 10/30

David, there is not enuf space here to do justice. I'll say a few words but suggest you give me a call for more comments. MacServe works well between Macs. Any Hard Disk can be a disk server. When a volume is requested it is selected as read only or read/write. Unfortunately, many Applications which you might want to share (e.g. Word) must be able to write to the volume. Only one person can access a read/write volume. Sharing with PC's is a bit trickier. Using the PCMacBridge card and supplied software, and the Mail Center program on the Mac we can file share between PC and Mac world. PCMacB software includes an ASCII convert program for downloading ASCII files from PC to Laserwriter. Unfortunately, anything longer than 25 pages resets the LWriter...ugh. TOPS (shown at last WAP meeting) seems like a more elegant and workable PC to Mac system. PC files can be read and changed directly by opening icons on the Mac Screen! Magic... Similarly, Mac files can be read and changed from the PC using usual cryptic PC names like D:short.doc...

TOM DEMAY ON 10/26

When using OverVue 2.0d with MockWrite 4.3 to create macro "Do" files, after creating the do file and copying it to the clipboard, I closed MockWrite and tried to go back to OverVue. The system locked up with only the EDIT menu available. There was no way to unfreeze the Mac except the RESET button on the side. The earlier version of MockWrite seems to work ok. I'll play with this some more and report back with my findings. If anyone has any comments, they would be appreciated.

DAVID MORGANSTEIN ON 10/30

Tom, I use MiniWriter for writing OV Macros...it works fine!

DAVE CHAMPNEY ON 11/04

I have a Data Frame hard disk formatted into volumes with MacServe. Frequently the contents of the clipboard get lost when moving from one application to another, particularly when the applications are on different volumes. Also, when copying to the clipboard from MacPaint I very often get this message: "MacPaint having trouble writing to the scrap", and nothing appears on the clipboard. Do I have to reformat my

disk in some special way? I have only one copy of the Systems Files.

DAVID GURSKY ON 11/04

Dave, Before I answer your question, (with hopefully, even, the right answer), I wish to point out to you that entering messages in upper case is considered to be very rude [no offense intended]. If you are having problems entering uppercase text on the BBS, check your user profile at the BBS or Main Menu prompt (the command is 'U') and check that you have lower case enabled. Now then ON to clipboards... The Clipboard is "static" memory and does not survive system reboots. It is possible that if you have a System and Finder installed on the volume your document and application reside on (assuming that your application and document reside on different volumes) that the active system is changing from the one on one volume to the other, which could cause the clipboard to go "bye bye". Also, you should only have one file on your system volume named 'Clipboard', HFS or MFS! The Mac gets very confused is you have multiple files with names like 'System', 'Clipboard', 'HD20', etc. [Notable exception to this is 'Scrapbook'.] A second thing to be wary of is your free space available on your system volume. Make no mistake about it, but Paintings are BIG and can take up lots of space! I hope this is of some help to you. Don't forget to check the upper/lower case setting in your user profile!

JIM MARCH ON 11/06

When I upgrade my 128K to 512K, will my MacWrite and MacPaint programs need upgrading too?

DAVID GURSKY ON 11/07

Nope.

BERNIE URBAN ON 11/07

Don't agree totally with Dave. If you also get to Mac512 enhanced, you will also have to get latest Finder and System (5.3 and 3.2)

BERNIE URBAN ON 11/06

The clipboard problem reminds me of my problem with the scrapbook. I've got a DataFrame 20 and M+. The scrapbook refuses to stay empty even after I cut out the old stuff. When I return after quitting or shutting down, there is the old junk still cluttering up the file. I suspect it was the reason my system file grew to 3.9 megs! What to do? Reformat the hard disk? Use Font/DA Mover to throw out the old scrapbook utility and junk the file? Can anyone explain?

DAVID GURSKY ON 11/07

3.9 M? And I though mine was big at 1.4! What do you have in it, Bernie? MS-DOS??? Throwing out the scrapbook file and zapping the scrapbook DA doesn't sound like a bad idea. Why aren't you using the Multi-Scrapbook... DA from one of the WAP disks though? It works fine on Mac+ (well, it works fine on my EMac. )

BERNIE URBAN ON 11/07

But what causes the problem?

DAVID GURSKY ON 11/07

The funny little men inside the Mac case get colds, and the ones that aren't sick are overworked? No huh. BTW, Jim was asking about MacWrite and MacPaint. On the other hand, I contd.

suppose I should have added the caveat I presumed he has MW 4.5 and MP 1.5.

LLOYD SWIFT ON 11/08

I don't entirely agree with Dave on that. If you just get a straight 128-512 upgrade there is nothing much else you have to do, but if you get the 128K ROMs and the 800K drive—the Enhanced 512 Mac—you need to put System 3.2 and Finder 5.3 on all your disks. I just got my 512K enhanced with the drive and ROMs and I've had a lot of bombs—mostly because (as a single-drive person) most of my disks have RAMDISKS on them and these seem to cause the thing to bomb. Also there is a device known as the INSTALLER which is supposed to install the new system and  $\Delta$ Imagewriter etc. on your startup disks, but here again there are problems. I found that almost all my startup disks have too much on them to accept the new system (which is BIG!!). So I have found it necessary (and not too inconvenient) to create new startup disks (double sided) with the new system file, with all the fonts and DAs I want and with autoblock installed and put each application on one of those. Since they're 800K there is still room for documents and data in reasonable amount. I also found that I could have about a 200K empty RAMDISK created at startup with these startup disks. The RAMDISK makes it much easier to transfer documents and data files in and out of the startup disk with a single drive since a double transfer through the RAMDISK avoids a lot of disk swapping. As predicted by all my friends on all the BBSs where I agonized about this upgrade, the 800K drive and new ROMs do speed things up quite a bit, although not as much as I expected in many cases, since my previous practice of using RAMDISKS made things pretty fast already.

#### Tech Notes

BILL BALDRIDGE ON 10/16

1+1=3...or was that 4? I'll never be a programmer at this rate.

BRUCE FIELD ON 10/16

Idiot! Every programmer knows that 1+1=10.

BILL BALDRIDGE ON 10/17

That's two base to comment on.

DAVID GURSKY ON 10/17

This board is definitely getting OFF base!

FRED SEELIG ON 10/29

David, Here I am, haunting you on yet another BB. Can't you get like Davd Hughes or Pontius or Inscoe, and have some clever animation in the graphic? In fact, I will personally send \$1 to any clever hacker who can produce animation on my Mac+ sitting right here in my office. I am getting really bored with text-only on BBs. I want cartoons, and mushroom clouds and monsters and PacMans and reverse video and and... Ought to be more specific. \$1 will go to anyone who can produce an animated BB, while I am using MacTerminal on the WAP BBS. I want no sniveling excuses about how MacTerminal protocol doesn't allow access to the bits on the screen. No excuses. Just do it. My money is on some smartalecky high school kid to be the first to do this. Fred "the gauntlet is down" S.

BILL BALDRIDGE ON 10/30

Seems to me this is impossible...that is, without the ability to embed control characters (like back tab or backspace), even

a simple animation like a blinking arrow wouldn't be possible.

DAVID GURSKY ON 10/31

You hit the nail on the head, Bill. At the company Fred and I work at, each VAX user has the ability to create a file (called a plan file) that can be read by any other user on any of M/A-Coms VAXes in Virginia, Maryland, Massachusetts, or California. Many of the VAX users at my office in Maryland (Fred is at the M/A-Com office in Virginia) have constructed elaborate plan files of the reactor at Chernobyl blowing up, the Russian sub sinking in the Atlantic, missiles exploding, etc. I have no problem viewing them on my Mac dialing in from home, using MacTerminal. The problem is getting UBBS to accept  $\langle$ ESC $\rangle$ ape sequences. These character patterns are used to generate graphics on VT series terminals.

FRED SEELIG ON 11/03

Didn't I say that there was to be no sniveling about how there is no inherent way to do animated graphics on screen? I want cleverness. I want things done on the bit level. Hell, if need be, do it on the quantum level. Use tachyons if necessary. Time travel. I don't care. We want cartoons! What I'd REALLY like to see is some ComicWorks cartoons on the tube. A BB devoted to cartoons. Think of it. Dynamic cartoons. No more waiting for the Sunday funnies. Now you can Dial-A-Cartoon. If there were some way to set up a BB to transmit graphics as well as text, you could do all this. Then the DC BB would REALLY be hot. Just remember, that the future of BBs, the future of computing, resides with the Macintosh community. I see the downward trend of IBM sales and stock as a positive step into the future.

#### Telecom. Hardware & Software

BILL BALDRIDGE ON 10/16

Beam me up, Scotty! It's a Klingon Battleship!! Turn heading 235 mach 5, warp 3, arm photon torpedos! Shields up...BOOM! BOOM! We took a hit on the starboard shield, Captain...she canna take much more. Photon torpedos armed and locked on target, Captain...Launch photon torpedos... Chukka...KaBOOOOM... direct hit. Captain...the Klingons are destroyed! Resume course for the next BBS, Sulu...

ALLAN BALLIETT ON 10/22

Bill, How's the novel coming along?

ALLAN BALLIETT ON 10/22

What better place than the top of a new board to ask my perrenial, how do you spell "perennial". No, actually, Does anyone know where to get a cable in DC/VA that will match an Avatex 1200 to a MAC+? I guess a second part of the question is, when Avatex specifies a path for pin #9 from the Mac+ to pin #x on the modem, are they dreaming or am I blinder than I knew?

BERNIE URBAN ON 10/22

Try the office. We either have them in stock or get them from Jay Heller.

JIM MARCH ON 11/0

As a new WAP member, I recently discovered my 128K Mac has become an antique. Since my New Member Disk 1986 won't work, I'm beginning to think I need more memory. Suggestions on what I should do with limited finances? Also, how in the world can I find information on how to use this contd.

BBS? I feel like I'm treasure hunting but am not sure what fortunes are really out there. Help please. And by the way, Why are there so many spelling mistakes?

BERNIE URBAN ON 11/03

See December issue of the Journal for information on how to use this BBS. Check with folks who have dealt with Levco. They (and many others) have reasonable rates on an upgrade. Have you ever seen a programmer who takes time out to (or can) spell?

DAVID GURSKY ON 11/03

Okay Fred, here goes... There are several constraints in making motion pictures on your Mac from BBS, the least of which is the terminal you have at your end. Don't believe me? Plug your Mac into the Linkabit IDX, set up MacTerminal in IBM 3270 mode, get Angel to log into PHRED or DUKE, and FINGER ASH@GTOWN. I guarantee you will get several minutes worth of utter garbage across your screen. Then, just for good measure, switch to VT100 mode and FINGER ASH@GTOWN again. Voila! One beautiful movie depicting a Russian sub sinking. There is also the problem that you can't enter an ESCape character into the UBBS editor per se. This makes drawing pictures very difficult, as the text file has to be prepared in advance and sent via XMODEM, a feature of questionable reliability. But then again once you have the cartoon on BBS, there is no guarantee that the user will make heads or tails of it (in fact, I'd even venture to say the possibility is bloody unlikely! MacTerminal does VT100 emulation better than any other comm package for the Mac, and it doesn't do such a great job). What about the guy with a Data General D200? Or one of the communication DAs? Now that I've said why it can't be done, let me tell you how to do it: To start with, you have to develop a new host BBS package designed with Macs in mind. Once you have accomplished this, you develop a slave package for the target Mac. The unique thing about these two packages is the ability to send quickdraw commands between them. The slave Mac, upon receipt of QD stuff could print them on the screen, and viola! Instant Mac Videos. Actually, the repercussions of this are startling. Can you imagine calling up your local BBS, and seeing Casablanca appear on your terminal.

ALLAN BALLIETT ON 11/07

Dave, Have you ever seen a Calendar for a BBS that could be updated from callers? I'm looking for something that will look like a calendar on the screen and then probably allow expanding any day. Second to that would be a calendar that works well on a BBS and can be easily updated everyday by the SYSOP. And now the sad news, the BBS I'm working on is on an IBM XT. Just want to know if I should keep looking and where. Thanks.

DAVID GURSKY ON 11/07

Yes and No. Imagine Software makes a piece of software called "Multi-User Calendar" (Imagine, as you all may recall, makes the "SmartAlarms" package. MUC is their newest effort. I'm certain it could be adapted to do what you want. The bad news (or good, depending on your perspective) is it runs on a Mac.

ALLAN BALLIETT ON 11/07

A few months ago I started searching for a cable to connect my Avatex 1200 to my Mac+. Avatex gives good information on pin configurations, but I couldn't find a dealer

who knew what his cables were doing. Ultimately (Thanks, Bernie) I found out that WAP special orders the right cable from Adaptaion Electronics (adv in each issue of the Wap newsletter). Not only did the cable work and cost HALF as much as the cable that didn't work did from that Alexandria store, but the owner of Adaptation talked/walked me through getting my switches/and mind right so I could enter the world of HS telecom!!! <Of course I forgot his name, but THANKS!> Its nice to know that someone is doing good work and good service in good humour!!

BERNIE URBAN ON 11/07

It is Jay Heller. He is VP for Mac in WAP.

DALE KRUEGER ON 11/09

I've got a Mac with a HD-20 that I'd like to use a BBS Host and run a BBS system in the Annapolis area. What kind of BBS software is available for the Mac to run such a system? Are there any shareware packages similar to RBBS or FIDO for IBM machines.

BERNIE URBAN ON 11/10

Check with Ron Wartow who is running a BBS and using Red Ryder Host for the Mac.

BERNIE URBAN ON 11/10

Cant use an 800K with 128K Mac. Jim should go to 512 for approx \$200.

BILL BALDRIDGE ON 11/10

He can if he goes 3rd party, Bernie. I'm using an 800K external right this secundo with my plain vanilla 1Mb, Old ROM, 4.1 Finder, 3.0 System Mac. While you are correct in stating the APPLE 800K external drive will not work with the 128K, there is no particular reason (other than an uncontrollable urge to want to spend twice as much) to stick to the marque. And until Apple, Inc. gets their ducks in a row with the new ROMs, I'll stick with my present set-up, which seems to run just fine, thanks...

#### Utilities

BILL BALDRIDGE ON 10/16

Does this board run on 110 or 220? Or better yet, convert to GAS!

#### Word Processors

GEORGE GARCIA-MUJICA ON 10/31

I heard Microsoft just announced a new version of Word. Does anyone know what's new?

PAUL CHERNOFF ON 11/01

I saw a demo of a Beta version recently. I cannot say too much, but it will come with a dictionary and work more quickly. Based upon my experience with Microsoft Word 3.0 on the IBM PC and many other word processors, Word on the Mac (new version of Word) should be a winner. I prefer Word on the Mac over Word on the PC. Word may also come with an outlining function, but don't expect it to replace ThinkTank or MORE.

PAUL CHERNOFF ON 11/01

I saw a demo of WriteNow—It was to be MacWrite II, but that never came to be. It is only 10K bigger than MacWrite and very fast (it is written in assembler). But it has two drawbacks, both of which are important for the office. 1) It has no mailmerge capabilities. 2) It does not support cursor  
contd.

keys. I have an original Mac 512 to which I have added a number pad with cursor keys, and I consider it important to have the option of using either a mouse or cursor key control, depending upon the situation. My secretaries agree with me. This program, in my opinion, is almost a winner. Unless they add cursor control real soon, I will wait for WORD 3.0.

RICHARD BROSNAHAN ON 11/02

3.0 was announced in the Wall Street Journal. It will hit the stores soon I expect. The big deal in the article was that it will be nearly completely compatible with IBM PC environs. It will also be able to transfer data base info back and forth. Incidentally, near the end of the article Microsoft said they will be concentrating on the Mac market more. The WSJ said that analysts say that the Mac is the best selling personal computer as of August. I am pleased but not too suprised. The new version costs a bundle! \$350 if I remember right. No mention of upgrade costs, but I am sure that is a possibility. They just didn't mention it.

TOM DEMAY ON 11/06

The latest issue of Communications Week reports that if you purchased MS WORD prior to October 1, you could upgrade to 3.0 for \$99. The upgrade price for those who purchased it after October 1 will be \$50. It is not expected to ship until January.

RICH WASSERSTROM ON 11/06

I've ordered 6 copies of WriteNow for sale to members through the Group Purchase program. It will sell for \$116. Our supplier has not yet received any, but expects them real soon now. I anticipate that we will sell the new MS Word when it becomes available (January '87?), but no price info (aside from the announced list price) is yet available to me. (We will not handle the upgrades.) I have heard from those who have seen WriteNow at Mac shows that it is a fine program.

JERRY OPPENHEIMER ON 11/05

I'm about to purchase either a Mac Plus or a 512E (used or new, not sure yet.) Anyway, my main use will be heavy-duty word processing—articles, books, etc. I am not a fan of the mouse. What are the best word processors that allow virtual keyboard control and are there any good macro programs? Also, I'm unclear on the 512E question—with the new roms, 800K drive, can one also get the upgraded keyboard with cursor control? Leave message here or call me at 657-8280.

LLOYD SWIFT ON 11/06

I have a regular Fat Mac (512K) but am hoping to upgrade to 512E soon (the dealers don't have the kits right now). I use Word (1.05) for fairly heavy word processing and find it satisfactory. I am anxious to see the new Word 3.0, of course. Word allows virtual keyboard control for almost everything you need to do including cursor control (although I use the mouse most of the time for that). I haven't done much with Macros but there are lots of applications and desk accessories on the various BBSs which allow you to set up Macros. You can buy the Mac Plus keyboard but it costs extra (i.e. is not included with the Enhancement to 512E).

DAVID GURSKY ON 11/07

Get a Plus. If you can, I'd wait until after the January stockholders meeting and see what new toys Apple announces for the Mac line. Not so much so you can ogle over new sexy

hardware, but the prices of existing hardware will, hopefully, drop further. The Mac Plus now retails for less then the original Slim Mac sold for when it was introduced, I think. The WP Package you want is MS Word. EVERYTHING in MS Word (font selection, cutting and pasting, cursor movement, footnotes, world peace) can be done from the keypad. No mouse needed. A new version (3.0) of MS Word is due out soon. I'd wait for it rather then buying now and upgrading. I refer you to several articles over the past year in 'MacUser' magazine, for information on how MS Word uses control keys to replace the mouse.

EMIL LEVINE ON 10/31

I would appreciate any information on a Hebrew word processing system for the Mac. Please leave message here or call 776-3062 weekends and eves or 633-1519 days.

MARTIN MILROD ON 11/05

Gentlemen, let me suggest that you purchase Mac Disk #47. It has a left-to-right processor, Hebrew fonts and a smacking good set of documentation. There are also several solid Hebrew and Hebrew-English commercial products available which do L2R processing. Almost all of these also contain a variety of Hebrew style fonts (writing, caps, various "styles.", etc.).

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# HELP!! A REQUEST FOR MACINTOSH LIBRARY VOLUNTEERS

by Dave Weikert

The volume of programs available for producing Mac Library disks has increased substantially in the past year. We are now issuing an average of five new disks and one revised disk per month. Each month brings a wealth of new material that must be examined, tested, cataloged, documented and assembled into master disks that will be duplicated, labeled and packaged for sale to our users. This work is now being performed by a small group of dedicated volunteers including Larry Half and Marty Milrod who cheerfully give up their time because it is fun and provides personal satisfaction. However, in order to more effectively support the myriad of functions, we need additional volunteers to take some of the load from the existing staff and to perform some new tasks that the current staff can't do while they are committed to producing the new disks.

The Mac Library tasks can be divided into the following functional areas:

1. Program Acquisition,
2. Program Review and Selection,
3. Disk Assembly,
4. Disk Duplication and
5. Disk Marketing, Promotion and Sales.

We need additional staff support in Program Acquisition, Program Review and Selection, Disk Assembly, and Disk Marketing, Promotion and Sales. We would like to add some new activities such as writing "how to" articles that are coordinated with the issue of new disks, and perhaps coordinating disk exchanges with other Mac user groups. All of the early disks from the formative days of the "skinny" Mac must be examined to consolidate those disks and programs that still have relevance to their larger and more capable offspring, the Mac 512, the Plus and the new Macs that we have yet to see. There are many more tasks too numerous to mention; many of these are still in the formative stages and some of these may never see the light of day.

What kind of skills are we looking for? We need writers that can develop the program notes for the disks and clean up some of the unformatted text downloads. We need scroungers to beat the bushes in search of new programs and updates for the library. We need evaluators to develop selection criteria, to review programs against the criteria and to recommend priorities for issuing new programs. We need artistic and creative hackers to help develop specialty disk releases such as the New Member's Disk and some of the earlier game disks. We need DA dabblers, font freaks, game gurus, telecommunications terrors and utilities umpires to review and consolidate the early volumes in the library. We need budding or accomplished entrepreneurs to develop and implement marketing strategies and create and distribute promotional material.

About the only thing we don't need right now is disk duplicators, as our durable duplicators are performing excellently and are staffed at very workable level. The current duplicators are: Dave Benbennick, John DeMarco, Garry

Elliott, Ben Frank, Andy Gallant, John Gertsch, Gary Grey, William Jones, Al Maloney, Ralph Mullendore, Fred Rodgers, Joe Swick, Bob Vandegrift and Shirley Weaver. John D., Andy, William, Ralph and Shirley are the seasoned veterans on the staff; most having been duplicating for the past year.

If you are willing and able to make a six-or-more-months commitment to supporting the Mac Library, give me a call at (301) 926-4461 from 7:00 to 10:00 P.M. or see me behind the Mac Disk sales table before the monthly meeting. It shouldn't take more than five to fifteen hours a month and most of us have found that is an enjoyable and mind expanding experience. ☺

## Softviews contd. from pg 57

the MacInUse disk:

To insert the MacInUse data:

1. Select an insertion point after the column headings below, but before the page break,
2. Select Paste from the Edit menu,
3. Select all the data which was pasted in,
4. Hold the option-command keys and click in the left margin of the line of column headings below,
5. Delete these instructions, but leave the two lines of column headings.

<u>Application</u>	<u>Date</u>	<u>Start Time</u>	<u>Seconds</u>
<u>Duration</u>	<u>Purpose</u>	<u>Comment</u>	

When you quit an application, MacInUse provides a window in which you may enter a comment. I use this comment field for project numbers so that computer usage can be automatically assigned to projects. The only drawback to this approach, is the requirement that you quit the application after every use for a specific project. This is inconvenient when the same program, say a word processor, is used for work on a variety of projects. However, it is an easy-to-use system and more likely to be complete than an approach requiring many different users to maintain a manual log of usage.

Since MacInUse files can be read by OverVue, I prepared a short macro which could be run by anyone in my office to summarize the data. The macro converted the number of seconds recorded by MacInUse into hours, sorted the file by the comment field which I used for project numbers, selected summary records containing totals by project number and printed these summary records.

The accompanying manual is easy to read and contains a description of several templates contained on the disk for reading and using the MacInUse data file.

Softview, 4820 Adohr Lane, Suite F, Camarillo, CA. 93010. Price \$49.95. ☺

# WAP SPRING TUTORIALS

by Robert C. Platt

WAP's tutorial program provides an opportunity for our members with varying levels of experience to gain "hands on" instruction on the Apple // or Macintosh. The continuing popularity of these sessions attests to the amount of time that instructors spend in preparing for class and the useful training that participants gain from them.

Because space is limited, we request that you reserve a spot by calling the office or using the mail order form in the back of the Journal. We charge a nominal fee to assure your interest and to defray club expenses. Please contact me to suggest any new topics which you would like to see added to our offerings.

Unless otherwise indicated, you should bring your own computer and some blank disks to the tutorial to benefit from the in-class examples. Each session is \$15 for members and \$20 for non-members.

Our tutorial program provides "regular" tutorials, which repeat each month, and tutorials on specific languages or applications that are offered as necessary. The course outlines for the regular tutorials appeared in the October 1986 WAP Journal p. 85. We are offering the following special tutorials this spring:

## Introduction to ReadySetGo 3 (Mac)

Saturday, Feb. 21 10 a.m. - noon. — *Marty Milrod.*

Master one of the most powerful desktop publishing programs currently available on the Mac. ReadySetGo includes automatic spelling checking, hyphenation and kerning for professional results. (For more details on ReadySetGo, see the Dec. 1986 WAP Journal p. 63) The tutorial covers all basic desktop publishing operations: page layout, inserting graphics, editing text, etc. Marty Milrod uses ReadySetGo and a Laserwriter in his work and also teaches WAP's introductory Mac tutorial.

## Introduction to Applesoft (Apple //)

Saturday, Mar. 7, 9 a.m. - noon. — *Bruce Field.*

Every ][+, //e, //c and //gs has the same powerful BASIC language built-in. This course assumes no prior programming experience. Topics include: variables, strings, arrays and hi-res graphics. Bruce Field is a long-time BASIC programmer and writes a Q&A column for WAP and A.P.P.L.E.

## Intermediate Applesoft (Apple //)

Saturday, Mar. 14, 9 a.m. - noon. — *Bruce Field.*

This session continues the coverage of BASIC. Topics include using disk files.

## SuperCalc 3a (Apple // - ProDOS)

Saturday, Mar. 14, 12:30 p.m. - 3:30. — *Nick Veloz.*

SuperCalc is a popular spreadsheet program which is widely used on CP/M, MS-DOS and Apple computers. Nick Veloz has extensive experience using SuperCalc in demanding data entry, statistical and data base applications.

## Music Software for the Mac

Saturday, Mar. 21, 10 a.m. - noon. — *Judy Moore.*

Learn about music notation programs such as "Professional Composer" by Mark of the Unicorn and "Deluxe Music

Construction Set." Sequencing software such as Mark of the Unicorn's "Performer" will also be demonstrated. Judy Moore teaches at Eleanor Roosevelt High in Greenbelt Md. Bring your own Mac and a copy of your music software.

## Introduction to Excel (Mac)

Saturday, Apr. 4, 10 a.m. - noon. — *David Morganstein.*

Excel is Microsoft's popular spreadsheet package. The first session will cover basic spreadsheet use, graphics and making a template. No prior spreadsheet experience is necessary. David Morganstein is past-President of WAP and writes the "Excel-ing on your Mac" column.

## Advanced Excel (Mac)

Saturday, Apr. 11, 10 a.m. - noon. — *David Morganstein.*

The second session will cover tasks such as using macros and data base applications. Course assumes topics covered in first session or prior spreadsheet experience. ☺

## CLASSES FOR SENIORS

Computer Learning for Seniors, Inc., a tax-exempt organization, is offering five beginning sessions for seniors, covering Operating System, Word Processing, Data Base, and Spreadsheet. Classes are held each Saturday from 9:30 AM to 1:30 PM at Holton Arms School, 7303 River Road, Bethesda, MD.

Tuition is free - for age 50+.

Non-refundable registration and lab fee is \$25. Make check for \$25 payable to CLS, Inc. for reservation. Also include birthday, Social Security Number, address and telephone nos. (day and evening). Mail to Computer Learning for Seniors, Inc., P.O. Box 34210, Bethesda MD 20817.

For further information call Tanya Metaksa, President CLS Inc. (703) 971-4490. The next group of sessions will start January 31, 1987. (There will be no class on February 14 because of the holiday weekend.) ☺

# MAC DISKETERIA

by Martin Milrod

In December, 6 new disks were issued and in January, 5 new disks were issued. These 11 disks are described below. Please note that folder information, where appropriate, precedes the listing of program contents. Programs and files are in printed in bold with shareware information printed in bold italic print.

The latest—Winter, 1987—Mac Disk Catalog containing comprehensive information about the entire WAP Disk collection (inclusive through Mac Disk 80,) is now available. The cost is \$3.25 and you may order it by mail (add \$1.50 postage and handling) or pick it up at the office or at our general meetings. The Catalog lists disks (1) by name of disk, (2) by textual description of the disk, (3) by an alphabetic listing of files across all Mac Disks, and (4) by a "type of file" listing across all Mac Disks. Most people who bought the earlier version of the Catalog have found it to be a helpful tool.

## Mac Disk 70: Utilities IX

**Camera (HFS)** Demonstrates the impact of different settings for your camera under different lighting conditions. You can change the shutter speed, the aperture and the film speed and see the effect on either a normal or negative photographic image.

**RamStart 1.23** A Mac+ compatible ram disk with a script feature. Move this onto a bootable disk (with System and Finder files) and the ram disk will automatically load on booting. If you want to read the help file or change the amount of memory in the ram disk, you need to click on the help button as the ram disk loads.

**Clock 3.0** Displays the time of various places around the world. You can set up to six different locations but you must know the offset time from local time for this program to work. The program defaults to Huntsville, Alabama as the local time zone but the local time zone and the other locations can be changed with ResEd.

**Scheduler** A daily schedule program. Permits you to enter the starting and ending dates for the week, allows notations in increments of 15 minutes starting at 8:00 a.m. and the schedules can be printed.

**Histogram Maker** Takes numerical data from a text file and creates a histogram display which can be moved via the clipboard to another program (like MacDraft or MacPaint) for printing. (A histogram is a plot of the number of occurrences of each of the numbers in the text file over a specified range of values.) *Shareware - \$10.00.*

**Talk Alarm** A talking alarm clock. It requires MacIn-Talk (not on this disk) to provide the voice.

### In the SamplerStuff Folder:

**FONT-FKEY-DA Sampler** This program allows you to sample DA's, Fonts, and FKEY's without installing them into your system. Shows all "official" DAs (file type DFIL), Fonts (type FFIL) and F Keys (type FKEY) and shows any file with a resource if the Option Key is pressed. *Shareware - gummi-bears, chocolate, a new car or a job offer.*

**Sampler Instructions** Documentation on how to use

the FONT-FKEY-DA Sampler application.

### In the Poor Tom Stuff Folder:

**Poor Tom** This is a STRANGE associational data base. Allows you to enter and associate words. Looks interesting, but I have not really figured it out. The author may not have figured it out either since he provides an official warning that the "program is almost useless for any practical applications".

**Poor Tom instructions** Instructions on how to use the Poor Tom data base.

**Empty Words, Words Data** Supporting files for Poor Tom data base.

## Mac Disk 71: Utilities X

**Quick Reader v1.0** Reads files from any word processor and prints, shows, or deletes them. Shows some unprintable characters and other garbage on Word, Jazz and ThinkTank files. *Shareware - \$10.00.*

### In Technical Utiils Folder:

**Pad Design** Computes resistor values for specified attenuation and impedance for T- and H-Pads and for  $\pi$ - and O-attenuators. *Shareware - \$5.00.*

**Binomial Sums** Computes the sums of binomial probabilities using a recursive algorithm that allows rapid and accurate computation even for extreme values of the parameters.

### In the Orbital Mix Stuff Folder:

**Orbital Mixing** Depicts the orbitals of molecular bonds.

**Orbital Mixing Help** Place this icon into your System Folder.

### In the Quick File Folder:

**QuickFile** A little database that is a later version of Rolodex. Great for telephone directories and address listings.

**QuickData:** Where QuickFile keeps your data. It contains the instructions for using QuickFile on the first 11 cards.

### In the FontChanger Folder:

**Font Changer** Allows you to make global font and style changes in a MacWrite document. Changes all occurrences of any font to any other font or change anything that appears under the MacWrite style menu.

**Font Changer Doc** Documentation on how to use Font Changer.

### System Utiils Folder:

**Mighty Finder 1.1** A minifinder which permits you to switch from application to application without returning to the desktop. It doesn't appear to work with HFS and it bombed a DataFrame 20. *Shareware - \$10.00.*

**Signature Bytes** Displays the latest version information of a program (if the developer put the version data in the signature resource).

**Speed Check** Checks the speed of 400K disk drives. It didn't work on the 800K internal drive on the Plus or on an external 800K drive.

### In the Jump Start Folder:

**JumpStart** From Apple Computer, Inc. Allows you to contd.

speed up programs by reorganizing the resource map. JumpStart rewrites the resource files so that the resources are arranged sequentially on the disk in the order used.

**JumpStart Log A Desk Accessory** to use with JumpStart to monitor resource calls.

**JS Instructions** Documentation on how to use JumpStart. This is part of The Software Supplement by Apple Computer Inc. and is excellent. Read the parable on page 10-11 to understand what JumpStart is all about.

**JumpStart Screen 1, 2 & 3** Open these by using MacPaint.

### Mac Disk 72: Utilities XI (Systems/Graphics)

#### In the Auto.Idle Folder:

**MacsBug** The name of this program is AutoBlack but the file is renamed to take advantage of the Mac operating system autoloading of any file named MacsBug at boot. This nifty "screen saver" loads itself into memory and automatically blanks your screen after five minutes of inactivity on the mouse or keyboard. If you move the mouse pointer to the upper right hand corner of the screen, the delay until blanking is reduced to two seconds. If you place the cursor in the lower left hand corner, the delay is increased to two hours. In spite of the comments from the MacQueue Sysop preceding the AutoBlack Doc, we have been using this at work for about three months with no apparent ill effects.

**AutoBlack Doc** Documentation for Auto.Black.

#### In the Fonts Folder:

**Font Documentor™** Prints and displays all of the fonts that may exist in the system file on any disk you specify.

#### In the JClock Folder:

**JClock 3.1** A slightly modified version of the perpetual clock that was on disk 36. This version does not require installation. Just copy it into your system folder (for HFS disks) or anywhere on an MFS disk.

**JClock.doc** Documentation for JClock.31.

#### In the Sequencer Stuff Folder:

**Sequencer** Use this program to run a number of programs in a row. You can invoke Sequencer from the desktop or you can use "Set Startup" so that it runs at boot. You need to use ResEdit to modify the STR# resource that defines the programs that you want.

**Sequencer∂** Documentation for Sequencer.

#### In the Utilities Folder:

**Scroll Menu Install** For those of you with many fonts, this program adds scrolling menus to some programs. It does not work on MacDraw. This is an update of the version that is on Mac Disk 36.

**Init MacWait** Another update of a program on Mac Disk 36. No installation of this one, just put it in the System Folder and watch (no pun intended) the hands on the wrist watch spin.

**VerCheck** The first message you see says that this program is probably out of date and you should get the most recent copy. However, most of the data appears relatively current. The program reads information from your Mac hardware and displays it for you. It lists the latest software releases from Apple so you can compare them with what you have. Reads tour DAs and gives you information on their currency.

**Icon Exchanger 3.1** Allows you to change the message in the Welcome Screen or Bomb Icons, modify the Welcome or Bomb Icons or to create new Icons. *Shareware - \$ Whatever it's worth.*

#### In the USA Map Folder:

**Geographics v1.4** Allows you to make maps by plotting points that are at the proper latitude and Longitude. It also can measure the distance and the compass direction between points. *Shareware - \$15.00.*

**US Map** Map data for use with Geographics.

#### In the Metalware CAM Folder:

**Metalware** This Computer Aided Manufacturing (CAM) program allows you to define machined parts using your Mac. The current version is limited to displaying and editing a data file that describes the shape of the part. The next version will add a price quotation capability. A service bureau is available to receive your disk, quote a price and machine the part.

**manual** Documentation for Metalware; provides an overview of the machining process, describes the use of the editor and provides a Language Reference for Metalware.

**example1, example2, example3** Examples of parts defined using Metalware.

#### In the Welcome Folder:

**Welcome2 (by CAM)** Your Macintosh will speak to you with a thrilling welcome, the day, date, time and an inspirational rejoinder. However, no matter how much you talk to it, nothing else happens.

**Welcome2.hdc** Docs for Welcome2.

### Mac Disk 73: Word Processing

#### In the TEXT Ranger Folder:

**TEXT Ranger** Converts text files into the word processing application that you are using. The program was included on Mac Disk 68 but without the documentation that now follows.

**TEXT Ranger ∂** Documentation for TEXT Ranger.

#### In the MEdit Stuff Folder:

**MEdit** A small but powerful mouse and macro-driven editor for the Macintosh. The program has an associated compiler (MComp), standard macro files (Macros.mcr and Macros) and the KeyCode desk accessory. *Shareware - \$25.00.*

**MEdit.doc 1.5** Probably some of the best looking documentation with shareware programs. Excellent figures for the syntax of the Macros.

#### In the Macro Stuff Folder:

**Macros and Macros.mcr** Macros that support general editing functions.

**Pascal and Pascal.mcr** Macros for Pascal programming.

**MComp** The compiler for the preceding macros.

**KeyCode** The desk accessory used to determine which keyboard key associates to each macro.

#### In the MacWrite Index Folder:

**Index** Allows you to create a page index of words and phrases for a MacWrite document. The index is created one MacWrite page at a time and words in paragraphs the overflow to the next page are indexed on the current page. The index that is created is a text file and is not sorted. You can transfer the text file into a database or spreadsheet program for sorting and then move it back to MacWrite for final editing.

contd.

**Index.help** Documentation for Index.

In the Writer Tools Folder:

**Tools** This useful program was designed to aid teachers and students of English composition. You can analyze your writing to determine the average word length of sentences, determine the frequency of occurrence of words (presented in either alphabetical or frequency order), find vague words and check for proper subordination. You can also determine if you have spelling problems, proof the document for duplicate words, and check for improper use of articles.

**WhatToWear:** A sample output file containing the frequency of occurrence of words in a composition (not included on this disk).

**spell words, vague words:** The "dictionaries" for spelling and vague words.

In the (Sample Papers Folder:

**A-paper, B-paper, C-paper, D-paper** These papers serve as examples of proper and improper composition as noted by the letter grades. (Does this mean that the schools don't give F grades anymore?)

#### Mac Disk 74: Fun & Games IX (Radical Castle)

**Radical Castle** This doesn't require much description. Open it and you find that you are a Squire, about to be thrown out of the kingdom in search of the King's Oracle. On your way, you will meet the usual assortment of baddies and some not so usual. Use your strengths and the weapons you acquire to combat them and continue your search. Use the mouse in the illustrations as well as the menus, and take advantage of the Save feature to avoid unnecessary repetition when you take the wrong turn or fall prey to the dreaded Vorpal Rabbit. *Shareware: \$5.00 or a disk, as the notice indicates.*

#### Mac Disk 75 Fun and Game X: (Thought Games)

In the Puzzles Folder:

**MasterCode** Presents a series of icons and gives you ten chances to figure out which of them (in which order) the computer has selected. "Rules" in the menu gives an outline of the play, but it may not be obvious at first that you click on the icons in the upper row in the order you want them to appear in the lower row, then click "OK" to move your guess into the entry column. Warning: The sound on this puzzle is louder than it needs to be and is not totally controllable from the control panel. You can turn it off from the menu, but only after you have been subjected to one chorus when you open the game.

**HexPuzzle 3.0** Requires you to code a series of bars to a key in a sequence constrained by the computer. The documentation notes that some patterns are harder to solve than others. Version 2.0 (without some of the documentation) was on Mac Disk 45. *Shareware: \$5.00; \$25.00 for full documentation.*

**The Towers Of Hanoi** An ancient puzzle (named long before Rambo was born) in which a series of disks are stacked in order of size on one of three spindles. To solve the puzzle, the disks are transferred to the home spindle in order such that no larger disk is ever placed on top of a smaller one. This program is more a demonstration than a puzzle, since once

you select the number of disks and the speed the computer moves the disks, Macintosh does the rest. Its just as well, since the process involved is an iterative one at which the computer should excel.

**Mystery Box** Another game of deduction. Balls are hidden in an 8 x 8 grid, and the player(s) deduce their whereabouts by shooting "rays" through the grid from the sidelines and observing where they come out. (Similar to the Black Box game on Mac Disk 46.) *Shareware: \$5.00.*

**Enigma** A mix-and-match puzzle in which interlocking patterned circles are scrambled by Macintosh and unscrambled by you. The author likens it to Rubik's Cube. *Shareware: \$5.00.*

In the Games Folder:

**Amazing** The old favorite from the Macintosh Guided Tour Disk—complete with the penguin!

**MacMatch** Anybody remember "Concentration"? Here it is again! First you find the pairs of matched symbols behind the sixty-four panels, revealing the hidden rebus. Solve the rebus to win. Sorry, there's only one puzzle here; you have to register and get the documentation to create new ones. *Shareware: \$20.00 for documentation.*

**Hangman 6.0** An excellent implementation which lets you enter your own words, either as you play or in a 100-word "Hangwords" document saved from MacWrite as text only. Don't look for "Start" in the menu once the game is opened. *Shareware: \$5.00, \$10.00, or a disk.*

**Third Dimension** Three-dimensional animated tic-tac-toe on a 4 x 4 x 4 grid. Has the same sound problem that affects the offering described above. (How does he expect us to play these at the office?)

**Think Ahead 1.3** A strategy game against the computer or another player, based on the board game of the same name. An update of the version on Sig Mac Disk 32. *Shareware: \$5.00.*

**Connect Four** Said to be similar to the Parker Bros. game. Click the buttons on the top of the columns to drop your tiles (white) into the grid. The computer adds its tiles (black) and the first to get four in a row (any direction) wins. When you return to the desktop, you may have a file labeled .BOUT on your desktop, which can be discarded. (This game earlier appeared on Mac Disk 46.)

In the Trivia Folder:

**SuperTrivia** A self-explanatory trivia game. (Throw away the document "Trivia Scores" to start the scores over.) Open the text file "Q" with MacWrite (CR = ¶) to learn how to create your own questions and answers for this game.

#### Mac Disk 76: Fun & Games XI (Mandelbrot)

"The Mandelbrot set broods in silent complexity at the center of a vast two-dimensional sheet of numbers called the complex plane. When a certain operation is applied repeatedly to the numbers, the ones outside the set flee to infinity. The numbers inside remain to drift or dance about. Close to the boundary minutely choreographed wanderings mark the onset of the instability. Here is an infinite regress of detail that astonishes us with its variety, its complexity and its strange beauty." The Mandelbrot set is a set of numbers that satisfy a specific mathematical relationship that, for the sake of

contd.

brevity and our sanity, will not be defined here. The Mandelbrot set provides some very interesting patterns that can be plotted on your Mac. The Mandelbrot set has the unusual characteristic that parts (regions) of the set may be magnified and then regions of the magnified area may be further magnified and so on. The patterns become more and more complex depending upon the region. The patterns may seem to repeat but there are subtle differences between them. Be forewarned that even in the draft plot mode, the time it takes to compute the points for plotting is very long. Be prepared to allow the plotting to take place while you are otherwise occupied. If you want to learn more about Mandelbrot sets, the following references (extracted from the article in Byte Magazine) are offered:

1. Schroeder, Peter B. "Plotting the Mandelbrot Set" Byte Magazine, December 1986, pages 207-210.

2. Dewdney, A. K. "Computer Recreations: A Computer Microscope Zooms in For a Look at the Most Complex Object in Mathematics." Scientific American, August 1985, pages 16-24.

3. Mandelbrot, Benoit B. **The Fractal Geometry of Nature.** New York: W. H. Freeman and Company, 1983.

**Mandelbrot** This program allows the drawing of the Mandelbrot set and the zoomed regions of the Mandelbrot set.

**Seahorse Valley, Spiral, pastip** These are data files (drawings) that contain some zoom views of patterns in regions of a Mandelbrot set. You may store your own patterns in a similar manner.

**Spiral Shade Table** A table of shades for different ranges of data associated with the Spiral data file above. You may save shade tables that you create for drawings that you save.

**Mandelbrot documentation.**

#### **Mac Disk 77: Fun and Games XII (Space and Arcades)**

**Snake** Don't let the name fool you. This is a clever little adventure game where you are a snake. Treasures, attributes, time limits, and a suicidal selection on game speed makes this worth trying. The startup screen has a nice look to it but the snake in the game is a bit less vicious looking. Get used to "driving" your snake around before you get serious about scores! *Shareware: Any donation.*

In the Brick Games Folder:

**Brickles 5** Anything your little heart desires in a beat-the-bricks game can be found here. The four paddle approach is interesting, and frustrating. Lots of variables make this approach unique.

**Break the Bricks** This game is quick. A variety of options lend to the versatility of the game and provides plenty of challenge. *Shareware: \$5.00.*

**Silicon Volleyball Smash** bricks to music! It's the same idea with a twist. Not loaded with options but a nice orchestral touch lends to the playability of this game. *Shareware: \$5.00.*

In the Space Games Folder:

**Space Attack** Variation is the key word in Space Attack; bomb size, speed, the number of barricades and the number of bombs the enemy drops are all selectable. A real challenge when all the stops are pulled. *Shareware:*

*\$10.00, or \$20.00 with source code.*

**Space Bubbles** An unusual game with a rather jerky presentation. The shooting 'rods' are real killers, nice startup screen graphics and be sure to check out the version option before playing. The number of space ships available to you is selectable and a lot of fast shooting is required to stay alive.

**Asteroids** Watch out! There are asteroids everywhere! Move and shoot is the only way to survive in this hostile environment. The game comes with documentation on the keyboard commands required to navigate and destroy those nasty old asteroids.

**Wizards Fire** Protect your cities or the aliens will wipe you out! Nice screen layout, three laser guns and some neat stuff under the apple (menu bar) makes this a most interesting game. *Shareware: \$10.00.*

**Ashes** presents a new twist to the thermonuclear war game arena, it has a population file and sure enough when the population goes to zero - you lose! A limited number of defensive assets (100 missiles) and a time delay for the satellite laser weapons to recharge make this game exciting, not to mention the fact that you have to be a good shot.

**Space Invaders** The old stand-by space shoot-em-up. Again, don't forget to shoot and move!

#### **Mac Disk 78: Fun and Games XIII**

**Blob Manager Demo** Presents an assortment of windows, each containing a mouse-based game or exercise. They are: Anagrams, Magic Square, Arithmetic, Peg Solitaire, Coin Swap, Pong hau k'i, Fifteen-A-Row, Pyramid, Fish Sticks, State Capitals, Fox, Goose, Grain, Tic-Tac-Toe, Hangman, Tower of Hanoi, Hebrew Alphabet, Wolf and Goats. See "Get Info" in the File menu for the rules of each game.

**Hackers Contest** Find the clues to solve the puzzle. Unfortunately, it's too late to collect the prize, so do it just for fun. *Shareware: \$5.00.*

**Reversi** The old favorite "Othello" type game from Mac Disk 5. Although the program refers to the documentation for information, we don't seem to have a current address to which the shareware payment can be sent. *Shareware: \$5.00-\$10.00.*

**Star Trek Trivia** For real Trekkers only. Multiple choice questions about the most famous science-fiction show ever. Sample question: "What was the name of the medicine with which Dr. McCoy injected himself, just before jumping through the Guardian of Forever's time portal?"

**Type A Buck** A program to help your kids (or you) hone your typing skills. Select the keys you want to practice on, set the penalty for hitting the wrong key, and begin. Watch the coins mount up as your skill increases! When you reach a dollar, you can print it out. Note: These dollars are not good at the WAP office (or anyplace else).

In the Orion Stuff Folder:

**Orion 1.4** An updated version (with documentation) of the game that turns your Mac into a spaceship and lets you explore the immediate neighborhood. (An earlier version was on Mac Disk 32.) *Shareware - \$15.00.*

In the Cellular Automata Folder:

**Automata** Generates one-dimensional cellular automata based on the status of the adjacent cells, a one-dimensional version of Life. Read the documentation to get a brief idea of contd.

the way it works and references to sources of additional information. A late addition to these references is K. Perry, Abstract Mathematical Art, Byte, December, 1986, p. 181.

Note: The documentation points out an important bug. Don't click "Set" in the Table menu, unless you have changed a parameter in the text boxes.

#### Mac Disk 79: Fun and Games XIV (Fractals and Curves)

##### In the Fractals & Curves Folder:

**Fractal** Generates fractals, designs which have the property that no matter how close you look, they still look the same.

**Smile** Lets you draw an animated design on the screen or play back one of the many examples furnished in the folder. This is a pre-release version, and some of the features don't work, notably the illustrations in the explanation.

**Julia** "The Fractals of Fatou and Julia are constructed as follows. Fix a polynomial  $P(z)$  and imagine a movie in which each frame is obtained from the previous frame by applying  $P$ . During the movie, some points will float off to infinity and some points will remain within a fixed distance of the origin. The Julia Set of  $P$  is the boundary of the set of points which do not float to infinity."

**Spline Demo** "Spline Demo was written to experiment with the properties of drawing curves with splines. The routine to generate splines is simple, but has powerful applications."

**Plato** Named, no doubt, for the "platonic solids" modeled here in three-D animation, from the cube to the icosahedron to the Macintosh!

**Curves** "Imagine a curve drawn in space. Curvature measures how rapidly the curve bends away from its tangent line; torsion measures how rapidly the curve twists out of the plane in which it momentarily finds itself. This program shows the fundamental theorem in action."

##### In the SmartTaskStuff Folder:

**SmartTask™** "A game for one to four players that requires skill, strategy, and luck. To win, you must have the highest score at the time your last token goes off the board." This is a limited play edition, some features are disabled, and complete games are not possible. *Shareware* - \$25.00. When you register, you get the full version, with a manual.

#### Mac Disk 80: Fun and Games XV (Card Games +)

##### In the Card Games Folder:

**MacSeven** Let the computer play itself and try to watch. Maybe it runs more slowly on a Mac 128 or 512? If any member can document this one, we will publish the documentation in a future WAP Journal.

**Solitaire V1.0** This one can keep you occupied for hours if you like solitaire.

##### In the Solitaire Variants Folder:

**Canfield 1.1** Originally issued on Mac Disk 35, this has been updated to run on the Mac plus. *Shareware* - \$10.00.

**Klondike 2.1** Another variant of solitaire, with screens similar to Canfield. Both of these games keep a record of high score and have help screens. *Shareware* - \$15.00.

**DeckEdit** Allows you to change the pattern on the back of the card deck and to change the face card pictures. The

editing of the picture cards is accomplished using MacPaint.

##### In the Arcade Games Folder:

**Safari 1.0** This starter program could develop hand-eye coordination for small children as well as provide some entertainment. Animals move from the left to the right; the object is to tranquilize them by moving the mouse cursor over the animal and clicking before the animal gets to the right hand side.

**Bash Big Blue** This has got to be one of the worst programs that we have ever seen. You bash an IBM logo with an Apple icon. *Shareware* - \$5.00.

**Hustle V1.1** Guide a snake so that it doesn't run into itself or into the walls while trying to hit various targets that appear. The keyboard selection doesn't form a diamond so it takes some getting used to. *Shareware* - \$10.00.

##### In the Demos and Fun Stuff Folder:

**StringArt** Produces some very pretty patterns which you can save as screen images for MacPaint, the ScrapBook (or whatever) using Command-Shift-3.

**Blocks** Build a block wall by clicking on the mouse. Remove blocks the same way. Make holes in the right places and see the wall fall down. See Spot run. Run Spot run. (Actually folks, it is kind of cute.)

**rae** Perhaps some of you have the patience to see if anything happens when the box fills up.

**Star Flight** An update of the one first seen on Mac Disk 29. It provides an illusion of traversing a star field but considers only point source stars and not constellations, nebulas, etc. (3)

## DISKETTERIA DISPATCH

by Jim Little

There is one new Apple II disk this month. Disk 809 (ProDOS), AppleWorks Tax Template for 1986, donated by Paul Koskos, is described elsewhere in this issue. (3)

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# 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.

- ( ) February 3 - WELCOME TO THE WORLD OF APPLE - ( ) March 3
- ( ) February 10 - HOW TO USE YOUR APPLE SOFTWARE - ( ) March 10
- ( ) February 17 - POPULAR APPLICATIONS: APPLEWORKS - ( ) March 1

**Macintosh:** Tutorials for the beginners are regularly given on the last two Monday evenings of the month at the office, from 7-10 PM. The fee for two tutorials is \$30.00. An outline was given in the October Journal. You are strongly urged to bring your Macintosh. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

- ( ) Monday, March 9 and 16 (extra session)      Note: Tutorials on February 16, 23 and on March 23, 30 are full.
- ( ) Monday, April 20 and 27

**Non-Regular Tutorials:** The following tutorials are being offered in the next few months (at the office unless otherwise specified). See "WAP Spring Tutorials" by Robert C. Platt elsewhere in this Journal. The fee for these tutorials is \$15 for each session within each tutorial (\$20 each session for non-members).

- ( ) Introduction to ReadySetGo (Mac) - Marty Milrod - Saturday February 21, . 10 - 12 Noon. Fee \$15 (\$20). Master one of the most powerful desktop publishing programs currently available.
- ( ) Introduction to Applesoft (Apple II) - Bruce Field      ( ) Intermediate Applesoft (Apple II) - Bruce Field  
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- ( ) SuperCalc 3a (Apple II - ProDOS) - Nick Veloz - Saturday March 14, 12:30 - 3:30 PM. Fee \$15 (\$20). Learn this popular spreadsheet program.
- ( ) Music Software for the Mac - Judy Moore - Saturday, March 21, 10 - 12 Noon. Fee \$15 (20). Learn about Professional Composer, Deluxe Construction Set, and others.
- ( ) Introduction to Excel (Mac) - David Morganstein      ( ) Advanced Excel (Mac) - David Morganstein  
     Saturday, April 4, 10 - 12 Noon      Saturday, April 11, 10 - 12 Noon  
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Please check the desired tutorials and return this form with fee(s) made payable to Washington Apple Pi, Ltd. to:

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