

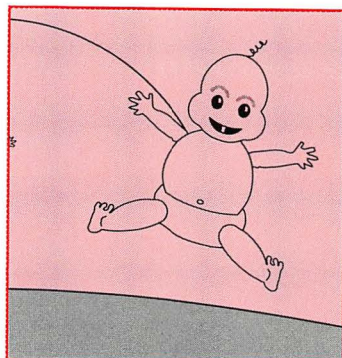
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washington pple pi

The Journal of Washington Apple Pi, Ltd.

Volume 13, Number 3

March 1991



**Taxes and The
Home Business**

12

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and all the regular condiments...

☆☆ N.B: Change of February Meeting Location !! (Page 3) ☆☆

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washington apple pi

This issue of the Washington Apple Pi Journal was created on a Macintosh IIfx, proofed on a LaserWriter IINTX, and produced by electronic typesetting at The Publishers Service Bureau.

The program used was PageMaker 4.0, the word processing program was Microsoft Word 4.0; the principal typeface is Adobe Garamond for the articles; and Helvetica and Condensed Helvetica for headlines, emphasis, and where it seemed appropriate or like a good idea at the time.

Late-Breaking News Department:

The Bethesda Holiday Inn, where we have been meeting while we have been trying to find a more convenient and less expensive location, made what they call a "mistake" (we are inclined to describe it somewhat more colloquially). The February meeting (Feb. 23) has had to be rescheduled to the Bethesda Ramada Inn, which is just a block away, at 8400 Wisconsin Ave. We hope to see you there.

Editorial Staff

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Frank Potter (703) 620-8886

Graphics Editor
Nancy Seferian (202) 333-0126

Apple II Editor
Rick Zeman (301) 604-0939

Macintosh Editor
Lou Pastura (703) 560-1477

Copy Editor
Eugenia Potter (703) 620-8886

Calendar Editor
Andy Shaw (301) 595-2539

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April *Feb. 1*
May *Mar. 25*

Editors' submissions
April *March 4*
May *April 1*

Ad space reservations
April *Feb. 25*
May *March 25*

Camera-ready ad copy
April *March 2*
May *April 1*

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Office hours: M-Sat. 10-2:30*
Tues. 7-9pm

*The office will open at 1pm on
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Works	open	

Fonts and taxes

It's getting to be that time of the year again, and the Journal reflects it: three—count 'em, three—articles about income taxes. Never what you might call a favorite subject, but still one that does occupy a certain amount of attention during some parts of the year. Like around now.

Those of you who have home offices, or are thinking about home offices, or are thinking that you would like to think about home offices one of these days, will want to check out the informative article beginning on page 12, entitled "Taxes and the Home Business." Taken with thanks from the BMUG Newsletter, it tells about some of the pitfalls and rewards of operating a business from your home and has several useful indicators about how to go about justifying all the money that some other people think you waste on your computers. As the author points out, this is only a primer; if you are going to take this journey, you will probably want professional help at your side as you proceed.

Other articles tell about the perennial favorite MacInTax, and of some shareware templates for the Apple II, and perhaps even for the Mac. So, if you haven't yet gotten around to it, this may help to concentrate your minds on the prospect and encourage you to get to it. At least it did us.

Typeface series

We begin the series of articles on laser and imagesetter typefaces with this issue, and will be interested in your views on this topic and how it can be made most useful to you. "Desktop Publishing" means much more than PageMaker and Quark, and most of us with access to laser printers can be accused of having indulged in it, from time to time. The explosion of the technology has put new tools into everyone's hands, and the sometimes bewildering variety of typefaces and fonts

tends to confuse more than enlighten.

It is our hope that this series will provide our readers with a view of the wide range of type choices available, and perhaps even some of the artistic insights that contributed to their design. There *is* life after Times Roman and Helvetica, and an interesting life it can be.

If you are interested in seeing future issues of the Journal appear in some of these typefaces, you might tell the editor or office. We are, if not exactly ever ready, at least frequently ready, to launch ourselves into new and exciting enterprises, and this might be one of them. We hasten to add, however, that we don't feel impelled to experiment in this way unless you indicate a positive interest in it. Seeing what we hope has become a familiar friend in new and different appearance each month can be unsettling, and we have quite enough of those experiences these days without subjecting ourselves to gratuitous stress.

Adobe is not the only source of digitized type. Candor compels us to admit our own bias, which is that the Adobe offerings seem to be somewhat cleaner and more professional; it also requires us to state that many feel otherwise. So be warned, and then we hope, also be enlightened, informed and perhaps even gratified.

fmp

Letter to the editor

I am writing in response to your comments in the January 1991 edition of the Journal of Washington Apple Pi regarding an article I authored ("Lessons of a New Mac Owner") in the November 1990 Journal. In no manner did I imply, or intend to imply, that Computer Age's technical support or sales service was weak.

In fact, over the last six months, I have referred over a dozen people to Computer Age (an Authorized Apple Dealer). And most of them, including myself, purchased Macs from Computer Age. I have found that Computer Age's hardware technical support staff is quite knowledgeable, and the sales staff can quote prices for various computer configurations very quickly. While the people at Computer Age are strong on hardware and pricing, they are weak on specific software questions. I have had several Apple system software and Hypercard questions improperly answered by Computer Age sales reps. But they were honest mistakes, and no harm was done.

As long as Computer Age maintains competitive pricing for Macs, I will continue to refer new business to them. And I apologize to any Pi members and the people at Computer Age if they misinterpreted the content of my article. As a closing thought for Pi members, most companies that advertise in the Journal are reputable businesses. So, when planning your next Apple-related purchase, check through the ads in the Journal.

Christopher S. Lee

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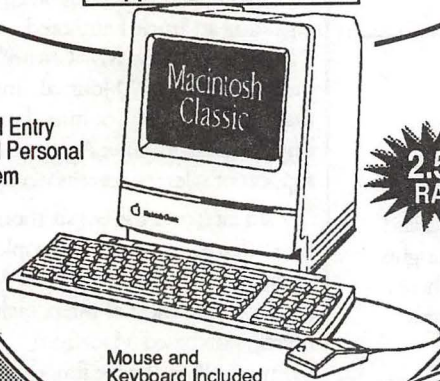
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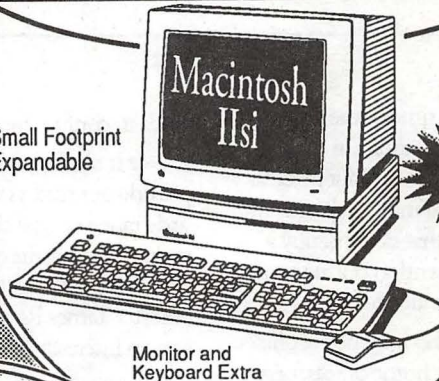
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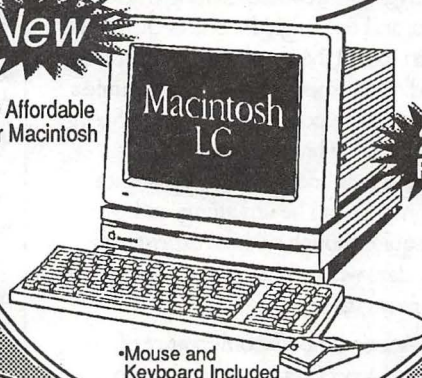
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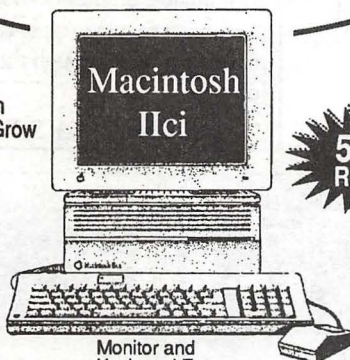
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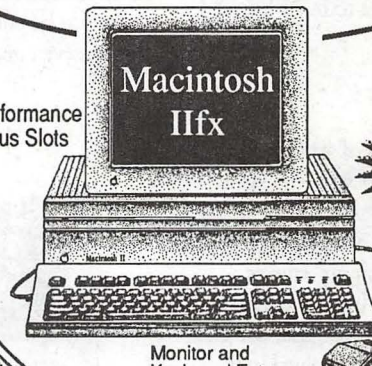
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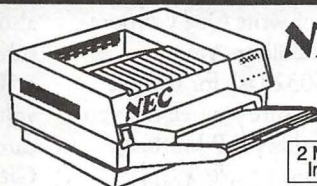
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What's new

Office News

by Nancy Pochecko

Lest you forget (I would never let *that* happen), we still need volunteers. One of the more pressing projects is the organization of WAP's magazine and newsletter library. As you may or may not know, WAP has an extensive collection of computer magazines and newsletters from other Users Groups. We could use your help in getting these periodicals organized so that everyone can make use of them. If you're interested in helping us get them in order, please give me a call at the office (301) 654-8060.

The hotline is also in need of some new life. If you are knowledgeable on some subject (whether it's already listed or not), we'd love to add you to the hotline! Just give me a call!

WASHINGTON APPLE PI MEMBER DEALS AND DISCOUNTS

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WAP members are eligible for a special subscription rate of \$24.97 for a one year subscription for new subscribers (the regular rate is \$27.97 for one year, \$43.00/two years and \$59.00/three years). To order, please send your check for \$24.97 per one year subscription made payable to inCider to the WAP Office at 7910 Woodmont Avenue, Suite 910, Bethesda, MD 20814. Also include mailing information.

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To take advantage of these prices, you can charge it by phone by calling us at (408) 685-9175 or send check or money order to:

Aladdin Systems, Inc.
Deer Park Center, Suite 23A-

171

Aptos, CA 95003-4723

(That is the complete address,

there is no street name)

They did not indicate any type of "limited time offer", however the free glow-in-the-dark Magic Menu decoder rings are only available while supplies last.

FLUENT LASER FONT LIBRARY by Casady & Greene, Inc.

Casady & Greene has a new font package - the Fluent Laser Font Library. They have upgraded 21 volumes of their Postscript fonts to Type 1/ATM compatible, then they repackaged them into a 7 disk set, version 4.0 with 79 typefaces retailing at \$179.95 (collectively, these same fonts were \$1900 two months ago).

Call Casady & Greene and ask for the Mac User Group Library Special and you can purchase the Library for \$129 plus \$5 shipping. The purchase also entitles you to a 6-month free subscription to Publish Magazine and a 50% discount on their new fonts, volumes 23-34, after the registration card has been sent to Casady & Greene.

This is a limited time offer, and it expires on March 31, 1991. To order, call (800) 359-4920 and be sure to tell them where you saw this!

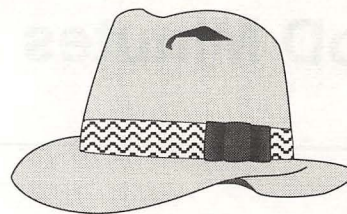
ADOBE TECHNOLOGY CONFERENCE

On April 4, 1991, at the McLean Hilton, Tyson's Corner, Virginia, Adobe will be hosting the first Adobe Technology Conference for the Washington DC area. They would like to invite the WAP members to join them for the day to meeting with key product managers from Adobe's corporate offices. There will be also be members of Adobe's Application Division who will be demonstrating Adobe's latest application products. Each member who attends the conference will receive a copy of one of Adobe's software products that demonstrates the power of PostScript. In addition, they will be holding product raffles. Call 1-800-745-5189 to RSVP.

And The Word is...

President's Lair

by Eric Rall



Audit Committee. Frank Zappacosta and Ann Eason have been working diligently for the past 3 months reviewing WAP's financial records. This has really been a Herculean task. In order to understand just how monumental this job is, you need to stop and think about the history of our club.

Over twelve years ago, Washington Apple Pi was founded by about dozen individuals interested in learning more about their new Apple IIs. Meetings were informal and held in a back room at Computer Etc. Dues consisted of people pitching in for the cost of postcards. This major user group literally started out in a shoebox. As Apple prospered and grew, so did WAP. The membership grew faster

than the formal procedures. Today, Washington Apple Pi is a major national Apple User Group with a large and diverse membership. Some of our business practices need changing to address the needs of a membership that has outgrown their shoebox.

I only digressed to give you a some perspective of the amount of work involved in going through twelve years worth of shoeboxes. Every single member of this club owes Frank and Ann thanks. These two professional accountants have given hundreds of hours of their time freely and generously to your club. Ann is now busy working (it's tax time.) Frank is finishing up the work to present to the board of directors and then he will be busy with the tax season. If you're so

inclined, drop a note to the Pi office thanking them. They deserve it.

Apple II+ Help Needed. The Montgomery Primary Achievement Center (MPAC) is a school for mentally retarded children who need your help. For years, they have been using Apple II+s. MPAC is in needs volunteers to help with some minor repairs of these computers. Some of the repairs are as simple as swapping a bad keyboard or disk drive. MPAC is also in need of equipment donations. If you have any Apple II+ systems or components in need of a good home, please think about making a tax deductible donation to MPAC. For those of you kind enough to help this worthy cause, please contact Bob Shaffer at (301) 384-3724.

Volunteers needed!!!!!!!!

Have you have always wanted to but you:

- a) Are not a computer scientist.
- b) Can't make a large commitment.
- c) Don't know how to make the time available.
- d) All of the above.

Then your opportunity to help has arrived. This job is easy and fun. Mix business with pleasure. When you come to the Washington Convention Center to check out the goodies at FOSE (March x to y) come early or stay later and help at the WA P booth.

Volunteers are needed to:

Man booth from 9 to 3,
March 5 & 6 (~ 1 to 2 hours)

Set up/Take down booth,
March 4 & 7 (~ 3 hours)

Set-up and take-down is only slightly strenuous. It means helping me move the WAP booth, three computers and some boxes of old Journals from the office to/from the convention center. Manning (or womaning) the booth means passing out memberships forms and WAP Journals. Sometimes you try to answering peoples' questions or point to the help section of Journal if you don't know the answer. For your effort you get a good feeling for doing good; you get to meet many of old/new members to the Pi and an

exhibitors badge to FOSE. (There will always be a least another person at the booth so fear not being stuck).

If you can help please let me (Tom Witte) know at (703) 683-5871. The more that sign up the merrier it will be. If you can't help out but make it to FOSE stop by and say Hi.

Also, Let me know if you want me to answer the mail to the convention people or have you done that? We need the same stuff as last time (power, table, chairs [2] and rug). Also, it would be very nice if we could get a pass to get by union workers that move equipment into convention center (we had trouble last year - they wanted big bucks to let us bring booth into center last year. We were luck to find kind foreman that let us sneak in)

BoD Minutes

NOVEMBER

The WAP Board of Directors met on Thursday, November 8, 1990.

Officers and Directors in attendance included Eric Rall, Bob Shaffer, David Wood, Dave Harvey, Dana Schwartz, Mary Hockmeyer, Bernie Urban, Dave Weikert, Ed Myerson, Manny DeVera, Dale Smith and Tom Vier (phone).

Members and guests included Nancy Pochecko, Greg Pochecko, Frank Potter and Priscilla Myerson.

The Board:

* Voted to bring the Seven Hills Software Partners program more closely under the supervision of the WAP office, specifically where the purchase of Seven Hills software is concerned.

* Elected Manny DeVera and Dale Smith to the Board, replacing Dick Byrd and Chris Bastian, who resigned.

* Voted a new reimbursement policy on outlays by members.

* Discussed indirect costs to the club associated with the TCS.

* Discussed the status of the Group Purchase Program.

DECEMBER

The WAP Board of Directors met on Thursday, December 14, 1990.

Officers and Directors in attendance included Eric Rall, Bob Shaffer, David Wood, David Ottalini, Dave Harvey, Dana Schwartz, Mary Hockmeyer, Bernie Urban, Dave Weikert, Ed Myerson and Tom Vier (phone).

Members and guests included Nancy Pochecko, Bill Campbell, Frank Potter and Priscilla Myerson.

The Board:

* Approved the minutes of the October 11, 1990 meeting as corrected.

* Discussed recent discrepancies concerning meeting dates in the Journal, including the December Garage Sale.

* Elected Board Member Bernie Urban as Vice President for Community Affairs.

* Heard that the clubs finances have improved, in part thanks to Eric Rall for helping collect some outstanding advertising bills.

* Discussed problems with BOD members (specifically David Morganstein and Lee Raesly) who have not attended Board meetings on a regular basis.

* Discussed the responsibilities of the Vice President for Apple II and Vice President for Macintosh.

* Discussed a letter sent by an unknown person to Journal advertisers under false pretenses and using falsified WAP letterhead. The letter, among other things, suggested that WAP membership was falling and that advertisers should seek a "modification" in their rates. Eric Rall told the Board he would send a letter to the Journal advertisers correcting misrepresentations made in the letter about WAP. It was also proposed that the fake letter be turned over to the Postal Inspector.

* Discussed problems that developed with a private effort for a group purchase of Apple computers.

* Voted to begin efforts at increasing contact with local Apple dealers, the first step being a committee made up of Manny DeVera, Bernie Urban and Harvey Kaye

* Discussed the status of the WAP Group Purchase program. The committee working on improving dealer relations was asked to look at the Group Purchase program as well.

* Discussed ways to increase membership and improve communication to WAP members. Dave Ottalini agreed to submit a proposal for a three month trial membership for purchasers of Apple Computers from local dealers.

* Discussed problems with the Desk Top Publishing SIG. DTP SIG members will be invited to the January meeting to discuss how to deal with the problems.

JANUARY

The WAP Board of Directors met on Thursday, January 10, 1991.

Officers and Directors in attendance included Eric Rall, Bob Shaffer (phone), David Wood, Dave Harvey, Dana Schwartz, Mary Hockmeyer, Bernie Urban, Dave Weikert, Ed Myerson (phone), Bill Campbell, Lee Raesly, Dale Smith and Tom Vier (phone).

Members and guests included Paul Schlosser, Nancy Pochecko, Greg Pochecko, Frank Potter, Bob Platt and Priscilla Myerson.

The Board:

* Elected Bill Campbell as Director At Large to replace David Morganstein, who resigned.

* Discussed the WAP's GENIE On-line accounts and their use by WAP members

for downloading public domain material.

* Declined to reinstate Bob Platt's membership in WAP by a vote of 5 to 5, with two abstentions.

* Held an executive session.

by Gary Hayman

We started off our new year with a meeting at our high-tech conference room at the National Institute of Health. Even this large room is starting to become a little crowded due to the increased attendance at our meetings. Gary Hayman announced that the SIG is now over 100 strong.

The meeting schedule for 1991 was posted. In March, May, July, September and November we will be meeting at the NIH, Building 31, Wing C, 6th Floor, Conference Room 9, at 7:00pm. During the alternate months, February, April, June, August, October and December, we will meet at the Dolley Madison Library, McLean Virginia at 7:00pm. Since locations and even dates may change, Gary stated that it is best to check with him at 301-345-3230 for up to date details. Gary stated that if you can sign on to the TCS where there are meeting announcements on the 'IIGS Misc' Board; and if you read the entire bulletin of that board you will see the yearly schedule which will be updated on a regular basis.

Dan Slaven went hi-tech on us and brought in his HP Paint Jet and TI Micro Laser - PS35 printers. The HP, which runs about \$1000 is capable of printing color graphics with its spray jet features - albeit slowly. The TI Micro Laser, a slight bit more expensive running around \$1580, produces crisp laser copies using 35 built in fonts. Both printers were hooked up through an AppleTalk network.

Dan exhibited the easy to replace color paint head for the HP and the paper carrier of the TI. The TI can handle paper stock of up to 65 lbs.

Without a hitch, the HP produced a color rendition of a tiger's face which was passed around. To save time, Dan had prepared a three ring notebook that contained many samples with a description of the

settings to produce them. He uses this a guide when at home, but it was very informative to the attending SIG members.

Try as he would, he could not get the TI to work properly. At first we thought it was a problem of compatibility with the IIGS that was being used (it wasn't his own), or even the wiring jungle that was connecting the devices. We then suspected AppleWorks GS what was intended to be used to create the text to be used by the printer. Later, after some experimentation at home, Dan discovered that it was a problem with the AppleTalk driver which became corrupted. He assures us that the AWGS - TI combination works now and he would be willing to demonstrate it at the next meeting.

While Dan was working on his equipment, we defaulted into one of the best Question and Answers sessions that we have had. In the board room

atmosphere of our meeting place, we had many intelligent questions and answers. We ran the gamut from hard drive choices, drive interfaces, doing backups and restores, accelerator options, and problems that individuals encountered, to questions about individual programs. It was a very strong learning situation and I believe that all who attended profited from what was discussed. The dialogue alone was worth attending the meeting for. Kim Brennan, Gary Hayman and others provided some important input. Dave Harvey passed around the new Apple II Guide for all to see, stating that it was available at the WAP office for \$5 (street price \$19.95).

The next meeting, February 25th (may have already passed by the time this appears in the Journal) will concern designing your own home via computer and maybe Dan again. Hope to see you at our Virginia meeting site.

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Taxes and the Home Business

by Janet Attard

(reprinted from BMUG Newsletter)

If you use your Macintosh in a home-based business, the next few weeks could find you wishing your marvelous money-making machine came factory equipped with one extra manual from Apple Computer: *A Macintosh Users' Guide to Keeping the Tax Collector at Bay*.

Yes, it's income tax time again. If you do your own taxes, and work for yourself part-or full-time, you'll soon be digging through business receipts, records and tax regulations looking for ways to keep as much money as possible out of the tax collector's outstretched hand.

How fruitful your efforts will be depends largely on three things:

- How careful you've been about keeping records all year
- How diligent you've been about paying estimated income tax
- How much you know about the tax laws governing your business

I'm the data manager and head sysop of the Home Office/Small Business (HOSB) RoundTable on the GENie service from General Electric Information Services. In talking to people who are starting or running home-based businesses, I often discover they either aren't aware of all the tax regulations that affect them or they have misconceptions about some of them.

Since I happen to be a Macintosh user who's gotten a lot of help from experienced Mac users on GENie and in my local user group, I've put together information that answers some of the questions home-based business owners frequently ask. I hope

the information will help other Macintosh users reduce the taxes on their home-based business income and avoid penalties for noncompliance with the tax laws.

Is It a Business?

For IRS purposes, a business is an activity that you engage in for profit. You do not have to work full time for yourself to be in business. Neither do you need to use a business name, have a separate business checking account (though that's advisable), or even have a permanent office. Thus moonlighting and part-time self-employment are considered businesses, too, if there is a profit motive.

If you are the only owner of the business, and it is not incorporated, the IRS considers you a "sole proprietor" and requires you to report your business income and expenses on Schedule C (Form 1040) Profit or Loss from Business. The total profit or loss calculated on Schedule C must be recorded on line 12 of your 1040 form, and the Schedule C form must be included in the tax return you mail to the IRS.

If you operate more than one business as a sole proprietor, you must file a separate Schedule C for each and include all of them with your 1040. Failure to do so may result in penalties.

The Hobby Trap

If your income-producing activity is one the IRS might consider a "pleasurable" pursuit, rather than a business, and if you're losing money at it, watch out! Be meticulous about

keeping records of everything you do.

The reason is that hobby income is taxable, but deductions for hobby-related expenses are not considered business deductions and are limited to the amount of income from the hobby. Furthermore, any allowable deduction cannot be taken on Schedule C; instead the deduction must be declared a miscellaneous expense on Form 1040A. Only that portion of the allowable hobby expense that exceeds 2% of adjusted gross income is deductible.

What criteria does the IRS use to distinguish businesses from income-producing hobbies? Profit and profit motive. The basic rule of thumb is if you have shown a profit in three of the last five years including the current year, the IRS will presume the activity is a business. Businesses involved with race horses have to show a profit in two of the last seven years.

If you fail the three out of five year test, the IRS may look at other factors to determine if the activity is being carried out with a profit intent or just for pleasure. These other factors include:

- Whether you carry out the activity in a business-like manner
- How much time/effort is spent (especially if the activity has little recreational or entertainment value)
- Your expertise in the activity
- Whether the losses are due to circumstances beyond your control
- Whether you change your methods of operation to attempt to improve the profitability of the activity and
- Whether you depend on income from the activity for your livelihood.

Income and Social Security Taxes to Pay

The net income from business activities (what's left after expenses) is subject to:

- Federal income tax

- Social Security Self-Employment tax
- Additional state and local income taxes, where applicable.

Your social security tax liability must be calculated on Schedule SE, the *Social Security Self-Employment Tax* form, which must also be included with your personal return. If your net business income was under \$400 in 1989, you do not have to pay social security tax.

For 1989, the social security Self-Employment tax rate is 13.02% on the first \$48,000 of combined wages and self-employment income (income from any salaried job plus net income from self-employment). Spouses filing joint returns are each subject to the \$48,000 maximum for the purposes of this tax.

Example: In 1989 you were a salaried employee of the Buyit Sales Corporation and earned \$38,500. Nights and weekends you worked as a self-employed consultant, setting up desktop publishing systems for local newspapers and graphic design houses, and cleared an additional \$25,000 after expenses, putting your total income for the year at \$63,500. Since you pay social security tax on only the first \$48,000 of income, social security tax would be due on only the first \$9,500 of your self employment net income (the \$48,000 maximum minus your \$38,500 income from the salaried job).

If you file a joint return, and your spouse brought in an additional net income of \$43,000 through his or her self-employment efforts, your spouse's full \$43,000 would be subject to the self employment tax, since it is under the individual \$48,000 maximum.

Estimated Tax

As a sole proprietor, you're expected to make estimated tax payments four times during the tax year if you will owe more than \$500 in combined income tax and self-employment tax at the end of the year.

Estimates get done and submitted on Form 1040ES, which is simple to complete, and is available from any local IRS office. Estimated taxes are normally paid on April 15, June 15,

September 15, and January 15.

If you normally receive a large income tax refund due to overwithholding from a salaried job, the refund can be applied toward your self-employment tax liability, thus reducing the dollar amount of your quarterly estimated payments.

After allowing for any excess withholding, the amount to be paid each quarter is equal to one-fourth of the lesser of the following two amounts::

- 1) 100 percent of your actual 1988 tax, or
- 2) 90 percent of anticipated 1989 tax bill.

Caution: The IRS doesn't like to be kept waiting for money. It expects you to pay estimated taxes on time throughout the year, not in for lump sum at year end or with your return. The IRS can impose penalties for underpayment in any quarter as well as for underpayment for the entire year.

Using Deductions and Depreciation to Lower Income

Out of ignorance or fear of audit, many home-based business owners pay more tax than they should because they don't take all the deductions they are entitled to.

While it would be impossible to list and adequately explain all the legal deductions a home-based business might be entitled to, here are some suggestions that may help you reduce the taxes you pay on self-employment income.

The IRS requires you to keep complete and accurate records of all business transactions, as well as "timely" logs of things like automobile usage, travel expenses, and computer usage if you use your computer partially for business and partially for personal use. If you get audited and don't have records and receipts to prove your deductions, many if not all could be disallowed and you could be hit with penalties and interest charges for back taxes owed.

Record Every Expense You Incur

Owners of home-based businesses often don't bother saving receipts or recording expenses for "little" things like pencils picked up at the supermarket, mileage for a trip to the post office, business-related magazines picked up on the newsstands, etc. Why? "It's too much trouble," or "It doesn't make any real difference anyway," are the usual reasons I'm given.

While it is true those insignificant expenses don't amount to much, individually, when you add them up over a year's time they can add up to a substantial sum. If you're in the 28% tax bracket and have \$1,000 in "insignificant" expenses (and records to prove them), your income tax savings on that \$1,000 would be \$280. You'd also save another \$130 on your social security (self-employment) tax.

The Home Office Deduction

Weigh the merits of taking the home office deduction if you qualify for it. The home office deduction is usually a number of deductions. When you check off the home office deduction box on Schedule C, you are entitled to deduct a portion of your heating and lighting costs, water costs, garbage disposal costs, and certain repairs. You may also deduct a percentage of real estate taxes and mortgage interest, as well as a sum for depreciation (e.g., if you use 10% of your home in business, you can deduct 10% of real estate taxes and mortgage interest.) While you have to reduce the deduction for these items on 1040A by the amount you have claimed on Schedule C, the deduction is worth more on Schedule C because it reduces the amount of income subject to social security tax.

It is widely thought that taking the home office deduction increases the chance your return will be audited. While this is probably true, checking off the home office deduction box,

(please turn to page 83)

Artists on exhibit

by Nancy Seferian

This column will look at the art and artists of Washington Apple Pi and the techniques and tools used to create the art.

Art: *Babies* (below), *Idaho Seal* (right), *Bridge* (opposite above left), *Stat Factory* (opposite below left), and *Ex Boss* (opposite right).

Tools: Mac IICx, Radius Pivot display, PageMaker, Freehand, Illustrator, and a transparency.

Artist: Todd Wallace created this art for various projects he has produced over the last three years. Most of his graphic skills were picked up while doodling in class, both in high school and college. Although he majored in psychology, Todd has found almost all of his employment in layout and graphic design, and now produces three newsletters a month, along with slide shows, exhibits, and technical illustrations. Todd's first illustrations were produced out of necessity:

"Although we had Macs at my first job, we had no clip art, and I was tired of using only pullquotes and black rectangles to break up the text." He is presently Desktop Publisher at Wade Miller Associates, and when he has time, does free-lance on the side.

Procedures: "My favorite jobs let me create something completely from scratch, like I did for a baby announcement for a woman in our office. First, I did a pencil sketch of some babies bouncing around off the walls, and when I had a pretty good idea how I wanted them to look, I redid them in Freehand. The biggest baby was the first; the rest of them are rotated and scaled copies. The bounce lines were added with the bezier-curve point tools, along with the ground.

Although I used to use the freehand drawing tool in Freehand, I find now that specifying each point as a corner point, tangent point, or curve point gives me much more control



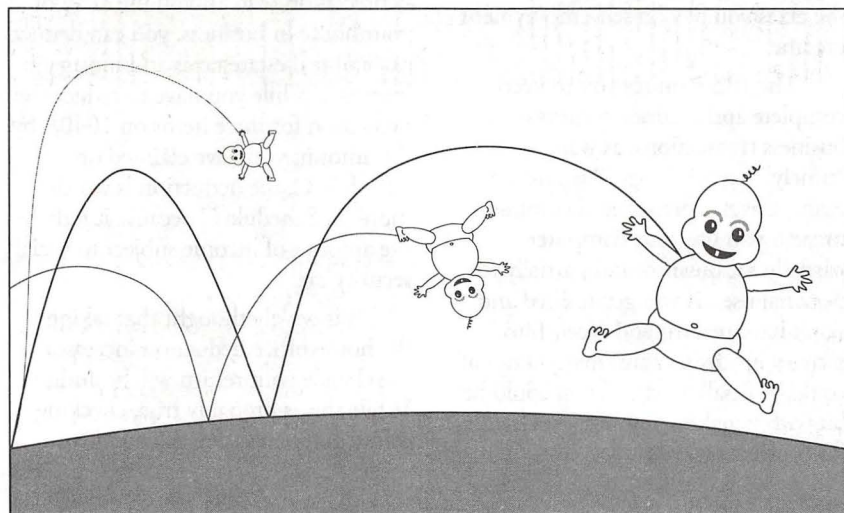
Idaho Seal

over the final shapes."

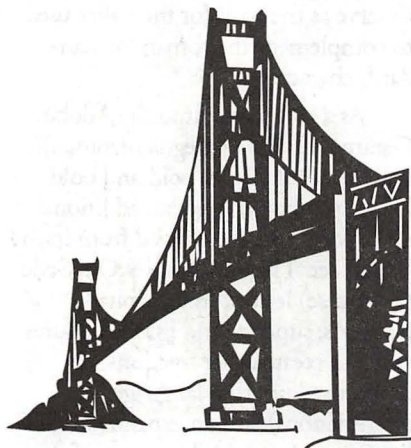
"Idaho Seal was done by starting with black outlines of the objects within the circle, and adding white polygons on top of the outlines to form the figures. After the pictures were done, the text was added around the circle with Freehand's join tool, joining the text to half-circles above and below the inner circle. I find that this technique can be used to make clip art that would not otherwise be available.

"Of course, this is the Golden Gate bridge in San Francisco, there are all kinds of clip art available because it is such a popular graphic image. But I was really going for a woodblock print kind of look for the brochure we were producing, so instead of using the more precise bezier-curve tools, I used the free-hand tool in Illustrator to get a less accurate but more human kind of picture. Again, though, the bridge is basically a black outline laid down first with lots of white polygons put down on top.

"I created the *Stat Factory* logo

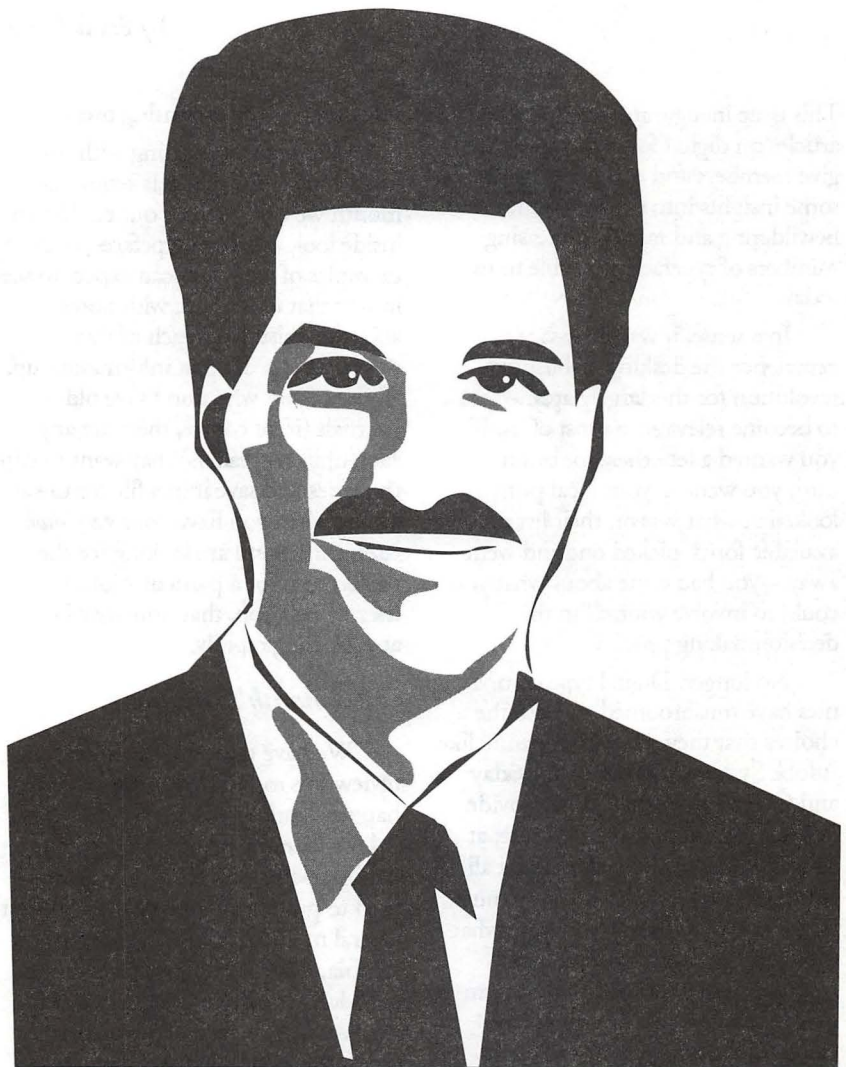


Babies



Bridge

for John O'Reilly, a fellow Washington Apple Pi member, for his rotisserie-league baseball statistics service. I started with the idea of a baseball diamond, thickened the basepaths and disconnected them from the bases with white space, and added the text in the infield. Each letter in the text was custom-made, because I wanted a very distinctive, unique look for John. I did the drawing of an old boss for some ex-



Ex Boss



Stat Factory

co-workers who wanted to give him a joke promotional piece with his picture in it. Although it's a good likeness, my ex-boss doesn't like it very much, so he gets a lot of reprints and anonymous notes with his face in them." ■

To submit art by mail, send it to

Nancy Seferian
1425 Foxhall Road, NW
Washington, DC 20007.

To submit art by modem to the TCS, dial (301) 986-8085. At the Main Menu select (F) for File Transfer Area. Then choose area 24 for Journal Submissions, and upload.

The world of fonts

Exploring Typefaces—1

by Frank Potter

This issue inaugurates a series of articles on digital fonts, intended to give members and computer users some insights into the sometimes bewildering and rapidly increasing numbers of typefaces available to us today.

In a sense, it was necessary to experience the desktop publishing revolution for this largely arcane area to become relevant to most of us. If you wanted a letterhead or business card, you went to your local printer, looked at what was on their list of available fonts, picked one and went away—you had done about what you could to involve yourself in the decisionmaking process.

No longer. Digital type companies have mushroomed, as have the choices that they offer. Companies like Adobe Systems, Bitstream, Casaday and Greene and others now provide options that seem almost infinite, at prices that range from nothing at all, in the case of freeware, to not very much, in the case of shareware, to somewhat more, in the case of commercial typeface houses. Some of them seem quite expensive until you begin to calculate the unit cost of a letter or article, and then add in the always-difficult-to-assess-factor of the *quality* of the product.

Adobe Systems, Incorporated is one of the most respected of the commercial typeface houses, and their products are ubiquitous in the world of digital type. The PostScript capabilities that they have designed and that Apple has incorporated into most of their LaserWriters have enabled amateur and professional publishers to flood the Western World with words and prose which, while it may or may not make much sense, at least looks as though it

was produced by a printing press.

Adobe is cooperating with the Journal in producing this series. Each month we will offer for our readers an inside look at several typefaces, with examples of what you can expect to see in text that uses them, with notes about the history of each of these, where we can dig that information up. Those of you who don't save old Journals (if, of course, there are any such unlikely readers) may want to clip the series and save it in a file for use at a time when you have your very *own* laser printer and are looking for the perfect font for a particular job. As laser prices drop, that time may be approaching rapidly.

This month's selections

We have three typefaces for your review this month—all of them, as it happens, serif fonts. The first of these, **Adobe Garamond**, you are already familiar with, because it's the typeface used to produce the Journal for the last several months. It, like the second, **Utopia**, is one of the typefaces created by Adobe as Adobe Originals—not derived directly from a preexisting typeface and supplemented with a number of extra features. The third is **Janson**, an elegant creation that has been around for many years and is a favorite of Jim Donnelly.

Adobe Garamond

"Garamond" is a typeface that has been around for some time. Adobe has five—count 'em, five—different versions of Garamond in its repertoire, and each of them is different. Other typeface houses have their own versions as well.

Adobe Garamond was created by

Robert Slimbach, who went back to early examples of Claude Garamond's (or Garamont's) work. Adobe tells us that many of the Garamonds seen today are derived from versions of his work—copies of copies, so to speak. He took a full year to produce this typeface, calling upon the work of a French typographer, Robert Granjon, to serve as the basis for the italics used to complement the roman, or standard, characters.

As a complement to the Adobe Garamond family (Regular (roman), italic semibold italic, bold and bold italic), Adobe packages an additional set of fonts that are derived from it: the Expert set. This set includes Old Style (lowercase) letters, small capitals, fractions, superior and inferior figures (used to create other fractions, or letters used in other languages as abbreviations) and an expanded set of ligatures. About this last, most of the laser fonts typically used in desktop can combine letters, such as fi and fl; other ligatures can be created than these, such as ff, ffi and ffl.

The Adobe Garamond Expert collection includes figures in the normal weights (regular, italic, etc.) and also contains Titling Caps that are slightly lighter than the standard, and more suited for display in large sizes, and Alternate Regular and Italic characters with uppercase and lowercase letters with elegant leaders and tails (known as swash characters).

There is a lot here, and the collection deserves more space than we could give it. Notice the relative height of the ascenders and descenders, compared to the x-height of the lowercase alphabet. This, in turn, seems to make it easier to create lines of type with less leading than might otherwise be necessary to keep one's eye on the proper line. At least that's the way it looks to us.

Utopia

Also designed by Robert Slimbach, the Utopia typeface is distinctly different. In many respects, it seems much more modern than Adobe Garamond. The font designers call attention to "the flattened points of the

A, V, W, v and w, the two heavy verticals in the U, the streamlined diagonals of the K, and the surprisingly classical tail of the J. The semi-triangular ball-terminals of the a, c, f, r and y are also new, along with the roman details to some cursive letters, such as the beginning serifs of the v, x, y and z, and the spur on the b."

Discriminating readers will note (and if you are reading this, you are by definition discriminating) the larger x-height of the typeface. Overall, it seems a stronger, and perhaps somewhat less elegant typeface than Adobe Garamond, although many will prefer it—perhaps for this reason.

The Utopia Collection has seven different formats: regular, italic, semibold, semibold italic, bold, bold italic and black. Like the preceding, it is accompanied by an Expert Collection in those same versions, together with a set of Titling Caps and some ornaments, or printers' dingbats.

Janson

The December 1990 column by Jim Donnelly was, for the most part, a paean to Nicolas Jenson, a fifteenth-century typographer who left a large shadow that persists to current times. Some have concluded that this typeface was actually created by an associate of his, Nicholas Kis—not having been around at the time, we are in no position to resolve the dispute.

This again is a typeface created for text. It comes in four flavors: roman (which seems to be a term used interchangeably with regular for reasons that escape me but about which I may ultimately be in a position to offer some enlightenment) italic, bold and bold italic.

Why Adobe called it Janson, instead of Jenson is not entirely clear to me. Of course in those days, people tended to be much more casual about spelling than they are nowadays, but this may not be the whole answer either. Here again, further information may eventually be forthcoming.

Stay tuned to this space for further developments. Next month, if all goes well, we will unveil Adobe Caslon, Benguiat and an interesting new, non-traditional typeface called Tekton. 🍏

Typographical miscellany

Some misconceptions, arcana and ambiguities might perhaps be clarified before we launch ourselves into the sea of type. First, most of us, and I include myself, misuse the term "font," using it in place of the more appropriate term "typeface," which describes a family of type. The Journal is printed in Adobe Garamond, with a point size of 10.5 and a leading of 11.5 (described in the trade as "10.5/11.5" or "10.5 on 11.5." The headings are in the same typeface, but are a different size, italicized and bolded and therefore they are a different font altogether—12/14, as it happens.

The size of a font is measured, not by the "x-height" of the letters in it (from the top to the bottom of a lower-case "x"), but from the top of the ascenders to the bottom of the descenders (from the top of the lower-case "b" to the bottom of the lower-case "y"). Thus, as you will see, there are some great variations between typefaces (and fonts, for that matter) for type which exactly the same size. Some of it is harder to read, and some less so.

Typefaces can be subdivided in a number of ways, but the categories that most find useful typically divide themselves into serif fonts, like this one; sans serif fonts, like Helvetica, which are frequently used, as here, for headlines and captions; and display fonts, whose function is apparent from its name. Some additionally identify a smaller group of "ornamental fonts," although others find this additional distinction not especially useful.

Text is most frequently printed in serif fonts. Most students of the art (and believe me, it is exactly that) have concluded, sometimes after exhaustive and exhausting research, that serif fonts are easier to read on a printed page. Certainly our preference, which is why, dear reader, you are seeing this message in Adobe Garamond, and not in Avante Garde.

The quality of the output device will have a strong impact on the precision and the readability of the type on the page. LaserWriters are considered to be "low-end" printers, with a resolution of 300 dots per inch (dpi). Electronic imagesetters, such as the Linotronic which produces the copy that is used to produce the Journal, can go as high as 4,000 dpi which, you will have to admit, is pretty darn small. In fact the delicacy of the Linotronic output used to produce this page is not wholly apparent, due to the relatively low quality (and low cost, we quickly add) of the paper used to produce this publication. Some typefaces have been designed specifically to be used on low-end printers; these do not rely heavily on fine lines and delicate curves.

It is just as true here as it is elsewhere—you get what you pay for. There is more than a small amount of personal taste involved in selecting typeface favorites, and it is our intention to provide a range of alternatives for your review.

Adobe Garamond

ABCDEFGHIJKLMNO
PQRSTUVWXYZabcdef
ghijklmnopqrstuvwxyz12
34567890 (48/50)

ABCDEFabcdef—Garamond italic

ABCDEFabcdef—Garamond semibold

ABCDEFabcdef—Garamond semibold italic

ABCDEFabcdef—Garamond bold

ABCDEFabcdef—Garamond bold italic

ABCDEF—Garamond Titling

a.cte.Qr.Qtt.z&3&—Garamond Alternate

a.BCDE.Fctstv&3&—Garamond Alternate Italic

ABCDEF^{1/4}^{1/2}^{1/3}1237⁷fffl—Garamond Expert

^{1/4}^{1/2}^{3/4}^{1/8}^{3/8}^{5/8}**I234567**—Garamond Expert Bold

The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well. 10/10

The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well. 10/12

The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well. 10/14

Utopia

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890(48/50)

ABCDEFabcdef—Utopia italic

ABCDEFabcdef—Utopia semibold

ABCDEFabcdef—Utopia semibold italic

ABCDEFabcdef—Utopia bold

ABCDEFabcdef—Utopia bold italic

ABCDEFabcdef—Utopia black

ABCDEF—Utopia Titling

a.cte.Qr.Qrt.z.~—Utopia Alternate

A.B.C.D.E.F.c.t.s.t.v.~—Utopia Alternate Italic

ABCDEF^{1/4}^{1/2}^{1/3}1237⁷fffi—Utopia Expert

^{1/4}^{1/2}^{3/4}^{1/8}^{3/8}^{5/8}I234567—Utopia Expert Bold

The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well. 10/10

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Janson

ABCDEFGHIJKLMN
OPQRSTUVWXYZa
bcdefghijklmnopqrstuv
wxyz1234567890(48/50)

ABCDEFGHIabcdef—Janson italic

ABCDEFGHIabcdef—Janson bold

ABCDEFGHIabcdef—Janson bold italic

There was nothing so VERY remarkable in that; nor did Alice think it so VERY much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually TOOK A WATCH OUT OF ITS WAIST-COAT- POCKET, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before see a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge. 10/10

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It's Virus Time!!

by Ralph J. Begleiter

Even MacNovices are bound to run into an occasional problem with a computer virus. The bad news is: there are plenty of viruses out there, and they seem to spread easily. The good news is: because Mac viruses have now been around for a few years, several programmers have come up with excellent, low-cost, easy-to-use defense and cure mechanisms.

This won't be a primer on viruses, but it'll offer you enough information to help you should you need to combat one, or wish to defend against them.

Essentially, a computer virus is a computer program someone's written with malicious intent. Sometimes, the viruses interfere relatively harmlessly with your work. They cause messages to pop up unexpectedly, or cause your cursor to behave strangely. At worst, however, a virus program can damage your files and even the basic system software which operates your Mac. No need to speculate on why some programmers create these demons. Fact is, they do.

The most important fact about viruses is that they spread. Inserting an infected disk into your computer can almost instantly convey the virus to software on your hard disk drive, or on one of your other floppy disks. From there, the virus can simply perform its devious business, or it can spread still farther, creating a more serious infection.

Because viruses can spread on floppy disks, a few simple rules of "safe computing" can help you avoid infections:

- Know your computing partners. Exchange files (spreadsheets, databases, word processing

documents, etc.) with associates at work whom you know to be practitioners of safe computing. If they keep their disks "clean," yours will be, too.

- Lock your "master" disks. A virus cannot infect a locked disk. Don't let your original program disks become infected. Lock them before using them in your Mac.
- Be alert to unusual behavior by your Mac. This is a broad rule. Watch for cursors acting strangely. Be aware if your System Disk suddenly "fills up" with invisible data. Be alert to frequent system "crashes." These are just some of the symptoms of a virus.
- When you suspect a virus, take action. Don't wait until you've allowed the virus to spread further on your computer, or to someone else's. Use one of the many capable virus-control programs to eradicate your Mac's illness.
- If you confirm a virus, alert your associates to whom you might have "contributed" the virus. Tell them about the symptoms you've observed, about the kinds of files which were affected, and about what steps you took to successfully cure your computer.
- To be especially safe, install an anti-viral program on your Mac. This will go a long way to preventing re-infection, even if it doesn't catch everything.

My own recent experience might be instructive. One of my Macs recently contracted a virus known as "WDEF." Fortunately, it's a relatively harmless virus, and relatively easy to eradicate. But while my computer was infected, I experienced frequent system

"crashes," and some of my hard disk partitions inexplicably became "full," causing programs to crash and occasionally preventing me from working.

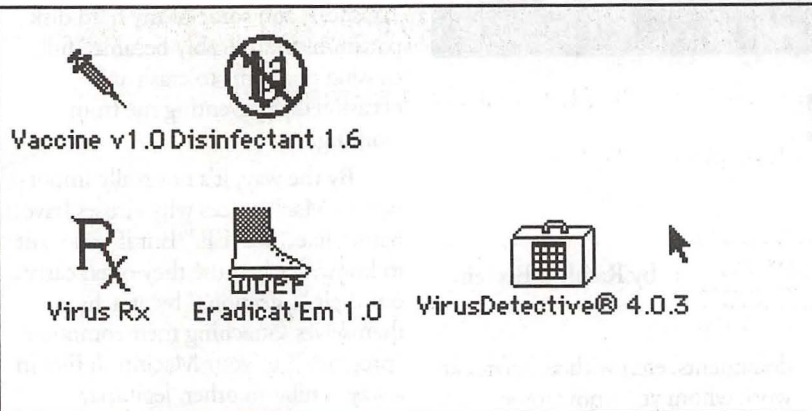
By the way, it's not really important to MacNovices why viruses have names like "WDEF." But if you want to know, it's because they often carry out their "infections" by attaching themselves (attaching their computer "program") to your Macintosh files in a way similar to other, legitimate "attachments," called "resources." For example, when Apple revises your System File, it often simply takes the old System program and attaches a new "patch" (not unlike a "band-aid") to fix a bug or change the way something is done on your Mac. These "patches" are attached to your System file invisibly as "PTCH" "resources," which your Mac notices every time you start up your computer. That's the way the viruses work, too. The "attach" themselves to other programs and then are "noticed" every time you use your Mac.

The WDEF virus "attaches" itself to one of the files which is present on every Macintosh disk: the "Desktop" file. This file is invisible to most users, so the WDEF virus is likewise invisible.

But WDEF's method of infection also makes it easy to kill. Trashing the Desktop file and building a new one on an infected disk will get rid of the WDEF virus. (Rebuilding a Desktop file occurs invisibly, too. You can do it by holding down the COMMAND and OPTION keys while you insert any floppy disk or while you start up from any hard disk drive. Your Mac will ask you if you "really want to rebuild the Desktop file," noting that "this could take a few minutes." Actually it takes only a short time, and is almost completely innocuous. (Your only "loss" will be any comments you've written in the Get Info box for any file.)

There's even a freeware "fix" for the WDEF virus, called "Eradicate Em 1.0 (by Dave Platt; based on Eradicator! 1.2 by Guy Fiems, Riccardo Ettore and Luc Wets). This simple program





Likewise, you can have SAM warn you every time there's an unusual attempt to modify your software, or you can teach SAM to ignore certain repetitive, acceptable modifications so it doesn't interrupt your work for "false alarms."

To avoid hours of frustration and possibly permanent damage to some of your files, take steps now to immunize your Mac against computer viruses and to impliment your own "safe computing" habits.

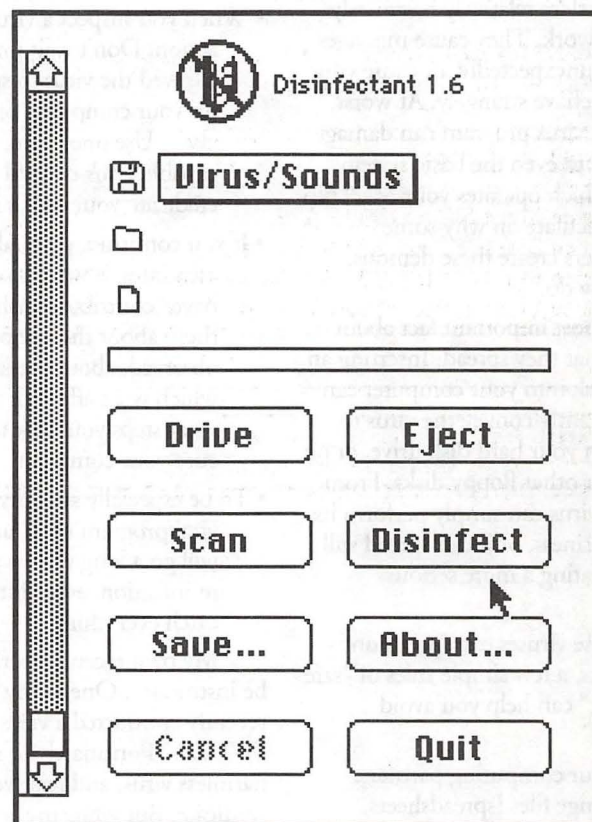
sits in your System Folder quietly, waiting for a disk to be inserted in your Mac. When it "sees" a disk coming, it scans the Desktop file for the WDEF virus. If WDEF is present, Eradicate Em signals the user (with two beeps) and automatically rebuilds the Desktop file. If the disk is locked (preventing rebuilding), Eradicate Em automatically ejects the disk immediately after signalling the user. Simple, elegant WDEF prevention.

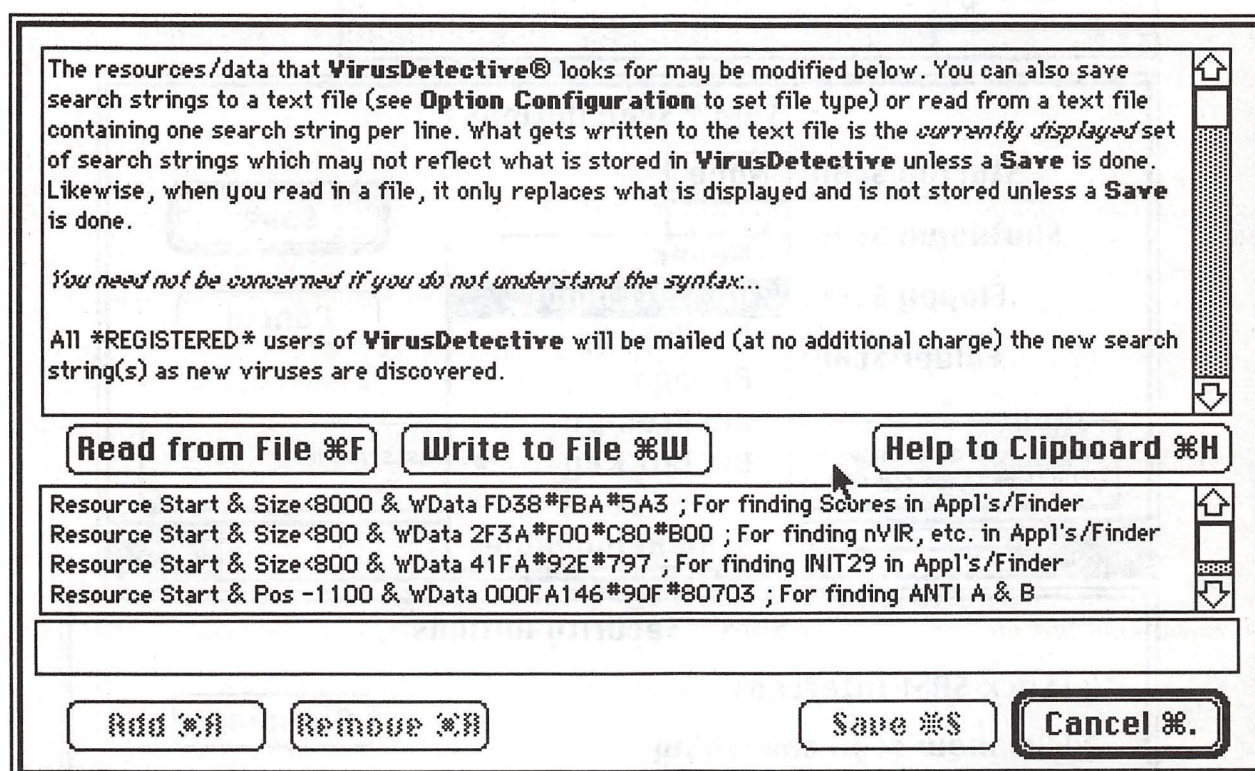
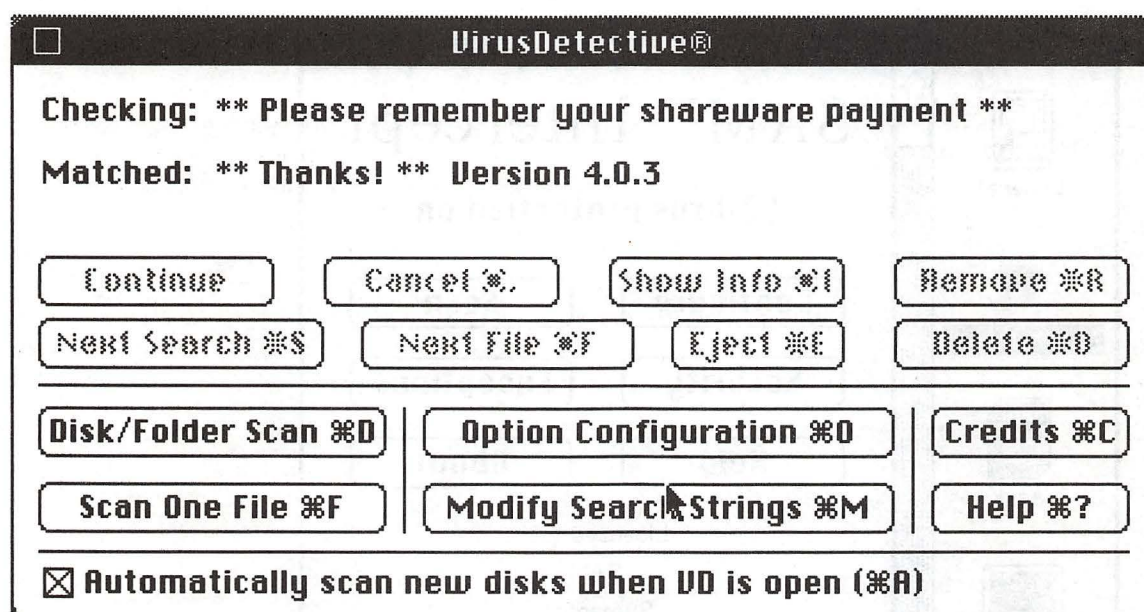
Another simple and amsll program (available free with CE Software products) is called Vaccine. Like Eradicate Em, Vaccine is poised in the System Folder, alert to any unusual attempts by software to modify other programs or your system software. Vaccine alerts the user if such an attempt is being made.

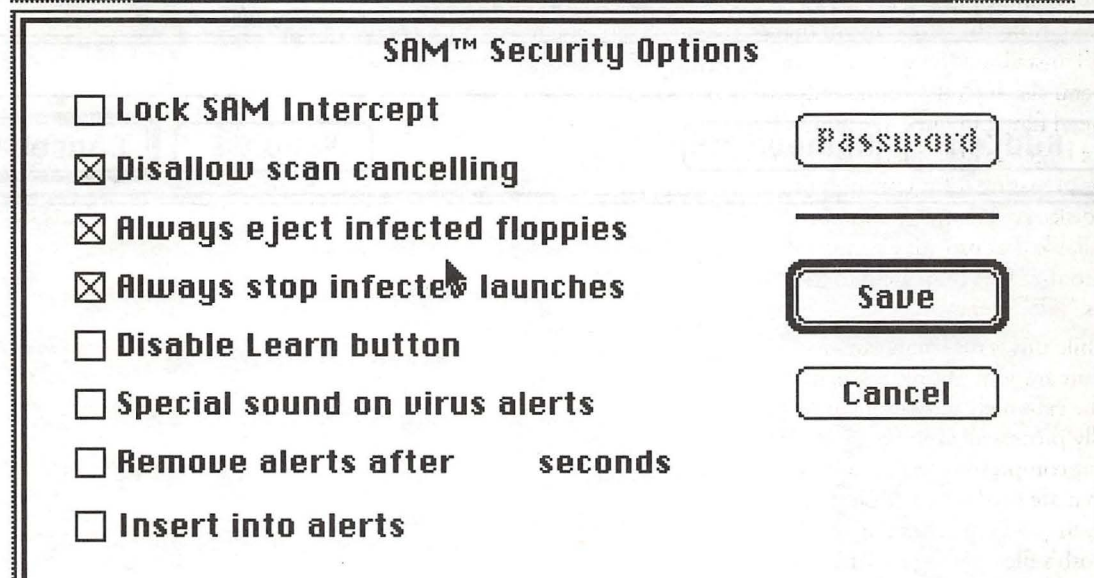
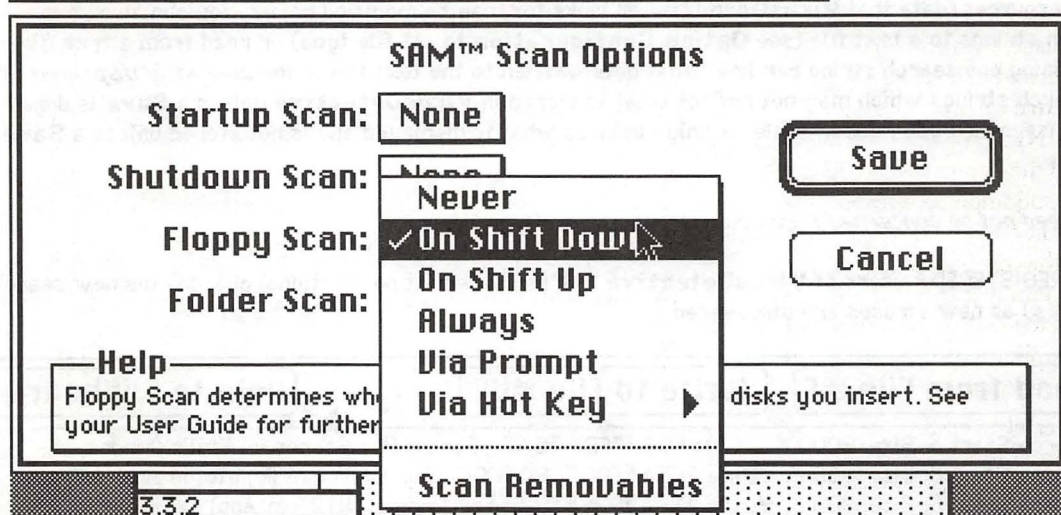
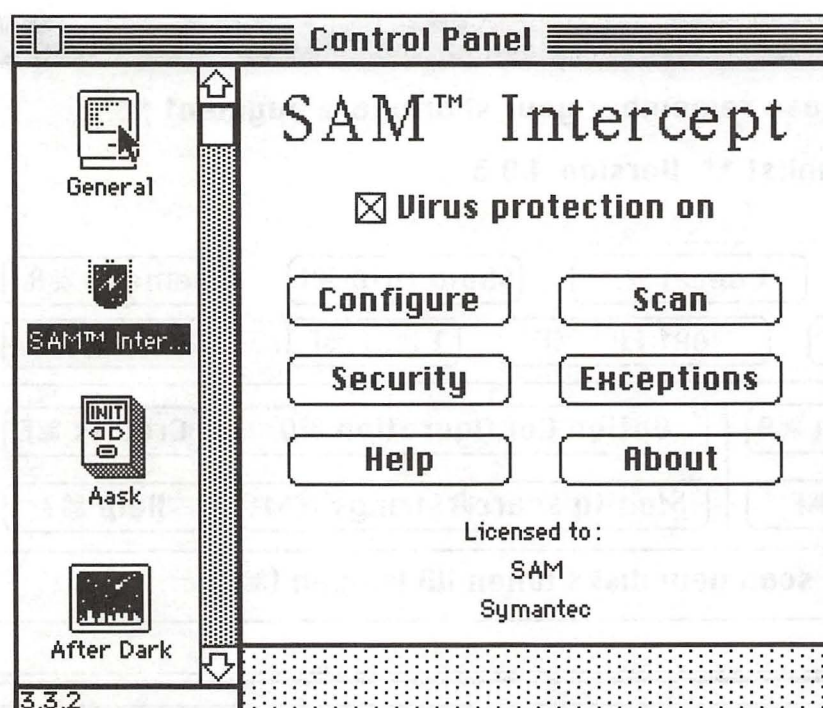
There are other programs similar to these. Washington Apple Pi's virus control shareware disks are full of excellent programs.

Two major programs available in this way are Virus Detective© by Jeffrey S. Shulman (P.O. Box 1218, Morgantown WV 26507-1218) and Disinfectant© by Northwestern University (John Norstad; Academic Computing & Network Sciences; Northwestern University; 2129 Sheridan Road; Evanston, IL 60208). Shulman charges a nominal shareware fee for his excellent program. In return, users receive periodic updates, including instructions for updating to protect against new viruses. Disinfectant is also updated periodically, usually through on-line bulletin boards or through user groups such as WAP.

And there's a major commercial program called "Symmantec Antivirus for the Mac" ("SAM"). It's a well-designed program combining an efficient "prevention" module which is ever vigilant while you're using your computer and a separate utility for "treating" viruses once your Mac contracts them. SAM allows a great deal of user adjustment to accommodate to individual working habits. For instance, you can instruct SAM to screen every disk automatically upon insertion. Or you can tell it to screen disks only on your instruction.









Disk Doubler

by Brad Andrews

It is a fact of computer life that no matter how much space you have on a hard drive, you will always need something bigger. Though the size of hard drives has increased greatly, the number and size of the applications that go on them have also increased. In an attempt to solve this problem, Salient has just released version 3.1 of their compression utility, Disk Doubler.

Disk Doubler comes in a fairly simple package, with a small instruction booklet and a single 800K disk. Getting started involves two basic steps. The INIT program is first copied into the system folder and then the main application is copied someplace on the hard disk. After rebooting the computer, Disk Doubler will automatically install itself. Your only task is to identify the location of the main application the first time you actually use its features.

Items can be compressed or expanded from the desktop by selecting the file or folder to compress (or expand) and choosing the appropriate item from the "DD" menu that the INIT installs on the system menu. This menu also includes commands to join several files into one large group or to split a large file into smaller chunks, ideal for preparing it for transport on floppy disks. A "File Info" option is also available that provides information similar to the "Get Info" item in the Finder's "File" menu.

While this is nice, and can save a significant amount of disk space, it would be extremely inconvenient to manually process all your files, even if you limit compression/expansion to those that are used only occasionally. Instead, the INIT patches the Macintosh's file opening routines so

that whenever a file is opened from a dialog or executed from the desktop, it is automatically expanded to full size before it is used. The INIT will then re-compress any expanded files after you quit the application that expanded them, though you can set it so expanded files will be left expanded. While the speed cost for the compression benefit could prove too great for frequently used applications, it works just fine on things you only use once in a while.

There two limitations to this process though. Any programs, such as Studio/8, that pre-scan a file to determine its contents cannot do their scan on the compressed file. Also, files that are opened indirectly, such as the many forms used by MacInTax, will not be expanded since they are opened from outside the SFGGetFile dialog.

Older versions of Disk Doubler had used a special file icon to represent the compressed file that made viewing your hard disk very confusing since all the icons looked the same. The new version uses a much better approach and shows the original icon, with the letters DD printed in the lower left corner. Thus the compressed desktop still looks nice.

Disk Doubler also contains code necessary to read and re-pack files stuffed by the StuffIt and PackIt utilities, though translating them appears one way, and you should take care here.

Salient includes a freely distributable expand-only version of the program, to allow you to send compressed files to others who don't own the full package. Obviously the main program and INIT are NOT freely distributable, only the limited version.

Files can be compressed in either of two manners, optimized for size or speed,

with the inherent tradeoffs. This does bring up the main problem with the program: Compressing and expanding files takes a noticeable amount of time and can be annoying for frequently accessed files. When and where it is useful will depend on how much of a delay you can handle.

The manual is short, but effectively documents all the available options and many potential problems you could run into while using the program. The program disk also has several utilities to exploit the features of Disk Doubler from within programming languages, as well as the files necessary to use it with QuickKey.

I did find that OnCue could not launch applications in its usual fashion since it could no longer find them. But since I only compressed applications I use occasionally, I can live with taking them off the OnCue launch menu.

On the whole, Disk Doubler is a sharp little package. It is well integrated in to the Macintosh environment and does not appear to conflict with anything I could find. If you would like to squeeze more space out of an existing drive, this is a program worth considering.

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What's new...

Notes on the Mac

by Paul Schlosser

Sony Announces Mac Video Controller

Sony has announced "VBOX", a small paperback—book—sized controller that will enable Macintosh users to remotely control most Sony video products. Any Sony products with a "LANC" port are can be controlled in this manner. Sony products that include this port are 8mm camcorders, VHS and Beta video recorders and laserdisc players. Sony will eventually publish the LANC specifications, so that other manufacturers can take advantage of them. When Apple releases the driver for VBOX, users will be able to control video equipment much the same way they now control printers and disk drives, printing to and retrieving data from video sources. The VBOX is expected to retail for \$250. One VBOX is required for each device to be controlled, and up to seven of them can be daisy—chained together.

New Apple Printer Announced

Apple will soon be selling a new "bubble-jet" printer, which will be produced by Canon (Canon also supplies Apple with laser printers). The new printer is a modified version of Canon's "BJ10" printer (which Canon currently sells for MS-DOS machines), and will come equipped with outline font technology. The print quality is expected to be "nearly as good" as the LaserWriter II NTX-J, and the printer is expected to retail for approximately \$750.

AppleFax/BackFax Solutions

Do you own an AppleFax modem? If you do, Apple will sell you a copy of the \$245 BackFax application for \$35. BackFax (from Solutions Inc.) allows users to send and receive faxes in the background, without requiring them to give up use of their machines. If you've already purchased BackFax, Apple will send you a coupon good for \$75 off any other Solutions Inc. product.

Electronic Mail News

Pacific Bell and Software Ventures (publishers of MicroPhone II, the popular telecomm program) have teamed up to provide a user friendly interface for Pac Bell's new electronic mail service. The new point-and-click software will be based on MicroPhone II's scripting language and will feature an easy-to-use graphical interface. Features will include an address book, full screen editing, automatic file transfers, session logging, color and message management capabilities. David S. Hindawi, president of Software Ventures, believes it is the most sophisticated front end to public electronic mail on the market. "Users no longer have to learn specific electronic mail commands," he says. "Instead, they can interact with intuitive graphical elements on the screen. Even novices can be up and running in a matter of minutes." Current MicroPhone II owners can purchase the Pac Bell Connection script for \$25. The MicroPhone II/Pac Bell script will be sold together for \$250, and a new, limited version called "Personal MicroPhone" will sell for \$125. Personal MicroPhone comes with the Pac Bell script but does not

allow the creation or modification of other scripts.

Goodman Releases Utility for Mac 512 Owners

Bill Goodman (the author of Compactor, the popular file archive utility) has released "CptExpand", a utility that will enable Mac 512K and 512Ke users to unpack Compactor format archives. The new utility requires System 3.2, at least 205K of free memory and the HFS file system. Users without the HFS file system can install the HD20 INIT to solve the problem. CptExpand and the HD20 INIT are available for downloading on the TCS.

Excel 3.0 Announced

Microsoft has announced version 3.0 of Excel, with more than 100 new features. Among the new features are: an Autosum button to extract the sum of a row or column, an outliner, special help screens for Lotus 1-2-3 users, three dimensional graphs that can be rotated on the screen, new drawing tools and the use of the new Object Linking and Embedding (OLE) protocol. The OLE protocol allows different applications to pass data back and forth, and is relatively new to the Macintosh world. One user commented "It's more graphical than any other spreadsheet to date, the 3-D graphics, the Autosum feature and the outliner add great depth to the concept of the spreadsheet." Excel retails for \$495, upgrades from previous versions are \$50.

MacDraw Becomes MacDraw Pro

Clarisc demonstrated MacDraw Pro at the expo in San Francisco recently, and hopes to actually ship this new version by late spring 1991. Clarisc is calling MacDraw Pro a "major upgrade," saying that it will now support extensive use of color, sophisticated text functions, and new polygon and bezier curve tools. File formats supported will be PICT, PICT2, MacDraw II, EPSF, MacPaint and color TIFF. MacDraw Pro will



retail for \$399, upgrades will be \$99.

Apple Revenues Increase

Apple reports that net revenues rose 12 percent and earnings are up 33 percent during the fiscal quarter that ended 12/29/90 (compared to the same quarter last year). John Sculley, chairman and chief executive officer, attributes the figures to strong product demand. "The new products we introduced this past quarter — the Macintosh Classic, Macintosh IIsx, and the Macintosh LC — have been extremely well received." He notes that shipments of Macintosh computers are up 50 percent during the first fiscal quarter from the year-ago level. Net revenues for the quarter were \$1.676 billion, up from \$1.493 billion a year ago. International sales represent 45 percent of total revenues.

Campbell Resigns from Claris

Bill Campbell has been named president and CEO of Go Corporation, after leaving a similar post at Claris Corporation. Prior to joining Claris, Campbell had been executive vice president of Apple from 1984 to 1987. Go Corporation also announced that it has licensed AppleTalk for its new pen-based operating system, PenPoint.

Apple Changes Distribution Policy

Apple has moved to change its distribution policy, saying it will add consumer electronic stores to its mix of distribution channels. Robert Puette, president of Apple USA noted that the new low-end Macintoshes have sold more units in their first quarter than the Mac Plus did in its best full year. Distribution will be in three areas: low-cost, high volume electronic and warehouse type operations, computer stores that sell to small and large businesses, and value-added resellers that provide custom integration and consulting. The electronic and warehouse type stores will still be required to provide service, if only minimal support. This change puts Apple in a segment of the market that

is very competitive, and goes against past and current policy. PC clone manufacturers such as Packard Bell and HeadStart have also targeted electronic stores as distribution channels. "Service today means taking care of the hardware," Puette said, providing installation and repair service. He contrasted service to support, which he characterized as providing software and operations assistance. Macintoshes, Puette said, would have an increasing amount of built-in support, assisting users in setup and initial use by using high-quality documentation and a new training disk included with every system.

FreeHand 3.0 Announced

At the MacWorld Expo on January 10, Aldus announced FreeHand 3.0, a new release of its design and illustration program. New features include on-screen colors, styles, layer palettes that list the line and fill colors, graphic styles, and layers that users create in an illustration. Artists can use any number of layers (limited only by computer memory), which speeds up any screen redrawing, and can help focus on particular parts of an illustration. FreeHand 3.0 is said to offer improved performance that makes the program feel smoother, move faster, and offer more precision than ever before. FreeHand retails for \$595, upgrades will be \$150.

New Ethernet Products From Apple

Apple has announced new "plug and play" Ethernet products that bring ease of use and low cost to the Macintosh world. The new products are a Ethernet NB Card for NuBus-based Mac II's, a Ethernet LC Card for the new Mac LC, and a Ethernet Cabling System with media adapters for connecting the cards to any standard Ethernet. Apple reports that third-party companies will be releasing Ethernet solutions for the Mac Classic.

New Files on the TCS

The following files were uploaded to the Macintosh File Transfer areas on the TCS during the last thirty days. This listing represents only a small portion of the files available for downloading. Call the Pi Office at 301-654-8060 for information on signing on to the TCS.

File area 13 - Mac Fonts

045 CAROLESCHUNKS.S Caps-only Type 1 font

File area 14 - Mac Games

104 TOP10.CPT Letterman's Top 10 1987-90!

103 ANAGRAMM.CPT Generates anagrams

File area 15 - Mac Graphs

088 ICOSOHED 3-d rep of icosahedron
087 CRYSTALS.CPT Demonstrates growth of crystals

086 SPOCK.GIF The famous Mr. Spock
085 MANDEL.CPT Fantastic fractal generator

File area 16 - Mac Hypercard

094 HC2BUGTX.SIT HC2 Buglist in text file

093 SCRIPTIN.SIT Sm. stack - learn about HC2 scripting

File area 17 - Mac Technotes

030 TIDBIT38.SIT Tech TidBITS for 28 Jan 1991

029 TIDBIT37.SIT Tech TidBITS for 21 Jan 1991

028 TIDBITS3.SIT Tech TidBITS for 14 Jan 1991

027 VERS291.SIT MacWorld "Versions" column from 2/91

026 TIDBIT35.SIT Tech TidBITS for 07 Jan 1991

025 TIDBITS3.SIT Tech TidBITS for 12/10/90

024 RESED.PRIM.CPT Beginners guide to ResEdit

File area 18 - Mac Utilities

261 BINHGX.CPT DA to encode/decode binary files

260 PHONEBOOK.SIT PhoneBook DA, version 2.1.2

259 JUMP.START.SIT CDEV to specify which APP's to launch

258 PRINTER.CLOCK Imagewriter print control & Clock Set

257 RESBULK101.CPT Manipulate resource attributes. v1.0.1

256 FAST.FIX.CPT Fixes problem w/Disk Express-Speed Disk

254 SITDX201UP.SIT StuffIt Deluxe 2.0 - > 2.0.1 upgrade

253 HAMRADIO.2 Ham Radio Computation Program

252 HD20.INIT HD20 INIT for the 512K/CPT utility

251 SUN Compiled ZBASIC program-Sunrise/Sunset

250 DB.S Compiled ZBASIC Decibel Ratio's

249 REMEMBER.SEA Remember v 2.1.1. Self-extracting

248 DEPTH.GAUGE.SIT Pixel-depth utility

247 SIT.EXPAND.SEA Extract SIT files on 512K & 512KE Mac's

246 CPT.EXPAND.SEA Extract CPT files on 512K & 512KE Macs

245 SYSERRDA.CPT DA to explain system errors



244 TCS.OFFLINE.102 Read, write, reply to TCS msgs offline
 243 HEAPLIST.CPT Lists all heap info.
 242 UNZIP.CPT Extract MS-DOS PKZIP files
 241 BOOTMAN.SIT Edit/write boot blocks to disk, v1.1
 240 PIXEL.FLIP.CPT Change screen depth fast and easy
 239 BOASTER.CPT Display icons at startup
 238 OSCAR.CPT Oscar the grouch, trash can replacement
 237 CLONE.OFFLINE.1 Offline Reader for Twillite Clone BBS
 236 SAMPLER.SIT. Test DAs/fonts/sounds/etc.

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- Describes how to "design" a 171.
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MacSchedule Plus

by Deirdra McAfee

Management with Bells and Whistles

This shows some of MacSchedule Plus's bells and whistles better than I can describe them, a picture being worth at least 10,000 words in a software review. MacSchedule makes Gantt charts, or graphic timelines. These charts—job bars going across a dated grid—are immediately understandable, and MacSchedule includes tools that make such charts flexible enough to map out the fits and starts of projects large and small.

As you see, job bars and milestone markers come in a range of sizes and shapes, as do fills, the shaded parts of job bars that show how things are going relative to the schedule. The ad said I'd create my first schedule minutes after opening the program, and I did. It was easy to figure out how to use MacSchedule, although some aspects of the interface seemed less than elegant, especially all the pop-up menus. Opening the application draws a calendar with a toolbox in the corner and blanks for headers, footers, the schedule title, and specific task titles.

You can fit up to 28 task rows and 17 columns on letter-size paper in the portrait orientation, but actually the size-limits for charts are quite generous: you can tile schedules to make a wall-chart up to 8'x 8'. You can specify, via menus and pop-up menus, or using the time-control arrows in the toolbox margins, when your calendar should start and whether you want it to be quarterly, monthly, semi-monthly, weekly, or daily. You can also make fiscal-year calendars. (A big drawback, however, is that you can't specify in the same way when the calendar should end.)

The calendar—let's start calling it the schedule, even though it's blank as you begin—is a nice-looking and legible gray grid.

You can date- and page-stamp it or not, and you have various options for designing the grid, too; you can set MacSchedule to shade weekends, for example, and also to shade individual columns to show crucial dates or holidays. You can adjust column widths and you can also make the grid invisible.

As a freelance writer and editor, I can use a scheduler; I usually have three or four projects going, in various stages of completion or chaos, and I also use meetings and lunch dates to rustle up business. But my work is relatively uncomplicated; I research and write, or I read and edit, and I usually have just one deadline per project to meet.

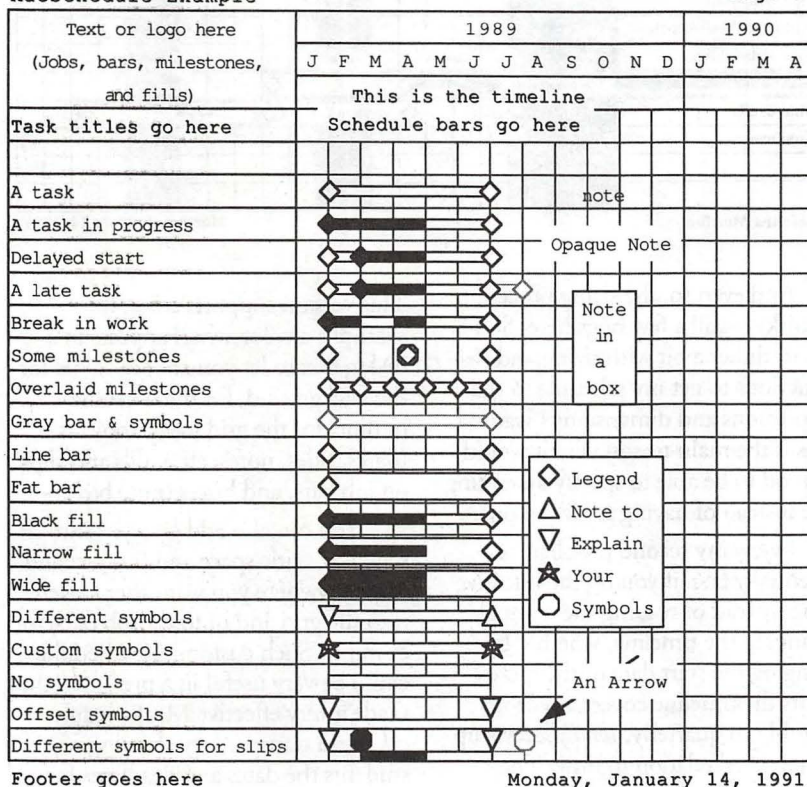
But I was also teaching English composition at Virginia Commonwealth University, and it occurred to me that scheduling my students' research papers would be a true test of MacSchedule. I wanted students to

- write out topic proposals
- write and show me their tentative theses and conclusions
- bring in their notes and bibliographies on notecards
- submit rough drafts, first drafts, and final drafts for grades

I wanted my class to begin this paper on October 25 and to have final drafts no later than December 11. The completion of one phase directly

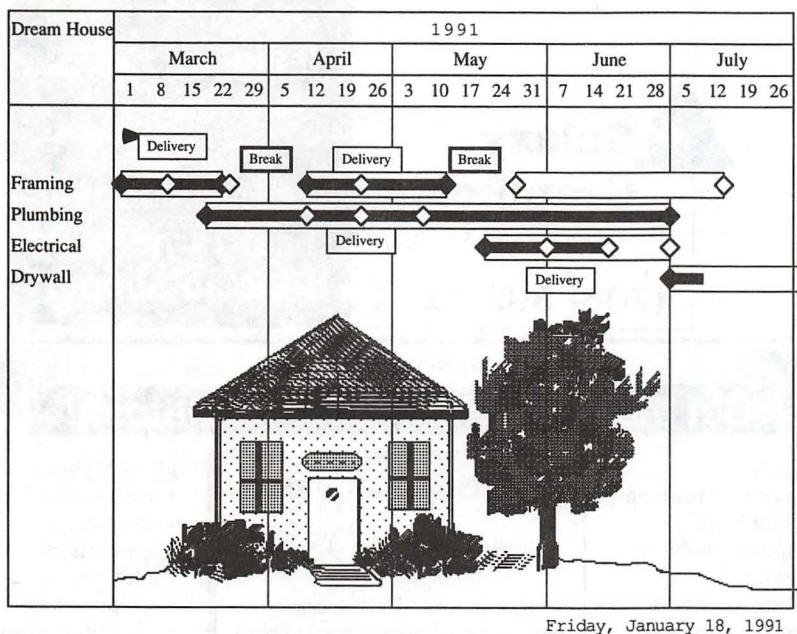
MacSchedule Example

Page 1



Monday, January 14, 1991

Monday, January 14, 1991



research paper—like, say, a house. You could break the schedule down into framing, plumbing, electrical, drywall, etc., and each job bar could have a milestone showing when you contracted for materials, when they arrived onsite, when each job was roughed in, when finished, etc.; you could also include delays, breaks, and slips.

I was supposed to review MacSchedule 2.04 here; that's what the WAP sent me. While driving it, though, I had some problems. When I called Mainstay, MacSchedule's manufacturer, for tech support, they answered the phone promptly and courteously and then said, "Version WHAT? Oh, that had lots of problems. But we fixed 'em all quite a while ago. You can't get that version any more."

When I told them I was a reviewer with a deadline, they said if I could send them proof they'd send me the newest version, 2.5. I sent proof, but they only sent me a demo disk back. A second long-distance call to California brought me the real thing, and, in fact, more than I bargained for. Instead of MacSchedule 2.5, I got MacSchedule Plus (two packages of it, in fact, two days apart) which "starts with all of the capability of MacSchedule and adds automatic EARNED VALUE

ANALYSIS!" (You can probably tell I'm quoting the catalog now.)

Earned value analysis shows the difference between the projected costs of an undertaking and its actual costs, but it shows them in relation to time. If one phase is ahead of schedule and over budget, while another phase is behind schedule and under budget, where does the whole undertaking stand financially?

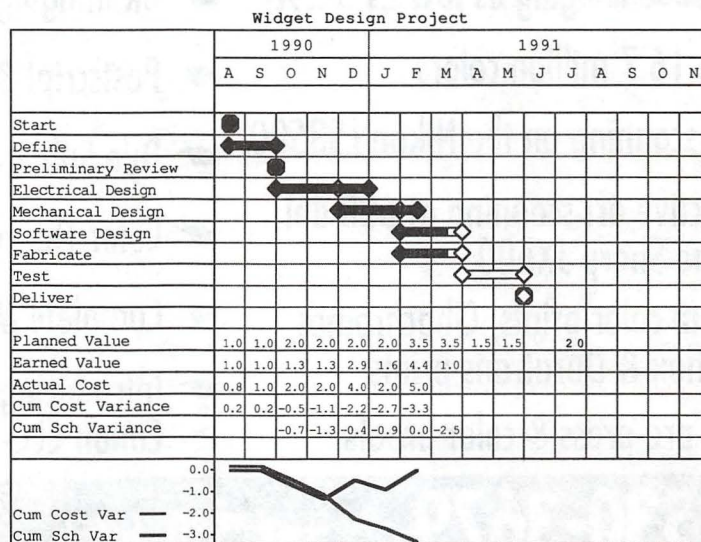
MacSchedule Plus can tell you the difference in both time and money ("schedule variance" and "cost variance") between what's happening and what you planned to have happen,

and can graph these differences, a useful feature for cost estimating, as well as presentations and meetings.

MacSchedule Plus can also help control cash flow, and can export earned-value data "into Excel or any other Macintosh spreadsheet program." You can export the *data* to spreadsheets—and you can also export the *schedule* via the Clipboard into PageMaker, MacDraw, and, as you see above, Word 4.0. (Word does get cranky about it; when I tried to rescale the first example in this review, Word rewarded me with a bomb.)

This graph shows the widget project ending up fairly close to time estimates but taking more worker-hours (the unit of measure for this project) than expected. This earned value feature is great, especially if you run projects for which you need frequent readings on how the time and money are holding out. You can also use it to set up hypothetical schedules as a tool for financial planning. Once you fill in the "planned value" row (how many worker-hours or dollars you anticipate each job will need), the program looks at your filled or empty job bars and figures out the rest of the information for you. Going into the spreadsheet gives you the graphing values, and then you hit the command to graph them.

According to Mainstay, MacSchedule Plus's suggested retail is \$345 and MacSchedule 2.5's is \$245. If you routinely manage complex





projects, these programs offer flexibility and ease of use; the earned value analysis feature of MacSchedule Plus offers current and projected financial information as well.

According to the manual, tasks scheduled with CPM programs like MacProject from Claris "have a range of acceptable dates (using the concept of slack time)." MacSchedule can import data from such programs and create "three sets of dates: the earliest possible start and finish, the latest possible start and finish, and the projected actual start and finish" using sets of bars in a single task line.

MacSchedule and MacSchedule Plus's ease of use and low cost, relative to complicated PERT and CPM scheduling software, may make them a cost- and time-effective alternative, especially if you don't have to spend the whole day creating schedules on your Mac. (You may want to spend the day, though; those bells and whistles are almost irresistible.)

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MacInTax

by Frank R. Kistner

By the time you read this article you may have already filed your 1990 income tax return. If you haven't, and completing your tax return requires a little more than just a 1040A or 1040EZ, You should consider buying MacInTax, from Softview. There are substantial benefits to using MacInTax, such as:

- The software includes most of the forms that you will need. You simply fill in the forms, print them on an ImageWriter or LaserWriter, and submit them to the IRS;
 - Repeated entry of a single piece of data on multiple forms is virtually eliminated;
 - Calculation and recalculation of form totals is automatic. This is quite valuable if you want to analyze various tax scenarios like determining the tax impact of selling stock, making a charitable contribution or contributing to an IRA, or if you want to plan for next year's taxes.
- Changes for 1990

The 1990 version of MacInTax is distributed in a Stuffit archive in order to conserve disk space. This has no operational impact, but it creates one more step in the installation process. This version also contains a "forms guide" to assist you in identifying the forms that you must complete. The forms guide helps you determine the required forms based on your response to a series of questions that are visible to you after you select the primary form (1040, 1040A, 1040EZ) that is appropriate for you.

Some things are fine just the way they are...

If you're an experienced MacInTax user, the following list of features will be familiar. However, for those of you that have never used MacInTax, here's a summary of the features that make this such a popular program:

- Support for an extensive list of IRS Forms and Schedules including:

Forms:

1040, 1040A, 1040EZ - The "main forms"
 1040ES-Estimated Tax
 1116-Individual Foreign Tax Credit
 2106-Employee Business Expenses
 2119-Sale of Residence
 2210-Underpayment of Estimated Tax
 2441-Credit for Child and Dependent Care
 2555-Exclusion of Foreign Earned Income
 2688-Application for Additional Extension of Time to File
 3468-Investment Credit
 3800-General Business Credit
 3903-Moving Expenses
 4255-Recapture of Investment Credit
 4562-Depreciation and Amortization
 4684-Casualties and Thefts
 4797-Supplemental Schedule of Gains and Losses
 4868-Application for Automatic Extension of Time to File
 4952-Investment Interest Worksheet
 6198-Computation of Deductible Loss From Section 465 Activity
 6251-Alternative Minimum Tax for Individuals

6252-Computation of Installment Sale Income

8283-Non-cash Charitable Contributions

8453-Electronic Filing Declaration

8582-Passive Activity Loss Limitation

8606-Nondeductible IRA Contribution

8615 - Tax for children under 14

8801-Credit for Prior Year Minimum Tax

8814-Parent's election to report child's interest & dividends

Schedules:

A-Itemized deductions

B-Interest and dividends

C-Profit or Loss From Business

D-Capital Gains and Losses

E-Supplemental Income and Loss

F-Farm Income and Expenses

R-Credit for the Elderly or the Disabled

SE-Social Security Self-Employment Tax

- You enter the data directly onto the forms just like you would if you were using the forms from the IRS. If you need to change a number, you don't have to go looking for the white-out. If you need to provide additional data in the form of a detailed listing, you simply "double-click" on the entry box for the line item that you want to "itemize" and you get a supplemental schedule.

- If you use a personal financial management program or budgeting program like Quicken or CheckWriter II, you can import data from these programs. You can also import data from Excel and other programs.

- If you used MacInTax last year, Softview provides a "converter" program that will allow you to extract much of the information from last year's return and put it onto the 1990 forms.

- If you need help, you just "double-click" on the text for the line item that you need help with and you



will be presented with a dialog box that displays the "official" IRS instructions for that line.

- If you make a logic error such as entering a spouse's social security number while using a filing status of "single", MacInTax will alert you that an error has been detected. The error checking that is provided is quite comprehensive.
- If you have not completed all of the required entries on a form and you attempt to print your return, MacInTax will alert you that some data is missing. To find the form that the data is missing from, you simply look at the list of forms under each selection item on the menu bar. If the form name is in an **outline font**, the form is missing data. To find the missing data, you open the offending form and press "Option-return" or "Option-tab" and MacInTax will show you exactly where the data is missing.
- When you've entered all of your data, made all of those last minute changes and you're ready to print, MacInTax will print all of your forms and supporting schedules in a format that is acceptable to the IRS. All of the "official" forms look exactly like the ones printed by the Government Printing Office. You can even print blank forms for your friends and save them a trip to the library or local IRS office.
- If you're self-employed or you have to make quarterly tax payments for any other reason, MacInTax includes the ability to calculate

your estimated taxes and generate the payment vouchers for each quarter.

- If you have a refund due and you qualify for electronic filing of your tax return, MacInTax provides support for using the **SPEED>S** electronic filing service. This includes the necessary forms to apply for a Refund Anticipation Loan (RAL) if you just can't wait for that refund.
- The documentation is clear, concise, and well organized. It also contains plenty of good examples and pictures.
- Finally, if you want to fully automate your tax preparation, Softview provides supplemental state income tax preparation software for the following states and the District of Columbia: CA, NY, IL, CT, MA, NJ, OH, VA, PA*, MD*, MN*, and MI*. (Those marked with an asterisk are new for 1990.)

And some things could be improved...

One of the things that MacInTax is not very good at is helping you to determine which filing status you should choose when you have more than one choice. A specific example is Married Filing Joint (MFJ) versus Married Filing Separately (MFS). Frequently, users would like to be able to determine if tax savings will result from choosing one over the other. While MacInTax allows you to attribute income items such as wages and Schedule C income, there are other income items that it does not

allow you to segregate, and very few expense items can be segregated. As a result, if you want to compare the two filing types you may be required to enter portions or all of the same data up to three different times (once for you, once for your spouse, and once for the MFJ return).

Another problem with MacInTax, and other tax preparation software in general, is that some of the forms may be supplied in draft form or may be missing from the early releases of the software. Generally this problem is the result of the IRS making last minute changes to forms, but it may keep you from completing your tax return until you receive the "final" version of the software from Softview.

Finally, the "converter" program was missing from the first release of MacInTax for 1990. If you only prepare one set of tax returns per year, this is a minor nuisance. However, if you're a commercial preparer with the same client base year after year, the converter can be a real time saver. In defense of Softview, they did have a reasonable explanation for omitting the converter from the first shipment.

But for less than \$100 you can't go wrong...

Most mail-order vendors and discount software stores offer MacInTax for approximately \$75. Annual updates are generally priced at \$50. If your return is complex and you do it yourself, MacInTax is worth the money.

And it runs on almost all Mac hardware...

MacInTax requires a 512Ke, Mac Plus, Mac XL, Mac SE, or Mac II computer with either 2-800K diskette drives or 1-800K drive and a hard disk. The User's Guide does not specify the version of System software that is required, and the software is not copy protected.

As a final note, you can even buy a version of MacInTax that will run on "three letter" computers and their clones. At least they didn't change the name!

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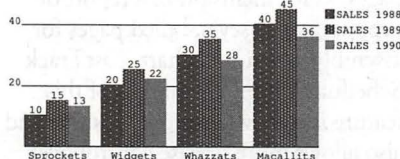
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Cheshire 1.0

by Dan A. Oren, M.D.

Not Quite in Wonderland!

Ever been in the midst of typing a paper and wanted to display your data quickly without having to leave your program and transfer to a chart making program? If so, Cheshire version 1.0 is the program for you. Packaged as an "INIT," Cheshire allows users of PageMaker, Microsoft Word, MacWrite II, and MacDraw II to have elegant charts at their instant disposal. Appearing and disappearing at the touch of a button, Cheshire adds one dialog box to your favorite application without your having to switch to a separate charting program or desk accessory.



Clearly, careful thought has guided the design of the program. From the first pages of the easy-to-use manual, the sophisticated graphics are enhanced by the inspiration of noted visual statistics commentator Edward R. Tufte, of Yale University. (*Ed.—Discriminating readers will recall that we reviewed, and raved about, Dr. Tufte's book, The Visual Display of Qualitative Information, in the September, 1989 Journal. Still do, for that matter.*)

After the simple installation procedure described in the manual, Cheshire is ready to do your business. Using standard mouse techniques you select the data (up to 64K worth) in your original document that you wish converted into a chart, then access Cheshire simply by hitting the "hot

key" or a combination of keystrokes that you designate. Within the Cheshire box, you then choose the type of chart you wish displayed (bar, column, line, surface) and the form of graphical wizardry you wish to express in portraying the data:

Like its namesake, Cheshire then disappears from view, leaving only its resulting chart.

What could the authors work toward in version 2 of Cheshire? More understanding that "the rest of us" who use the Mac do so because we choose not to need to keep track of arcane keyboard codes or options. The producers of Cheshire have failed to allow the Macintosh to work to its full potential by not taking full advantage of the graphical user interface. I suspect the feline icon of Cheshire is grinning because the program is almost—just about, but not quite—up to the usual Macintosh standard of simplicity. For example, it would be wonderful if there were some way to access the program using the mouse, instead of having to remember the access command. When I once changed the access keystroke for the program and forgot what I'd changed it to, I felt as dumbfounded in front of my Mac as I have felt in front of PC clones when I tried to remember obscure DOS commands.

Cheshire allows you to customize the charts you produce to use the full array of fonts, styles, and sizes that have been installed on your system. Most Mac programs allow users to select the Font Size to be used right off the menu. Cheshire 1.0, unfortunately, considers this a luxury and expects its users either to have LaserWriters or else to recall exactly what font sizes are available in the system. Those of us not

fortunate enough to have easy access to LaserWriters, however, are liable to find our chart reproduced on an ImageWriter with a font size that looks less than pretty.

A minor annoyance is that clicking the "OK" button in the program box fails to cause the chart you have selected to be drawn. The user must remember to double click on the name of the chart to induce any change in formatting or layout.

The "Help" screen is unimaginative. Though the window that follows when the help button is pushed dutifully instructs the user on taming Cheshire, it would benefit greatly from a table-of-contents or at least a dash of bold printing to highlight the section.

What's to smile about with Cheshire 1.0? A lot. The manual is well-designed and exceptionally useful. Every aspect of the program is described in clear and easy-to-locate terms. Each type of chart (21 to choose from in the initial package) portrays the data in words and pictures. Even better, the manual instructs the chart novice on when to use which charts. A valuable page of the manual is devoted to listing and resolving six of the error messages or problems you are may encounter when using Cheshire. Software writers will pounce at the "Developers Kit" bundled with the package. In detailed terms Cheshire allows corporations to write their own custom modules and to produce and sell their packages of Cheshire modules to allow even more forms of charts to decorate documents.

Despite its minor inadequacies, Cheshire will easily satisfy the needs of a Macintosh user who frequently relies on charts to highlight his/her publications. Version 2.0 will surely be even more satisfying. The authors have already promised to supply modules for constructing pie charts and other pictorials in future editions. For those willing to pay its high price, Cheshire appears to be the cat's meow.

Cheshire, from Abbott Systems, Inc., requires version 6.0 or later of the Macintosh System. Retail price is \$125.





Great GANTT and FastTrack Schedule

by Jeff Porterfield

Anyone who has submitted a proposal or has needed to track a project involving multiple tasks is probably familiar with the project management tool known as the Gantt chart. This tool portrays tasks involved in the project as bars on a timeline, with the starting and ending points of the bars representing the starting and ending times of the associated tasks.

While Gantt charts can be produced with any graphics software, such as MacDraw, this is a tedious and time-consuming process. Care must be taken to align the bars with their associated activities, and any revisions that cause an activity to be inserted, deleted, or changed so that it now occupies a different amount of vertical space will cause all following activities to require adjustment. Complicating these alignment problems is the unfortunate fact that with a LaserWriter, objects that appear

aligned with text on the screen may not be anywhere close on the printed output, necessitating tedious adjustments.

Enter Varcon Systems, Inc. and AEC Management Systems, Inc. with Great Gantt! (version 1.2) and FastTrack Schedule (version 1.5), two packages that promise to automate the process of producing these valuable charts. Both of these packages are available for under \$150. Either one of these packages can make your life easier if you need to create these charts on a regular basis. Either will accept data from MacProject, spreadsheets and a variety of other sources. Both accept data entry by drawing the bars or entering the start and finish dates and letting the bars be drawn by the software. Both feature several canned bar styles and endpoint styles and both allow customized endpoint symbols to be drawn. FastTrack Schedule also

permits symbols to be pasted from the Clipboard. Both programs allow bar styles to be customized, also, which should make compliance with any existing organization presentation standards a fairly simple matter.

Another feature to assist in maintaining presentation standards is the ability, present in both packages, to save and retrieve chart formats, as well as custom bars and endpoints. This prevents you from having to recreate any customized symbols for future charts.

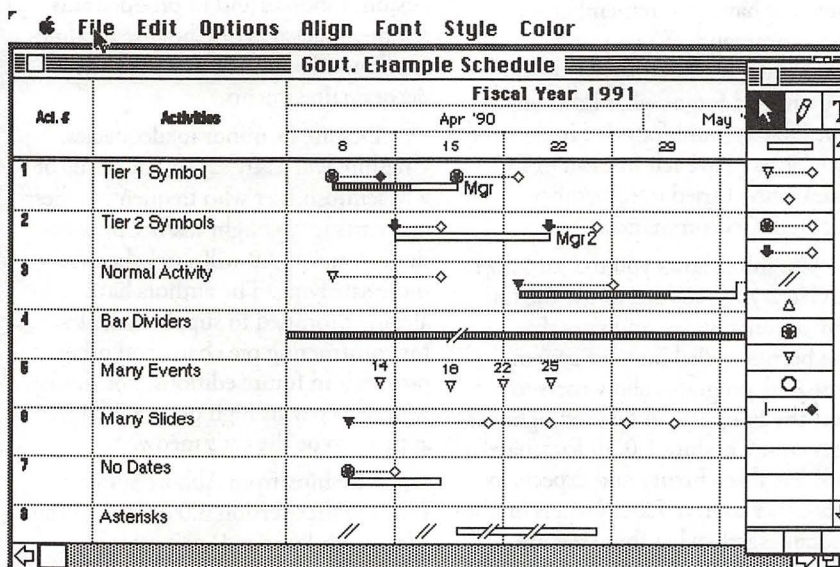
After a Gantt chart is produced with either of these packages, it is a simple matter to revise it by either changing the dates and watching the bars on the chart adjust themselves to reflect the changes, or by moving the bars with the mouse and letting the dates adjust themselves. Great Gantt! also has the ability to show both planned and actual start and end dates for an activity, thus enhancing its utility as a project tracking tool as well as a presentation tool.

Both packages offer the option to print your chart as several succeeding pages, as for inclusion in a report or proposal, or as several tiled pages for assembly into a wall chart. FastTrack Scheduler's implementation of this feature is somewhat more intuitive and also allows more precise control over alignment of the chart on the paper. Both packages, however, produce charts that are attractive and professional in appearance.

What I would like to see, possibly in future releases of either of these products, is the ability to save a chart in PICT or PICT2 format. This would allow still more customization for presentations, etc. Another improvement would be the use of more keyboard shortcuts, particularly for commonly-used features. Of course, you can do this yourself with MacroMaker or QuicKeys, but it would be nice to have it in the software, itself.

If you have a need to produce Gantt charts more than once or twice

(Please turn to page 38)



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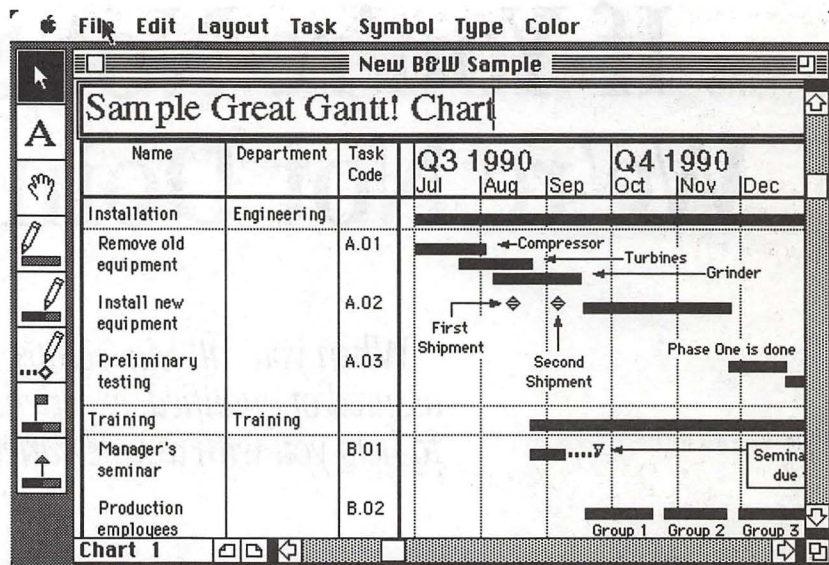
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(Continued from page 36)

in a career, then you should give serious consideration to one of these packages. The speed of production, ease of revision, and ease of customization make either one a bargain when compared with the time, tedium and frustration involved in creating them in other ways. If forced to choose, I would come down slightly in favor of FastTrack Schedule, mainly on the basis of their documentation, which is well-organized and more complete than that for Great Gantt! However, either of these tools would be a great help to someone who needs their specialized assistance.



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Easy Kana

by Robert Farquhar

Easy Kana, by HyperGlot Software Company, is an outstanding tool for learning to write and speak Hiragana and Katagana, two of Japan's three writing systems. The program is based on HyperCard 2.0 (included) and requires a hard disk drive and system 6.0.5 or higher. I used a Macintosh 512KE upgraded to 1 Meg of RAM and an Ehman 62MB hard disk drive. The program ran smoothly and I experienced no difficulties or bugs whatsoever.

The program is divided into two distinct halves, Hiragana and Katakana, and moving between the two is not easy. This is not a problem, however, since each writing system should be mastered independently or it is easy to get the two mixed up. Each half is divided into "writing," "Flash," "words," "worksheets," "history" and "using EasyKana" sections.

Writing

In the "writing" section you are provided a chart containing all of the characters. Selecting a character will move you to a card that demonstrates how the character is written, and how it should be pronounced. The voice of the native speaker used to pronounce each character was clear and easily understood and does not require any special sound equipment or add-ons.

Flash

The "flash" section is designed to give practice in recognizing and memorizing each character. From a main chart you can select groups of characters that will be used in the drills, and each character is presented in random order. In the drill a character is presented with its English equivalent, and there is a delay before the character is pronounced. This delay can be set in increments from "0" (no delay) to "5 secs" (approximately 5 seconds, depending on the speed of your machine) in order to accommodate a range of student levels. A drill can be stopped at any time by simply clicking the mouse.

The "word" section provides you with the ability to combine individual characters into words. An "orthography" button explains rules for creating words, and provides examples for each rule. Once again, groups of characters used in the drill are selected from a main chart, and all

cards used in a drill can be "browsed" before the drill. During the drill, characters are displayed and a rectangle is placed around each character as it is pronounced. Finally, the pronunciation of the entire word is provided. A "meaning" button is provided and, when pushed, displays a pictorial representation and English translation of the word. If you would like to review a difficult word later, a "mark to review" button is provided that will allow you to review these cards at a later time.

Worksheets and history

Worksheets provides sheets that can be printed out and used for practicing the writing of each individual character. An example of the character is provided along with a step-by-step guide as to how it should be written. History provides a quick history of Hiragana and Katagana, how each writing system evolved and how each is used today.

Using EasyKana

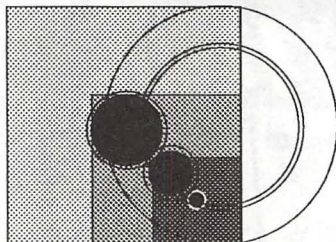
This section provides a guide on how to steps to use when learning each writing system.

I would highly recommend this program to those wishing to learn Hiragana and Katagana. In college I struggled with textbooks and work sheets while I learned Japanese. In fact, I never learned Katagana very well and plan to use this program to fix this.

I was struck by the quality of the graphics, sound, and layout of the cards, as well as how smoothly it worked. On-line help is always available, and you have to really work to get lost in the stacks (amazingly enough, something that I was never able to do!).

HyperGlot offers a variety of Macintosh and IBM foreign-language software in French, Spanish, German, Russian and Chinese. If these programs are as well designed as Easy Kana, they are well worth the price! I hope to eventually be able to get a copy of Kanji Master, a program for learning Kanji (the Japanese version of Chinese characters), and I will review the package if I am successful.

HyperGlot Software Company
505 Forest Hills Blvd.
Knoxville, TN 37919
(800) 726-5087 or (615) 558-8270



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- ☐ DISK & TAPE CONVERSIONS
- ☐ DATABASE MAINTENANCE



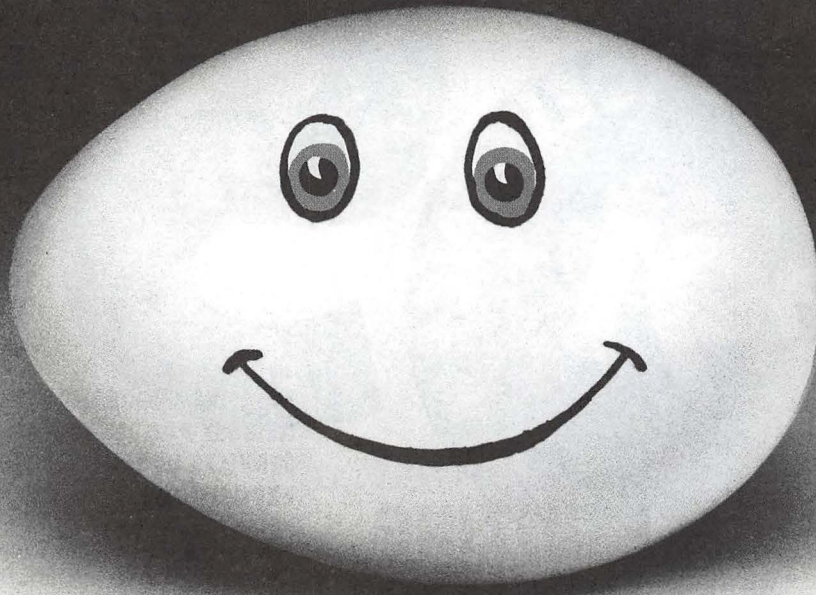
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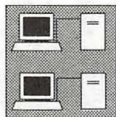


S O F T W A R E
V E N T U R E S

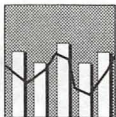
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**PERSONAL
COMPUTERS**



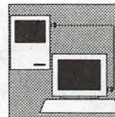
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Apple II/III

Apple II

GENERAL

John Wiegley after 2:15 (703) 437-1808
Leon Raesly (301) 220-0717

ACCOUNTING PACKAGES

BPI Programs
Jaxon Brown (301) 350-3283

BPI & Howardsoft (Tax)

Otis Greever (615) 638-1525

Dollars & Sense

Barry Fox (717) 566-6709

Home Accountant

Leon Raesly (301) 220-0717

Quicken

Gary Hayman (301) 345-3230

Apple SSC

Bernie Benson (301) 951-5294

AppleWorks

Ken DeVito (703) 960-0787

Ray Settle (301) 647-9192

Harry Erwin (before 10pm) (703) 758-9660

Gary Hayman (301) 345-3230

Leon Raesly (301) 220-0717

AppleWorks Database

Morgan Jopling (301) 721-7874

COMMUNICATIONS

ProTerm

Alan Levy (301) 340-7839

Talk is Cheap/Pt. to Pt.

Barry Fox (717) 566-6709

DataBases

dBase II

John Staples (703) 255-6955

dBase II&III, Data Perfect. Db Master-PRO

Leon Raesly (301) 220-0717

Profiler 3.0

Barry Fox (717) 566-6709

HARD DISKS

CMC (not CMS)

Barry Fox (717) 566-6709

Corvus & Omnet

Tom Vier (12N-6PM) (703) 860-4810

Corvus

Leon Raesly (301) 220-0717

Sider

Jaxon Brown (301) 350-3283

Otis Greever (615) 638-1525

LANGUAGES

Applesoft

Louis Biggie (301) 967-3977

Peter Combes (301) 251-6369

Leon Raesly (301) 220-0717

John Love (703) 569-2294

Integer Basic

John Wiegley after 2:15 (703) 437-1808

John Love (703) 569-2294

Machine

John Love (703) 569-2294

Pascal

Michael Hartman (301) 445-1583

C and TML Pascal

Harry Erwin (before 10pm) (703) 758-9660

OPERATING SYSTEMS

Apple DOS

John Wiegley after 2:15 (703) 437-1808

CP/M

Art Wilson (301) 774-8043

ProDOS

John Love (703) 569-2294

John Wiegley after 2:15 (703) 437-1808

ProDOS 8 and 16

Barry Fox (717) 566-6709

RWTS, Disk structure

John Wiegley after 2:15 (703) 437-1808

Print Shop

Thomas O'Hagan (301) 593-9683

SPREADSHEETS

General

Walt Francis (202) 966-5742

MagicCalc/SuperCalc2.0

Leon Raesly (301) 220-0717

Telecommunications

Allan Levy (301) 340-7839

TimeOut Series

Morgan Jopling (301) 721-7874

Utilities: ProSel

Barry Fox (717) 566-6709

WORD PROCESSORS

General

Walt Francis (202) 966-5742

Apple Writer II

Dianne Lorenz (301) 530-7881

Leon Raesly (301) 220-0717

AppleWorks GS

A.D. (Bill) Geiger (703) 237-3614

Letter & Simply Perf

Leon Raesly (301) 220-0717

Mouse Write

Barry Fox (717) 566-6709

Publish.It!

Gary Hayman (301) 345-3230

ScreenWriter II

Peter Combes (301) 251-6369

Gene Carter (202) 363-2342

Word Perfect

James Edwards (301) 585-3002

Henry Donahoe (202) 298-9107

Word Star

Art Wilson (301) 774-8043

Apple IIGS

Paul Tarantino (before 10pm) (703) 451-5608

Neil Laubenthal (703) 691-1360

FA.D. (Bill) Geiger (703) 237-3614

GENERAL

Barry Fox (717) 566-6709

//e Upgrade

Morgan Jopling (301) 721-7874

APW

Andy Gavin (703) 734-3049

Jim Frison (703) 532-8328

Leon Raesly (301) 220-0717

Deluxe Paint II

Rich Sanders (703) 450-4371

GS BASIC

Barry Fox (717) 566-6709

Multiscribe GS

Ray Settle (301) 647-9192

TELECOMMUNICATIONS

Dale Smith (301) 762-5158

Allan Levy (301) 340-7839

Bob Sherman (305) 944-2111

TimeOut Series & Utilities: ProSel

Chuck Ward bef. 9 pm (703) 830-3720

Barry Fox (717) 566-6709

VIP-Pro/Multibe

Jim Frison (703) 532-8328

816 Paint/Writ'rs Ch.El

Andy Gavin (703) 734-3049

Apple II Hardware Epson printers, hard drives,

Guy Durant (202) 363-0366

Wayne Meckling (301) 263-4053

Apple III

GENERAL (APPLE III)

Jim Jutzin (703) 790-1509

3 Easy Pieces

Robert Howe (916) 626-8198

David Jernigan before 9 pm (703) 822-5137

Word Juggler

Tom Linders (408) 741-1001

Charlene Ryan (703) 822-5137

Pascal

Charles Sykora (912) 729-2968

Powerkeys

Robert Howe (916) 626-8198

Diskwindow III+

Robert Howe (916) 626-8198

Apple Speller

Robert Howe (916) 626-8198

Beagle Buddies

MARYLAND

Ray Settle (Annapolis) (301) 647-9192

Scott Galbraith (Frederick) (301) 865-3035

W. T. Cook (Columbia) (301) 995-0352

Gary Hayman (Greenbelt) (301) 345-3230

Lee Raesly (Adelphi) (301) 220-0717

Allan Levy (North Potomac) (301) 340-7839

David Page (301) 599-7630

Don Avery (Bethesda/DC) (202) 362-1783

VIRGINIA

Kenneth De Vito (Alexandria) (703) 960-0786

Neil Laubenthal (703) 691-1360

MARCH

- 2 Saturday**
9:00 AM Tutorial (Microsoft Word)office
- 4 Monday**
7:00 PM PI-SIGcall
Editorial Deadline—April Issue
- 5 Tuesday**
7:00 PM Tutorial (Apple IIGS)office
- 6 Wednesday**
7:30 PM Mac Programmersoffice
- 7 Thursday**
7:30 PM dPub SIGPEPCO
7:00 PM Columbia SliceColumbia
7:30 PM GameSIGoffice
- 9 Saturday**
9:00 AM Annapolis SliceSeverna Park
9:30 AM Frederick SliceFrederick
9:00 AM Tutorial (Illustrator)office
- 11 Monday**
7:00 PM Tutorial (Mac intro)office
- 13 Wednesday**
7:00 PM Tutorial (PageMaker)Columbia
7:00 PM NeXT SIGNIH
7:30 PM Database SIG/4DComputer Factory
- 14 Thursday**
7:30 PM Board of Dir.'s Mtng.office
8:00 PM StockSIGoffice
- 16 Saturday**
9:00 AM Tutorial (MS Excel intro)office
- 18 Monday**
7:00 PM Tutorial (Mac intro)office
- 19 Tuesday**
7:00 PM Tutorial (Apple IIGS intro)office
- 20 Wednesday**
7:30 PM Excel SIGoffice
7:30 PM Fed SIGcall
7:30 PM HyperTALK SIGcall
- 21 Thursday**
7:30 PM AV SIGoffice
- 23 Saturday**
8:00 AM AppleWorks SIGbefore WAP Mtng.
9:00 AM WAP General Mtng.Beth. Ramada Inn
- 25 Monday**
7:00 PM Apple IIGS SIGMcLean (call)
7:00 PM Tutorial (Mac intro)office
Ad Space Deadline—May Issue
- 26 Tuesday**
Writers' Deadline—May Issue
- 27 Wednesday**
7:00 PM Tutorial (Microsoft Word)office
7:30 PM Apple III SIGoffice
Ad Copy Deadline—May Issue
- 28 Thursday**
7:30 PM Ed SIGcall

WAP General Meetings

Monthly General Meetings are generally held on the 4th Saturday; in February and March at the Bethesda Ramada Inn, 8400 Wisc. Ave. We are still looking for a semi-permanent "home" for the General Meetings. Requirements are: two meeting rooms, one holding approx. 50 people and the other approx. 250 people. Anyone with suggestions please contact Nancy Pochecko at the WAP office (301-654-8060 in Bethesda).

Come as early as 8:30 AM to join, buy public domain disks, schmooze. Attend the Q&A sessions to get your questions answered and hear the latest rumors. Listen to the main meeting topic at 9:30.

Meeting Notices

Annapolis Slice—2nd Saturday; Severna Park Library on McKinsey Rd(off Rt. 2) Severna Park, MD, 9:00am.

Apple IIGS SIG—normally the Monday after the regular WAP meeting; alternates between Dolley Madison Library in McLean and (NEW) NIH (building 31, C Wing 6th Floor, Conference Room 9) in Bethesda at 7:00 PM. Call Gary Hayman 345-3230 for information.

Apple III SIG—4th Wednesday; WAP office, 7:30 PM.

AppleWorks SIG—just prior to the regular WAP meeting at 8:00 AM.

AV SIG (arts and video)—3rd Thursday; WAP office, 7:30 PM. May be subject to change; call Nancy Seferian (202) 333-0126 to confirm.

Columbia Slice—1st Thursday; Jan. meeting at Mt. Hebron High School. Usually at the Howard County Board of Education Bldg., Route 108, Columbia, MD.

Database SIG/4D—Second Wednesday, 7:15 pm start (until about 9:30 or 10:15 pm); Mac-In-Office Training Room, 4th Floor, Brick Triad; 101 West Broad Street, Falls Church, Virginia; (Along Route 7 at the intersection with US 29/211—Free office parking lot abundantly behind the office buildings) (Via Metrorail, use *East* East Falls Church Metrostation. Call Eric Gutsche to confirm, (703) 379-1265.

March

SU	MO	TU	W	TH	FR	SA
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Meeting Notices

dPub SIG (desktop publishing) —1st Wednesday;
PEPCO Auditorium at 1900 Pennsylvania Ave., N.W.,
7:30 PM. Note March change: 1st Thursday!

Ed SIG (Educational programs) —4th Thursday;
WAP office, 7:30 PM.

Excel SIG—3rd Wednesday; WAP office, 7:30 PM.

Fed SIG (Federal)— 3rd Wednesday; alternates
between Falcon Training Center, 1745 Jefferson Davis
Hwy. Suite 502, Crystal City, and Apple Fed. Sys. Office,
1892 Preston White Dr., Reston, 7:30 PM. Call Jim
Manley (703) 490-1034 to confirm location.

Frederick Slice—2nd Saturday; at the library at 110
East Patrick St., Frederick, 10:00 AM.

GameSIG—1st Thursday; WAP office, 7:30 PM.

HyperCard SIG—currently dormant.

HyperTALK SIG— currently dormant.

Mac Programmers— 1st Wednesday; WAP office,
7:30 PM. No January meeting; next meeting will be Feb. 6.

NeXT SIG —meets 2nd Wed. of each month, NIH
Bldg 12A, Rm B51, 7pm. Call Hugh O'Neill, (202) 328-
9510.

PI-SIG —(Programmer's Interface) 1st Monday, 7:00
PM (except for Monday holidays). Call Ted Meyer (703)
893-6845 for date, time and location.

StockSIG —2nd Thursday; WAP office, 8:00 PM.

Telecomm SIG—currently unscheduled.

Notice: Anyone having information on changes to the
WAP calendar is requested to call the Calendar Editor at
home (301-595-2539, in Beltsville) or Nancy Pochepko at
the WAP office (301-654-8060 in Bethesda). E-mail can be
left at: Andy Shaw, Twilight Clone BBS.

APRIL

1 Tuesday
7:00 PM



PI-SIGcall
Editorial Deadline—May Issue
Ad Copy Deadline—May Issue

2 Wednesday

7:30 PM
7:30 PM

dPub SIGPEPCO
Mac Programmersoffice

3 Thursday

7:00 PM
7:30 PM

Columbia SliceColumbia
GameSIGoffice

9 Wednesday

7:00 PM
7:30 PM

NeXT SIGNIH
Database SIG/4DComputer Factory

11 Thursday

7:30 PM
8:00 PM

Board of Dir.'s Mtng.office
StockSIGoffice

13 Saturday

9:00 AM
9:30 AM

Annapolis SliceSeverna Park
Frederick SliceFrederick

16 Wednesday

7:30 PM
7:30 PM
7:30 PM

Excel SIGoffice
Fed SIGcall
HyperTALK SIGcall

17 Thursday

7:30 PM

AV SIGoffice

24 Thurs



Ad Space Deadline—June Issue
Writers' Deadline—June Issue

27 Saturday

8:00 AM
9:00 AM

AppleWorks SIGbefore WAP Mtng.
WAP General Mtng.CALL!

29 Monday

7:00 PM
7:00 PM

Apple IIGS SIGMcLean (call)
Tutorial (Mac intro)call

April

SU	MO	TU	W	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Macintosh

GENERAL

Jeff Alpher to midnight (301) 630-2036
Shabtai Klein (301) 270-2250

Art & Video

Nancy Seferian (202) 333-0126

Borland Products

Doug Ferris day only (800) 826-4768

DATABASE PROGRAMS

Fourth Dimension

Bob Pulgino (301) 474-0634

Peter Yared (301) 564-1560

FileMaker II

Tom Parrish (301) 654-8784

Mort Greene (703) 522-8743

Paula Shuck bef. 10pm (301) 621-5549

Helix

Jim Barry to midnight (703) 662-0640

Harvey Levine (301) 299-9380

Double Helix

Paula Shuck bef. 10pm (301) 621-5549

MS-File

John Love (703) 569-2294

John Spencer (301) 730-1084

Mort Greene (703) 522-8743

Omnis 3 & 3+

Paul Tabler (703) 278-8657

Jeff Alpher to midnight (301) 630-2036

OverVue

J.T. Tom DeMay, Jr. (301) 461-1798

Tom Parrish (301) 654-8784

Pro-Cite

Elizabeth Mangan (703) 750-2710

DESKTOP PUBLISHING

General

Frank Potter bef. 9 pm (703) 620-8886

Jay Rohr (301) 655-0875

Freddi Galloway (V/TTY) (202) 234-5837

ReadySetGo

Jim Graham (703) 370-5737

Marty Milrod (301) 464-5981

Freddi Galloway (202) 234-5837

PageMaker

Mort Greene (703) 522-8743

Quark Xpress

Ron Mann (202) 333-3409

GRAPHICS

General

Bill Baldrige (301) 779-8271

Jay Rohr (301) 655-0875

Adobe Illustrator

Ling Wong (703) 378-5102

Canvas

Bill Baldrige (301) 779-8271

Tom Parrish (301) 654-8784

MacDraw

Tom Berilla (301) 434-3256

Tom Parrish (301) 654-8784

John Spencer (301) 730-1084

ImageStudio

Mort Greene (703) 522-8743

SuperPaint 2.0

Mort Greene

(703) 522-8743

VideoWorks

Mort Greene

(703) 522-8743

Inside Mac

Jon Hardis

(301) 330-1422

John Love

(703) 569-2294

LANGUAGES

Pascal

Michael Hartman

(301) 445-1583

MS BASIC

John Love

(703) 569-2294

SPREADSHEETS & CHARTS

General

David Morganstein

(301) 972-4263

Bob Pulgino

(301) 474-0634

Tom Cavanaugh

(301) 627-8889

Excel

David Morganstein

(301) 972-4263

Mark Pankin

(703) 524-0937

Jim Graham

(703) 370-5737

Dick & Nancy Byrd

(703) 978-3440

Bob Pulgino

(301) 474-0634

Tom Cavanaugh

(301) 627-8889

Paula Shuck bef. 10pm

(301) 621-5549

Kirsten Sitnick

(301) 750-7206

Mort Greene

(703) 522-8743

WingZ

Kirsten Sitnick

(301) 750-7206

MultiPlan

John Boblitz

(301) 356-9384

John Love

(703) 569-2294

TELECOMMUNICATIONS

General

Allan Levy

(301) 340-7839

CompuServe

Michael Spelske

(301) 949-0203

WORD PROCESSORS

Microsoft Word

Marty Milrod

(301) 464-5981

Harris Silverstone

(301) 435-3582

Tom Cavanaugh

(301) 627-8889

Freddi Galloway (V/TTY)

(202) 234-5837

Kirsten Sitnick

(301) 750-7206

ThinkTank-More

Jim Graham

(703) 370-5737

Tom Parrish

(301) 654-8784

Hebrew Word Processing

Tim Childers

(301) 997-9317

WriteNow

Bill Baldrige

(301) 779-8271

WordPerfect—Mac

Curt Harpold

(202) 547-8272

Microsoft Works

Amy Billingsley

(301) 622-2203

MISCELLANEOUS

MacMoney

Chuck Sicard

(301) 963-2879

MacProject

Jay Lucas

(703) 751-3332

Norbert Pink

(703) 759-9243

HyperCard

Rick Chapman

(301) 989-9708

File Transfer

Mort Greene

(703) 522-8743

Backfax

Mort Greene

(703) 522-8743

HyperCard Scripting

Jamie Kirschenbaum (eves)

(703) 437-3921

General

Games-Apple II

Charles Don Hall

(703) 356-4229

John Wiegley after 2:15

(703) 437-1808

IBM

Leon Raesly

(301) 220-0717

Math-OR Applns

Mark Pankin

(703) 524-0937

Modems-General

Allan Levy

(301) 340-7839

Hayes Smartmodem

Bernie Benson

(301) 951-5294

Practical Peripherals

Allan Levy

(301) 340-7839

Printers-General

Walt Francis

(202) 966-5742

Leon Raesly

(301) 220-0717

MX-80

Jeff Dillon

(301) 662-2070

Stat Packages

David Morganstein

(301) 972-4263

Stock Market

Robert Wood

(703) 893-9591

MS/DOS

Tom Cavanaugh

(703) 627-8889

Dvorak Keyboard

Ginny & Michael Spevak

(202) 362-3887

Frederick Apple Core Help Line

Please limit calls to reasonable evening and weekend hours and never after 10 P.M.

Oscar Fisher

(Frederick)

694-9237 Apple //

Dick Grosbier

(Frederick)

898-5461 Apple //, GS, & Mac

Harold Polk

(Frederick)

662-6399 Apple //

Tony Svajlenka

(Frederick)

694-6209 Apple //

Doug Tallman

(Frederick)

663-3268 Mac

Scott Galbraith

(Monrovia)

865-3035 Apple // & GS

Stephen Hadley

(Mt. Airy)

831-5353 Mac

R. Carl Myers

(Smithsburg)

824-7122 Mac & GS

On the Trail of the Apple III

by David Ottalini

Apple III SIG Co-Chairman

Meetings

I need your help to determine if it is worth continuing our monthly meetings, or try to cut them back. Attendance over the last 6-8 months has been poor. There have been meetings where just I or Jim Jutzin were the only ones to show up.

I know from the surveys that you like the Journal and the PD. But the meetings are of less importance. Part of it is our location. It is difficult for our Virginia members to come to Maryland for a meeting, even if it is once a month.

And I realize that we don't do a very good job about preparing programs. Frankly, without someone willing to do that job, it's just not in the cards for Jim or me to try and put together a whiz bang program every month.

If you have any thoughts about our meetings, please let Jim or me know. Due to the war, I was unable to attend the January meeting and don't believe anyone else attended. We'll see how things go through the Spring to see what our SIG members might have to offer as alternatives. Frankly, it might just be fun to have one meeting during the Summer for everyone to simply get together. Think about it and give Jim or me a call or drop us a note at the WAP office.

On Three notes

Couple of notes from On Three. They have run out of 512K upgrade kits and are not taking names on a waiting list. Bob Consorti apparently needs 100 orders to have the boards manufactured, so if you are interested, please call On Three at 206-334-8001

to place your name on the list. Speaking from experience, the 512K upgrade is one of the best things you can do for your III.

Also, On Three is also out of StemSpeller, the only Apple III program that can spell check III EZ Pieces word processing files directly. Prospects for getting more from the Australian publisher are not good. Your alternative here is to get Apple Speller III from Sun Remarketing (1-800-821-3221). Print your III EZ Pieces word processing file to disk as an ASCII file, and then load it into Apple Speller for checking.

Speaking of Sun

That 800 number is now a 24 hour order line number for your convenience. Unfortunately, the last two catalogs I've gotten have not even mentioned the III. Despite that, Sun continues to support the III by offering repair services and sales of hardware and some software. Get on their mailing list (as well as On Three's) if you haven't already.

Interesting words

I'm always looking for comments about our III. Lavona Rann, of the Third Apple User's Group in the Windy City had this to say recently on CompuServe:

Learning Messy-DOS reminds me of the old III days. It is a lot more like SOS than I had thought. AND learning text editors reminds me of my first experiences with the original AppleWriter. I went out and bought software right away to make it a little more user usable (not friendly). Poor Sara, one wonders what she would have been if her first name had been

IBM. Or, on the other hand, IBM had not decided to enter that market. The more I see of DOS 3.3, the more I believe the people just starting out with III's are better off than I had thought.

Printer questions

Always of interest to Apple III users, the question comes up frequently during Hotline calls. There were some recent comments about connecting two printers (A Qume Daisywheel and the original Imagewriter printer) on an Apple III on CompuServe, which our good friend Ed Gooding answered:

You will need a modem eliminator cable for your Imagewriter. And you can use a T-Connect (also called an A-B Switch) as well. You would connect the modem eliminator cable to the serial port, then connect a serial cable from that to the T-connect. Connect two cables from the T-switch to your two printers and you will be in business. You will want to use separate printer drivers for the two printers, though. I use the version 1.3 serial printer driver for both. The Imagewriter is set up for 9600 baud, 8 bits, no parity, and the Qume is set up for 1200 baud, 7 bits. I named the Imagewriter driver .PRINTER, as it is my default printer, and named the Qume driver .QUME.

Since I pretty much only use my Qume from Applewriter, I set up my SYS.PRT file to direct print to .QUME. If I want to print a draft, I can redirect my output with the PD command. I also have a print control file set up named IMAGE.PRT that I can load in with different margins and such so I can quickly print a draft, edit, switch back to the Qume, and print a final. If you have Macro Mgr., you can set up macros to make this very easy to do. If you use your Qume more than your IW, then you may want to make the Qume driver .PRINTER, and the IW driver .IW.

By the way, your III SIG PD library has a double-sided disk full of drivers (3UTIL-04), including the Imagewriter and Qume drivers.

In the public domain...



APPLE III

This month, I'm happy to announce EIGHT new disks. They all fall under a new category in our Public Domain: Pascal. We've basically tried to gather all the latest Pascal language disks we could find that you might be interested in. In fact, a knowledge of Pascal is really required for you to really work with these disks.

The WAP PD library has all the Pascal manuals which you can take out if you're interested. In fact, we have a number of extras you may have for the asking. Now for the disks:

3PCL.1 is the Pascal 1.2 Interp and associated files. It is NOT self-booting. 3PCL.2 has the Pascal 2.0 Compiler and Toolkit #1. 3PCL.3 has the Pascal Toolkit disks 2 and 3. 3PCL.4 has the Pronto Debugger and SANE disk #1. 3PCL.5 has SANE disks 2 and 3. 3PCL.6 has SOS I/O and ExerSOS examples (this disk is self-booting). 3PCL.7 has Pascal Utilities and the Putdemo and Putlib

demos. And finally, 3PCL.8 has Wade's Pascal Patch for Pascal 1.2 (allows you to put 1.2 onto a hard disk) and a PCode Dissembler.

We do have earlier versions of Pascal, and if there is interest, we'll put those into the PD as well.

By the way, if you are looking for a good tutorial on Pascal, I can recommend Elliot Koffman's "Pascal, A Problem Solving Approach" as a good way to get started.

In the future, we'll add Fortran and some other languages too, so stay tuned. Also on the agenda, some foreign language drill disks, a great program by our own Jim Salerno that was designed to keep bowling scores, yes that Star Trek disk and much more.

Used computers

Following up on a previous column, I've found one company

locally that offers to help to buy or sell a used computer. It's called ComputerRecycler Classifieds. A recent ad in the Washington Post says its a "unique on-line system to access listings for all makes and models" of computers. Phone number is 301-858-7050 or if you have a modem the number is 301-858-7094 or 301-626-8682.

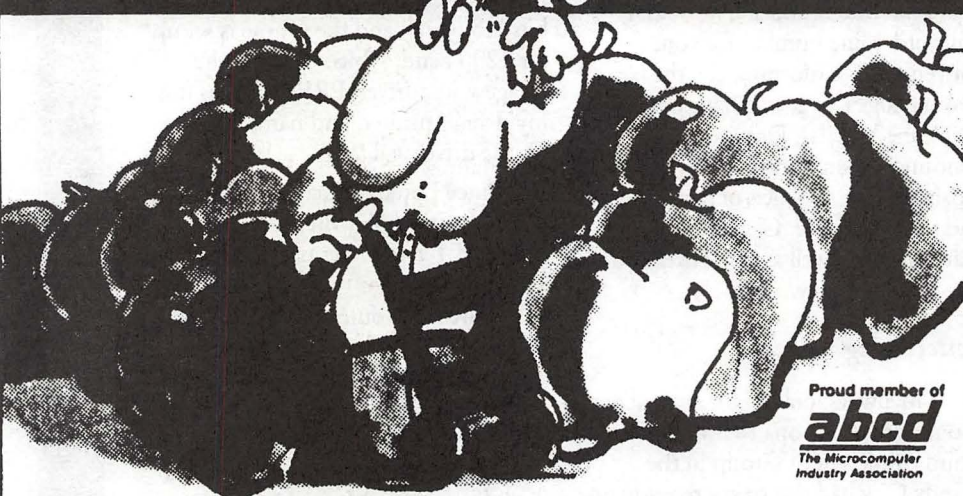
I haven't had a chance to check into these folks, but will report to you more fully in a future Trail column.

Finally

My 4 year old (this month!) really enjoys this game, which I adapted from an Apple II program. It's a simple drawing program that requires an Apple III joystick and is much like an Etch-A-You Know What.

```
10  INVOKE".D1/BGRAF.INV"
20  OPEN#1,".GRAFIX"
21  PERFORM RELEASE
22  PERFORM INITGRAFIX
30  PERFORM
GRAFIXMODE(%1,%1)
40  PERFORM
PENCOLOR(%15):PERFORM
FILLCOLOR(%9)
50  PERFORM FILLPORT
55  PERFORM GRAFIXON
60  Y=PDL(1)*.74902:REM
192/255
80  X=PDL(0)*1.09804:REM
280/255
90  PERFORM
MOVETO(%X,%(191-Y))
100 IF BUTTON(0)>0 THEN
GOTO 50
105 IF BUTTON(1)>0 THEN
GOTO 50
115 ON KBD GOTO 170
120 Y=PDL(1)*.74902
140 X=PDL(0)*1.09000:REM
SMOOZED A BIT FOR RIGHT
EDGE OF SCREEN
150 PERFORM
LINETO(%X,%(191-Y))
160 GOTO 100
170 IF KBD=27 THEN GOTO
50:ELSE GOTO 300
300 TEXT:HOME:PERFORM
RELEASE
310 CLOSE#1:END
```

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InWords

by Lee Raesly

Hmmmm. How to do this review... I know...InWords, Great Program. Fabulous, Go buy InWords, NOW! Oh, I'm supposed to say more? But that says it all.

I should talk about their Tech Support? Great Tech Support. I located a bug in InWords (if the font table was larger than 7 blocks, it would lock up the next time you booted, with lost variables, etc.) and called them. The President, John Oberrick, (with whom I had talked several times before on other matters) said they knew about it, and an update was being sent to all registered users about February 15th 1991 and was I registered? I told him no, and he registered me on the spot. He also gave me a work-around until my update comes in. Go buy InWords, NOW!

Any bugs? Well, two, but they have fixed them and have a FREE update shipping the first of March to all registered users. Great update policy. Go buy InWords, NOW!

Is it fun to operate? Terrific. Great fun. You mean I still have to say more in the Review? Well, does it scan well? Terrific with printed copy. Oh, you don't really have a need for it? So what? It is fun to operate. Purchase InWords just to play with it. Say more in the Review? How about new and different font tables that you want to use? InWords has a terrific Teach mode, teach it all the new font types and styles you want. Go buy InWords, NOW!

Still more? Well, can it do columns or whole sheets? Either. The column mode works great, and the wide (Merge) mode is beautiful to

watch. You scan the left side in a Merge scan, then the right side, and InWords puts it back together as a single, wide, column of text. Go buy InWords, NOW!

I would much rather write about the "Tips and Techniques" part of this article, but I guess I am going to have to do the review part. Blast. Oh, well, relax and enjoy it, Lee. Let me start at the beginning....

InWords is a software package and requires the use of the Quickie Hand Scanner. No, that is not quite right. InWords requires the use of Vitesse's Quickie interface card. Perhaps I had better clarify that.

Vitesse sells the Quickie Hand Scanner (and the Thunderscan people sell the Lightening Hand scanner). Each has their own interface Board, which is quite different. The scanner head is actually an Omeron 1700 made by some company in Japan. It is a delightful unit with itty-bitty lights and cells that allow dark or light images to send something back to the interface board (don't you just love this technical talk? <grin>). These signals are interpreted by the interface board, and the software operating the board creates a graphic image in the computer (either a Apple][+, //e, or IIgs - sorry, not able to put a board in an Apple //c).

By the way, the Omeron 1700 scanner is also available for an IBM (or Clone) from different companies. Although none of the software results are as good as on any Apple // (especially OCR) from what I've seen.

So you need the Quickie interface card and the Quickie Hand Scanner (or the Lightning Hand Scanner). How can that be? I've already indi-

cated that BOTH Scanner Heads are really the Omeron 1700. In fact, if you had an IBM model Omeron 1700 hand scanner (such as Logitech's Scanman Plus), you could use that, AS LONG AS YOU HAD THE QUICKIE INTERFACE BOARD AND SOFTWARE.

So if you had purchased the Lightning Hand Scanner, Vitesse will sell you a separate board and software only for about \$125. This is the Quickie Update kit you may have seen by some mail order houses at about \$95. It does not update the Quickie, it updates the Lightening Scan scanning head to be a Quickie. This will even UPDATE the Lightening Scan MAC scanning head to be a Quickie, and then you could purchase the InWords OCR software.

Since this is supposed to also be a review, I guess I am going to have to tell you more about how the software operates. Then I can get on to the fun part.

Setup

When you first boot InWords, it asks you your name and your company name (doesn't everybody have a company laying around somewhere, ready for when you need one?). It then records this information and presents the Main Menu. From this point on, whenever you boot the program, it tells you who you are and that it is registered to you. It does make pirating more obvious.

The Main Menu offers you the following options:

1. Scan
2. Edit
3. Save File
4. Fonts
5. Setting
6. Quit

You can move up or down the list with the up or down arrows on your keyboard. The first option is Scan, so let's talk about that next. When you select Scan (by highlighting it, then depressing RETURN) it presents you with the Scan options menu. These are:

1. Standard scan

(C) 1991, Leon H. Raesly



2. Merge scan
3. Column scan
4. Font training
5. Recognition precision
6. Continuous display
7. Append to file
8. Font table

Now it seems to me important to understand a little more what InWords does in its process. When you scan a document in ANY of the scan modes, it creates a Double High Resolution (DHR) image, just like the Quickie 8-bit program does. It is this image that is than "scanned" by the software for patterns of dark image that it can recognize. It compares this located dark image spot to the font table that is stored in memory. If it finds a match, it places that character in the text file (in memory) appending it to the text information from a previous scan or creating a new file and placing it there. Which operation it does depends on setting number 7, "Append to file". If it is set to "Yes" it appends it; if set to "No", it creates a new file in memory and places the info there. It is important to note that this does not save it to disk, that is a separate step which you handle from the Main Menu.

Now, a word about the scan modes. Standard scan is just that. It just scans the document, no special attributes. I have not found this too useful in my scanning since I am more often working with either text in columns or text wider than 3.5 inches (the maximum scan width at 400 DPI (dots per inch). At 300, 200 and 100 DPI, the maximum width is 4 inches.

The option 2 is the "Merge Scan" mode. This is useful for material that is wider than 3.5 inches up to a maximum (at 300 DPI) of about 7.5 inches. You must have an overlap of at least 1/2 inch in the Merge scan mode for the blending back together of the separate scans to work. The wider the overlap, the more accurate the blending.

Option 3 is the "Column Mode". Here, the software reads the column you are scanning and separates it from the next column to the right (or 1/2 column to the left). In most of my scanning, this is the one I use. If the

portion of the left column is too big, the software gets confused; and it interprets the partial left column, instead of the complete column on the right.

What I usually do to prevent this, is to place a sheet of paper over the unwanted left column and then scan. Hey, I got a tip in! Wow, didn't have to wait until I finished this review portion. Terrific. Oh, well, on with the REVIEW.

The "Teach" option (number 4) makes this OCR software extremely powerful. Although it comes with about 7 resident font tables, for most of your scanning you will probably want to teach it new font tables. I know this as I have done that extensively.

The recognition precision is just that. How precise do you want the match to be between the font table image and the identified character image in the DHR graphic to be. The default is 50%, and the manual suggests 80% for teaching a new font table in the Teach mode. Higher settings give more unrecognized characters which results in more "unknown character" entries in the final file (the default unknown character marker is a tilde ~) while lower settings have more erroneous characters in the final file.

Continuous display is fun to watch, since it displays each potential character with a little gray box on the screen. If it recognizes the character, you see it appear in the text file at the bottom of the screen, and then highlights the next potential character, and so on; but it dramatically slows the process. Do it continuously at least once to watch it, then turn it off for all your scans.

"Append files" will usually be set by you to "Yes" (the default is "No"), and the "Font tables" option lets you change fonts or tell it to create a new one.

The next "Main Menu" setting is "Edit". What it means is "Edit a text file" that you have created. Here, all the commands will seem familiar. They are the AppleWorks commands.

Currently, there is no option to load a previously created file back into memory, but then, I don't know why you would want to, just use AppleWorks or any text file editor.

At the Main Menu, the next choice is "Save file". It does just that, saves a text file in memory to disk.

Fonts

This is a second way to change your current font table (the first has already been described as a part of the "Scan" options.). You have four choices: 1. Font table (where you can select a previously created font table or create a new one). 2. Save font table (save your current font table in memory to disk for later use again). 3. Delete a font table (which allows you to do that). 4. Edit a font table. Here it shows all of the font characters in the table and allows you to delete (as described below).

The next item is "Settings". Here you can do lots of neat things like: Change to unknown character default, tell it to list a summary, automatically save the font table (not a good choice) and many others.

InWords will not scan draft mode of dot matrix printout. At least, not with the current version. Well, it says it won't but check the techniques below for ways to allow you to scan better than 80% of the copy.

Now that I have finished the review, let me talk some about Tips and Techniques for Xeroxed copy and other poor originals. When you first get InWords, I think it is important to do their tutorials. This will give you a good sense of what it can do with good printed copy, before you start on your own material, which is usually not near as good in quality.

Let me talk about the principles of scanning in general. You can be disappointed if you are not aware of the entire process. Only if you are scanning perfect printed or gravure originals can you scan and forget it. Anything else (even newspaper print is smudged) cleanup is an integral part of the scan. Cleanup generally involves two steps: First in the Word Processor

program, second with a Spell Checker.

The best way that I have found for teaching InWords a new font table with Xeroxed copy is to scan (in Teach mode) and save it to disk as a text file. Then load it in your AppleWorks program as a text file. At this point, print it out. Now visually examine your printout for obvious errors. For instance, I somehow got an "m" and "o" confused in my scanning. So I had repetitive errors of mf (No, NOT what you were thinking, shame on you. <grin>) instead of what it should have been, of as in of. It is very easy to then do a global search-and-replace for space-mf-space and replace with a space-of-space. Some other errors which repeated regularly was the letter m for the letter n. As in grim for grin. Again, fastest fixed with the global search-and-replace feature of AW, rather than using QuickSpell.

If you remember that cleanup and spell checking is an integral part of scanning, you will save yourself a lot of disappointment and frustration. When you scan for a new font table, you place it in the Teach mode. As it learns the new characters, it asks you less and less what the characters are. Really neat.

Another important item not covered strong enough in the documentation: CONTROL-RESET is not the terrible thing we generally think it is. Put it this way: the software may often lockup when interpreting the graphic. A horizontal bar, for instance, still tends to drive it nuts. So don't think of a lockup when interpreting, think of it as an extended pause. Then CONTROL-RESET not as CONTROL-RESET, but rather as a restart. This way you will feel more comfortable in using CONTROL-RESET as a restart for the software. They have completely trapped it, so you don't lose anything. Variables are still there, the text file you were working with is still there, even the DHR graphic image is still there. If it goes into an extended pause while interpreting the graphic, first do an OA-SPACE BAR to see if you can skip the trash; if not, then CONTROL-RESET and continue with your work.

Now back to more tips.

InWords has a mode for multiple characters: i.e. two or more characters are touching or connected. When it shows you this on the screen (a little gray box highlights the multiple characters) you depress OA (Open-Apple) M (or OA-m will also do) and then enter what the multiple characters are. You may enter up to 12 characters. You then depress the RETURN key, and it adds them to your font table in memory. You can then save that table under a new name, and you have increased your library of font tables you may use.

I like their idea of naming the font table according to the source documents. It is much easier to remember "Scarlet" as the source the next time you go to scan, than try to decide what font type it is and what size.

If you choose "Edit a Font Table", there you will find the expanded list of characters to look something like this:

a
ai
aim
ab
abo

and so on. Listed alphabetically, including in alphabetical order, the multiple characters you have taught the font table.

Now in the example I gave above—of "mf" being scanned instead of "of"—there is a further step to clean up the font table. After you locate the errors and do the find-and-replace, you would reboot the InWords program; and go to "Edit a Font Table". Here, go to the letter "o" and delete all entries. Then go to the letter "m" and delete all characters again. Then look for "mf" as a multiple character; and if it is there, delete all characters. OA-D does this very well. The final step is to see if there is a multiple character there of "of". If so, delete these.

What you have done by deleting these characters from the font table is to clean the table for your next use. If you had other letters or combinations that repeatedly scan wrong, delete these combinations. The next time you use that font table, use it in the Teach

mode so that it will get these letters more precisely. You are basically removing known errors from the font table.

Generally, I always scan in the "Teach" mode if I am scanning Xerox copy. First, if I do a regular scan, it will take me about the same amount of time to "clean up" the marked missed words as the Teaching time. Second, using the Teach mode expands the multiple characters that it recognizes.

Although the manual suggests scanning at 300 DPI, I have found it more effective in the Teach mode to scan at 400 DPI if possible. This way, the space between characters is magnified, and there are less multiple characters; hence, in the Teach mode, the scan goes faster.

If you use the scan mode, instead of the Teach mode, you may want to either change the default for the unknown character or do a global replace when you get to the AW cleanup part. The default is a tilde (~), and the spell checker sees this as the end of a letter. So if the tilde is in the middle of a word the spell checker will truncate the word and then try to find a suggestion for 1/2 a word.

I use the numeral 4 to replace the tilde as the unknown character marker, and then configure the spell checker to use words with numbers. I use the numeral 4 since it stands out better than any other number, i.e. a 1 can be overlooked as an l, etc. One advantage of QuickSpell is that it shows you the words as all capitals. Compare these two words: altogether & a1 together. Confusing, aren't they. Now compare these two words: ALTOGETHER & A1TOGETHER. See what I mean?

Let's get back to Teaching the software. If you are working with good, clean (look at it under a magnifying glass, do letters touch?) PRINTED copy, you can first Teach a small font table of single characters; but if it is smudged or Xeroxed, you will build a large table full of multiple characters. Some of my more smudgy Xeroxed sources can build a table of 30-35 blocks full of multiple characters. However, once the font table has been built, future scanning is very nice



and fast.

Also, when scanning Xeroxed copy, I always change the recognition preciseness to 100%. Actually, although the table says 100%, it is not nearly that precise. It is just 100% of what the software is capable of doing. While this will increase the number of multiple characters, it also lessens the errors and makes later cleanup easier and faster.

In terms of this "100%", the algorithm includes what John calls "hints" (or approximations) of many letters. Thus, you will sometimes see the software enter a letter in the text file that you know you haven't "Taught" it yet. And that is so. It compares the "hint" in the algorithm to the shape it is attempting to interpret, and gets a recognition, and enters it. And usually accurately, as well.

A very important setting in this process is the Light-Dark setting on the Quickie. The tiniest nudge can make a great deal of difference in the number of connected characters; or, in the other direction, the number of broken characters.

There is, with the Quickie, what Gary Hayman likes to call a "parallax" error. It is really a sort of sloppiness in the movement of the wheel. SO, always move the wheel in one direction only. If you need to go in the other direction, go quite a bit; and then come back towards your starting point. Actually, I never move the wheel with my fingers since such a small movement can make a big difference. I use a pen tip to make the movements.

This brings up another point. When you are handling the scanner, it is very easy for your fingers to brush the wheel and change your light-dark setting. Be very careful about this, because you could even find different parts of the graphic image have been scanned at different light-dark settings giving you unreliable (at least unreproducible) scans.

As a part of a Teach mode, you should never accept into the font table broken single characters. You have two options. If you are scanning to just

teach the font table, but are not going to use the text file (article), then throw away the character. OA-SPACE-BAR does this. However, if you wish to keep the text file and use it, then you can depress OPTION-CHARACTER (depress the OPTION KEY, and while holding it down, depress whatever character it really is). This will insert the character into the text file, while NOT inserting the character in the font table. For multiple characters that you do not want to Teach, depress OPTION-RETURN. Again, it will enter them in the text file, but not the font table.

What type of characters would you NOT want to enter into the font table? Broken letters. Like: 1/2 an "a", an "o" with the top open (confusing the table with a "u"), One for sure not to scan in is an "i" (that's a lower case letter "i") without the dot over it., some multiple letters that are so blurred that you have to check the original document to see what they were. These will all make a messy font table and give you lots of errors in later scans.

Now for some techniques that WILL let you scan draft mode of dot matrix printing. Let's talk about the difference in Near-Letter-Quality (NLQ) of dot matrix printers, and the draft mode (even assuming a good, dark ribbon for both). In the draft mode, a close look at the characters will show that it is made up of a series of dots, each totally separate from the other dots. Thus, the character is really NOT a single character, but a series of dots representing a character. In Words cannot interpret this. However, with the NLQ mode, the printer moves the print head 1/64 of an inch and prints again. Thus, the space BETWEEN the dots are filled in. What you get now is a recognizable single character to In Words which it can be taught to recognize. The problem is that most information sent is usually in the draft mode, so what we need is a way to blur the dots so they run together.

There are two ways to go about this. The first is to use the nature of a Xerox copy to "fill in" the characters (you know, what causes you to get

multiple characters from Xeroxed copy). Right. So turn the dark-light setting on your Xerox machine as dark as you can (just before you begin getting dark smudges on the paper copy). Now the letters will be filled in, and you will be able to scan most of them.

To make the Xerox copy have even more solid characters, spray it lightly (VERY lightly) with a clear acrylic spray. You can usually get this at most aerosol paint displays in most drugstores, hardware stores, art supply stores, etc. Spraying this way makes the copy darker and will further "connect" the dots in the character. Try it, it works.

If you have very dark draft copy, it sometimes works to spray the copy with the acrylic spray and scan from there; but with the usual pale, worn out ribbons used, this would not work at all.

Now for two rather esoteric things I am regularly scanning. I have two authors for the newsletter that I publish that regularly give me handwritten copy. One is all printed in capital letters. The other is cursive handwriting. But since they give me copy, I will take it anyway they want to write it. (It's a shame our Editor hasn't learned these things yet. "Care and Feeding of Authors" [ed.-the Apple II editor doesn't have a Quickie, but he's open to all donations].

The first one is rather simple to handle. He prints from page edge to page edge - in pencil, yet. So the first thing I do is reduce it 65% on a Xerox machine. This does two things: 1. Gets it down to a size that the scanner can handle, and 2. Makes a copy of uniform density, a sort of evenness to the black copy.

Then I scan it in the Teach mode. It is just like any other scanning, except that there is almost no multiple letters. I scanned a few back copies he has given me, and now I have a font table with his name on it. Future submissions are duck soup.

The second case is a little different but not much. I reduce it also by 65% and get a small column which I can

easily use. Then I scan it in the Teach mode. Here, I get almost no single letters (except v's - he likes to write them as separate letters if they are at the beginning of a word, i.e. v ery). Now, when I scan, I am getting almost all multiple letter combinations. What I am really doing is teaching the font table his vocabulary. I just hope he doesn't use any words that are longer than 12 characters. This has worked very well; and when he submits his article, all I have to do now is reduce it with the Xerox machine and then scan it.

For the final item of this "Tips & Techniques" portion, I would like to consider the question, "When to Scan?" Obviously, this is going to be a very subjective answer for each person, but all will probably consider the following three points: 1. How fast can you type? 2. How well do you type? 3. How much do you dislike typing from typed copy?

Perhaps the issues might become clearer if I use myself as an example. One, I am a "hunt and peck" typist. I always have been at about 25-30 words a minute (wpm). However, when copying, my speed drops to about 10-15 wpm, and it is full of transposed errors (#2 above) as well as just plain creative spelling. In addition to the low speed, I usually have about 15 "unable to locate" spelling errors per screen. This means about 50-75 per article. This takes a substantial amount of time to correct which should be added to the typing time.

For number three, I am not sure I can communicate the intense loathing I feel for retyping what has already been typed. Or maybe I just did? I like to type when I am writing (such as this article), for when I handwrite it is indecipherable, and even more so if I try to write fast.

So for me, even if it is just one paragraph, and it is printed in some fashion, I ALWAYS scan. It is so much faster!

InWords scans original laser-printer copy very well, as it also does typewritten copy (whether carbon ribbon or inked ribbon) and (as said above) NLQ dot matrix printers.

I will close this article with what I said in the first sentences:

InWords, Great Program.
Fabulous. Go buy InWords, NOW!
That says it all.

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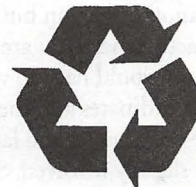
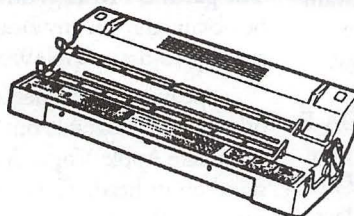
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Byts And Pyces

by Gary Hayman

This regular monthly column includes Apple II information, providing hints, techniques, suggestions, helps, information, news, etc. genre—information that may not in itself warrant a separate article in the Journal but would, nevertheless, be of interest to Apple II readers. You are asked to submit your hints, ideas and suggestions to me for monthly organization and publishing. You may do it via the TCS or direct mail to me at 8255 Canning Terrace, Greenbelt, Maryland 20770. Telephone calls to (301) 345-3230. Please note that this column is often submitted for publication 45 to 75 days prior to its appearance in print.

Spreadsheet Place Holder

You know how it is when you are in a AppleWorks spreadsheet and want to move to another section but later return to exactly where you are now. Previously you would have to write down your coordinates and then OA-F (Find) those coordinates at a later time—easy, but slightly involved. STEVE BEVILLE contributes two UltraMacro macros that you can add to you default macros that will do this for you automatically. The BA-M saves the coordinate in \$1 and the BA-G goes back to that coordinate at a later time.

```
<BA-M>:<asp><$1 = screen
1, 22, 7 : O = 3 : begin :
$2 = mid $1, O, 1 : X =
asc $2 : if X < 48 or X >
57 exit : endif : O = O +
1 : rpt : L = O - 1 : $1 =
left $1, L>!
```

```
<BA-G>:<asp><oa-F>C<oa-Y
print $1 : rtn>!
```

You can find these macros, with the original comments on our TCS in the File Transfer (AppleWorks) area.

Easy Word Processing

Someone was asking about word processing packages for children. LORIN EVENS responded that he knows of three big word processing packages that exist for the Apple. They are FredWriter, Bank Street Writer (original version) and from the Sunburst company, Magic Slate. There is also KidsWriter (which is for a very young age group).

AppleWorks Patches

Again, I would like to repeat that the latest patch for AppleWorks 3.0 is Patcher v. 1.5. I have found that many AppleWorks users have not applied this, or even earlier patches, to AppleWorks 3.0. I want to remind you that it is important to do, and it is free. The patch is FREE, is on the TCS, can be obtained from any Beagle Buddy or any 'up-to-date' AppleWorks 3.0 user.

Speaking of patches, there are other patch programs out there that can make AppleWorks do tricks and stand on its head. The most renown are AppleWorks Companion and SuperPatch 6.X or 7.X. Be careful when applying these patches for they may cause AppleWorks to do things that you don't want. Choose them very carefully and, if you have UltraMacros, be careful that the patch doesn't negate something contained in one of your macros. There has also been reports that some of the patches are "flaky". Before you start applying these patches, please copy, for archive purposes you APLWORKS.SYSTEM or APLWORKS.SYS file and the attendant SEG files somewhere so that you will be able to reconstruct what you had before in case the patches don't work correctly. The mentioned

programs do allow you to return to default conditions if you desire, but I would still protect myself as I have suggested.

To give you an idea of what some of the patches for AppleWorks do, I present a listing of SuperPatch 7.1 possible alterations. AppleWorks Companion does similar things. Notice that some of them are quite useful while others are cosmetic or "cutesy".

SuperPatch 7.1 Patches to:

Aplworks.System:

- 1 - Limit desktop expansion into bank switched RAMcards
 - 2 - Change 'Do you really etc' to 'Really?'
 - 3 - Change 'Type entry etc' to 'Enter any d*** thing you want'
 - 4 - Change location of dictionaries
 - 5 - Change vertical element in startup screen box
 - 6 - Customize 'Preloading AppleWorks' message
- Seg.Aw:
- 7 - Customize top horizontal element in Main Menu
 - 8 - Customize bottom horizontal element in Main Menu
 - 9 - Install closed file card display
 - 10 - Install closed Apple-Q menu display
 - 11 - Disable create subdirectory option
 - 12 - Disable delete files option
 - 13 - Install new 'Use arrows to choose files...' message
 - 14 - Install new 'Use arrows to move through list' message
 - 15 - Install new 'Use arrows to move through list, then press return' msg
 - 16 - Have zoom on after loading a WP file
 - 17 - Have zoom on after loading a DB file
 - 18 - Have zoom on after loading a SS file
 - 19 - Change default zoom status when creating a DB to on
 - 20 - Change default zoom status



when creating a WP to on

21 - Allow full use of slinky cards
> 2048K

22 - Change 'Getting errors' to
'Try using RepairWorks to read'

Seg.Pr:

23 - Install SuperPatch DeskJet
driver

Seg.Er:

24 - Zero out Special Codes

Seg.Wp:

25 - Customize bottom line in
WP display

26 - Customize Page Break lines

Seg.Db:

27 - Replace phantom dash in
blank entries with mousetext

28 - Recognize single space as
legal record entry

29 - Recognize single dash as legal
record entry

30 - Customize remaining
horizontal displays

31 - Customize middle lines in
some displays

32 - Change vertical element in
Apple-N display

Seg.Ss:

33 - Customize top horizontal
display

34 - Customize vertical display

Improved Patches for
AppleWorks 3.0:

Aplworks.System:

1 - Install date/time display, PD
clock

2 - Install date/time display, //GS

3 - Change date separator to '.' or
'

4 - Toggle various 'Type num-
ber...' messages

5 - Disable thermometer on
bootup

6 - Disable all thermometer
displays

Seg.Aw:

7 - Customize 'Carefully saving'
message

8 - Change 'More' to mousetext

Seg.Db:

9 - Print out patch now extended
to Apple-L screen

10 - Auto date insertion in reports

Seg.Ss:

11 - Auto date insertion in reports

ZIP happy/unhappy

BOB CONSORTI is happy with his new GSX ZIP CHIP that greatly speeds the operation of his Apple IIGS. This is what he writes [via CIS]:

"Well, I splurged and got a Zip GSX. I almost forgot how fast the GS can go since I sold my TransWarp (An Applied Engineering accelerator)! There are a couple of gotcha's with the Zip, the first being that the amount of memory you have is important for speedy Zip GSX operation. The way the Zip cache is setup, the standard Zip GSX with 16K of cache will cache 3 M of memory on the memory expansion card and all regular 0,1,E0,E1 RAM and ROM space, and the extra 896K or so of memory on a ROM 3 (IIGS). If you have more than 3 M, the extra memory will NOT be cached unless you expand your cache which is not a bad idea anyway. As an example of the speed difference, I tested my GS with my 4 M ON-BOARD with RamFast SCSI controller (see other articles re: RamFast in this edition) at both the 4 M and 2 M configuration and (the) timings were markedly different in certain programs. If the program resided in high memory that is not cached, it will run at normal speed. If you have a lot of memory get a larger cache on the GSX, or if you can live with it, setup a ramdisk with 32K more than the difference between your memory card and 3 meg. On my 4 meg ON-BOARD that's 1024K+32K = 1056K. Don't ask me why an extra 32K of ramdisk above the 1024K is needed but without it the high bank, and thus any program in it, is not cached. If you have a GS Ram+ with 6 meg you will need to setup a 3104K ramdisk to have the GSX cache all memory programs could run in.

"The other problem was with AppleTalk. You have to set the speed

to 81% instead of what the manual says (87%) in order for it to work, but I talked with Zip and they say they are working on an INIT that will allow you to run at full speed with AppleTalk and should have it soon.

"Boots went from 16 seconds to 10 and timings for a ProSel optimization on an already optimized 32 meg volume went from 6:12 to 4:13. Since it's been so long I can't remember if it feels faster than a TWGS but it's nice and fast and after 6 hours of operation, not one component on the Zip GSX is hot and I wouldn't call any part on the board even warm."

On the other hand, NIGEL BRODER, discussing a Zip Technology problem with ROBERT GURSKEY revealed, "I had upgraded from a 4 Mhz to an 8 Mhz chip and it lasted a week before I had a similar problem. I had to hit OA-CTRL-Reset to get the IIe to boot. I called to get an RMA with the understanding that the replacement would ship as soon as the RMA was received. That was a month ago. Repeated calls to ZIP's so called "customer service" have resulted in the run around. When I offered the name of the person who had signed for the return (I had UPS trace it) the rep stated she was not interested." He continued with the plan of action he was going to pursue, but I won't put it in print here.

Music From Out of the Woods

DAVID WOOD has been helpful in providing some music program information to our members. I present some of what he has recently written: "...here's the bird's eye lowdown on music software. If you're serious about music editing and publishing, the program to get is Music Writer, from Pyware. Pyware is a division of Pygraphics, a Texas company. Music Writer is available in three versions: Limited (3 staves), Special (8 staves), or Professional (40 staves!). The program is MIDI capable, and specially designed to make use of the Audio Animator (from Applied Engineering) if you have it.

"Music Writer provides a whole host of musical symbols (using the



Sonata font), and organizes them into palettes which you can select using a menu. Notes are included, from the whole to (I think) the 64th, single or double dotted, single and double flats and sharps, dynamics from ppp (pianissimo) to fff (fortissimo), and scads upon scads of diacritics that even I haven't found uses for yet.

"The other thing is that you can decide how much room you want to make for lyrics. Music Studio limits you to three lines of lyrics in their one font. Music Writer not only lets you put in twenty verses if you so choose, but you can also choose the font as well!

"The current version is 2.0, and it has included a MIDI recording utility so you can play your music into the Music Writer. It'll all come out nicely formatted. And if it doesn't, then hey! You can edit it to perfection!"

Pygraphics's phone number is 1-800-222-7536. Limited Edition: \$119, Special: \$295, and Professional: \$595. Also, an Instrument Designer is available for \$129.

GraphicWriter III Problems

JIM DORIGATTI, commenting in a recent edition of "The Apple Spice" on GraphicWriter III (Desktop Publishing Program) from Seven Hills Software states, "...there's a bug in the program which manifests itself only if you run (it) from a hard drive. When you quit the program and attempt to run a ProDOS 8 application, such as AppleWorks, the system crashes (System Error \$0201). Seven Hills is aware of the problem, and it's supposed to be fixed in the next version.

"Also, don't use the custom ImageWriter driver provided with the program. The new Apple driver included with System Software 5.0.3 (5.0.4 is now out) is far superior to it. Besides, the custom driver only works with GraphicWriter III, and it doesn't always work correctly. Just run GraphicWriter from the new System Software."

SCSI yes, Floppy, no

PAUL TARANTINO, always

sharing information that might be valuable to the rest of us writes, "This is for info only, don't know if it's an anomaly per se, but maybe my describing a minor discovery will save somebody else some agony...

ANYWAY...I had to send my HD to the shop due to power supply problems. (I) Tried today to use my GS with floppies only (had changed the boot slot in the control panel) and each floppy failed to boot (5.25" or 3.5"). When attempting to boot, would get as far as the "ProDOS 8 version 1.x" screen and the drive would stop. It turns out that my GS doesn't like to have the SCSI card installed without a SCSI device attached to it. When I disconnected the card (Apple DMA SCSI) all floppies functioned properly."

Sam shouts hurrah for help

SAM UPTON is wearing a smile on his face. He writes, "...thanks to the kindness and patience of GARY HAYMAN and DALE SMITH, the problem with ProDOS 8 has been solved. Let me share this experience so others won't fall into the same pit. I just got the Apple SCSI DMA card for my HD (hard drive). I went the FINDER route to format and partition (using the advanced utilities from the SYSTEM 5.0.3 TOOLS DISK) and then tried to install GSOS onto the HD. Now, Apple has included new SCSI drivers for their card, and there is an installer program on the Apple][High-Speed SCSI Card Utilities disk. I had to install this driver (according to the manual) in order to use the card. BE WARNED - this program also BACKdates some GSOS files. It will turn your 5.0.3 into 5.0.2. This doesn't seem to matter to ProDOS 16 too much, but the new ProDOS 1.9 *IS NOT* compatible with this set up. After unshrinking a virgin copy of 5.0.3, I re-installed the latest system files to the HD, and all turned out fine. Guess the lesson is this - If you use an installer other than the one with your current systems disk, be sure to re install the latest systems files from a *virgin* copy.

"Anyway, I just want to thank

Dale and Gary for their help again. It's times like these that re-affirm my conviction that WAP membership is pure gold (as are the people who belong)."

DALE SMITH later responded, "HURRAH!! indeed ... glad it worked for you. And I think your procedure of doing the final system update AFTER installing the DMA SCSI drivers might be a good idea - EXCEPT that System 5.0.3 should NOT require it at all - just install the SCSIHD.Driver and SCSI.Manager files from System 5.0.3 (best done using the Install SCSI Hard Disk files (or similar script name) from the Installer program. The changes that were put out in Feb. 90 with the HiSpeed SCSI DMA card were incorporated into System 5.0.3 AND BUGS WERE FIXED too. I think you might want to go back with Installer and install the SCSI HD files from the System.Disk and System.Tools for v5.0.3." Note: this was written prior to v5.0.4's release, but the technique still applies.

More On Ribbons

DAVID HAWKINS had asked for some clarification on some of the ribbon suggestions and WD-40 spray that were covered in two Byts & Pyces articles a few months back. I advised him that some people, to extend the life of their printer ribbons (Epson, Panasonic, etc.) will pop the top of the cartridge and give a short spray of the WD-40 on the bunched up ribbon. Then let the ribbon stand for 24 hours (after putting on the top). I don't do that with the IWII because I am re-inking on a regular basis — but from time to time, I do squirt a spray of WD-40 into the ink bottle when I feel that the ink is drying out a little, and from time to time, I squirt a bit into the ink well so that the holes get cleaned out and the felt gets lubricated. You might try these ideas too.

Printer Codes

I was recently responding to PAUL BRUENING who had asked some questions concerning AppleWorks and printer codes for underlining. I told him that

AppleWorks allows you to specify the codes for up to three printers. All you really have to do is the set up another printer (in the menu) with the appropriate codes. If the underline code is different for your second printer, then change it to meet the demands of that printer

Now sometimes the codes that are included as default when you select a certain type of printer from a menu are not always correct. If you find this to be the case, the first thing you should do is to go to a buried file called ADVANCED on your AppleWorks disk and print out the file that contains printer codes (It is best to do this in a sideways fashion for it is a wide spreadsheet). Check for your printer there. Try those codes, especially if they are different from the default codes.

If that doesn't work, then go to your printer manual and look up the codes for underlining etc. that appear there and enter them by hand in the printer area of AppleWorks. That is not as simple as it sounds. If you are lucky they will be listed exactly as you need them. Most of the time you will have to figure things out. For example, sometimes you get the impression that a number should be entered when really and character string representing that number should be. Very confusing, but experimenting is easy and will not do any damage.

Another thing that you have to watch for are the DIP switch settings of your printer and, if you have one, your printer interface card. If possible, the printer interface card should be set to be TRANSPARENT. If it is not, because of some special graphic use or something, then you will have to send, from AppleWorks, a code that will make it transparent. You may find this code in the manual that came with your interface card. You may also have to send a code to your printer that will either set it to a DEFAULT condition established by your DIP switch settings, or to a condition that will facilitate receiving AppleWorks information. Again, experimenting and reading the manuals over and over again. Printer and interface manuals

are not known to be very clear. TOM VIER has added that you CAN have a different set of special codes for each printer, however the NAME of the codes is the same. So you should make a list of what each special code number does for each printer. You can also make the standard printer commands (ie Boldface Begin) do something else. Someone told me (TOM) that some package somewhere allows you to switch in different printer codes in bulk. It's a shame that there couldn't be code files for all printers that could be saved during configuration.

Quickie Scanner Benchmarks

If you are using your Quickie Hand Scanner (Vitesse) to capture graphics in Double Hi Res planning to use them with Publish.It!, here are some dimensions that might be useful to you. The switch on the right hand side of your scanner allows you to choose 1-4. The following will list the size of the area that you can scan that would be represented on a full screen and the resultant size of the captured image if it were printed to paper via Publish.It!, with no re-sizing done:

1) scan 4" x 8"; print 1-1/2" x 2-11/16"

2) scan 4" x 4"; print 3" x 2-11/16"

3) scan 4" x 2-11/16; print 4-1/2" x 2-11/16"

4) scan 3-1/4" x 2"; print 4-5/8" x 2-11/16"

How to use the above: Measure your graphic and select the switch position where you graphic will easily fit into the scan dimensions. Choose the highest switch position available in order to capture the most detail. Later, using Publish.It!, you can adjust the graphic size up or down.

Publish It! fonts

MILT GOLDSAMT had a problem that was driving him "bonkers". He was installing some IIGS fonts into Publish.It!, but when it came time to print the document, things did not function properly. I did some research and discover some sage words written by JOHN

WRENHOLT of The Big Red Computer Club contained in the September 1990 edition of 'Scarlett', the clubs newsletter. JOHN, if you read his writing, has the ability to explain technical things in such a way that you can understand him. He writes, in part, "It is possible to install a font that is located on any drive or within any subdirectory. However, when it comes time for Publish-It! to actually use the font, it may not be able to locate it. Here's why. When Publish-It! is looking for a font, it first searches in the same path that the program itself is in. This could be a subdirectory on a hard disk or the root directory of a floppy disk. If the font is not found, then the search continues to each on-line storage device. Only the root directories are searched. Therefore, Publish-It! will not locate fonts that are stored in subdirectories or folders. The solution to the problem is to either store the fonts in the same path as the program, or to make sure that they are in the root directory of a floppy disk."

JOHN gives additional information about odd size fonts, font families, and squished fonts. The Big Red Computer Club is a good organization to join. You can get details by calling them at (402) 379-4680

The author is currently Chairman of both the AppleWorks and Apple IIGS Special Interests Groups. He is published frequently in the Journal of the Washington Apple Pi. He is also a Beagle Buddy and a Seven Hills Partner for the WAP. Professionally, he is a Certified Hypnotherapist in private practice in McLean, Virginia and does part-time Apple II family computer application programs consulting and teaching.



The Applied Engineering Transwarp GS Versus Zip GSX 1600X

by Vincent Shebyn

The Apple IIGS continues into 1991 with significant hardware improvements. In the past two years, two accelerators for the GS have been introduced and I have had a chance to work with both hardware devices. I have an Apple GS ROM Version 01, with an memory card expanded to four Megabytes, a Apple DMA SCSI card and connected to two external Apple 20 Megabyte hard drives. My printer is the Apple Personal Laser Writer IINT that communicates with via AppleTalk to my Mac and Apple. I have installed on my hard disk GS/OS Version 5.0.4, and use the Finder to start my applications and keep order on my hard disks. I have a few desk accessories (CDA & NDA), as well as some downloaded Cdevs. The accelerators were ordered in the hope that editing documents with AppleWorks GS for a newsletter would be a little easier and faster.

Each company has been in the Apple market a long time; Applied Engineering (AE) markets a large number of computer hardware products while Zip Technologies primarily sells accelerators for all of the Apple II line. In ordering my Applied Engineering Transwarp GS from Quality-Computer, I got my order very promptly but the product when it arrived did not work. After, several days of working with the product, I returned it to AE, and was promptly sent a new replacement which arrived in about two weeks. This replacement was successfully installed. In comparing my Applied Engineering experience with Zip Technology experience, when I ordered from Zip, they kept losing my order as

they switched from a old computer system to a new computer system. After a month, I received my Zip GS accelerator. Your experience may or may not be similar to mine, but in monitoring American Online, the Applied Engineering technical support can be difficult to reach, and Zip Technology in NOV-DEC 90 was having problems getting orders processed due to their computer problems's and over-demand. Technical support for the Zip GSX 1600 has been good on GENie and AM Online. Technical support for AE may also be found on GENie and America Online, but I find it is less informative. Many power users have switched to the Zip GSX 1600 from the Transwarp.

Installation

Installation of each device was simple but may not be suitable for those who are uncomfortable with pulling integrated circuits from their sockets. It is not as simple as putting an Apple Super Serial card into the slot 2. Both devices require you to pull one integrated circuit (CPU) and then install the accelerator in a hardware slot and with another connection into the CPU. The installation of either accelerator in the hardware slot does not commit the slot to be used for the accelerator. A small advantage of the Zip accelerator is that it has a place to hold your old CPU integrated circuit. Nonetheless, for those who give the job to someone else, it shouldn't take more than fifteen minutes to install and an additional fifteen minutes to test the device for proper installation. The Applied Engi-

neering manual was certainly slick with actual pictures concerning installation and discussion of their accelerator. The Zip Technology manual was a typed document, combined with a good runtime Hyperstudio stack disk. Unfortunately the two media don't blend very well, and the TWGS manual is better.

Installation of the appropriate software to control each device is transparent. The Applied Engineering Transwarp GS has built-in a classic desk accessory (CDA), while the Zip GSX 1600 uses the GS/OS installer to put in your hard disk a control panel device (Cdev), a system application (Sys16), and a classic desk accessory (CDA). One can download from America Online, or the Wash Apple Pi TCS, a Cdev for the Transwarp GS. The advantage to installed system applications that reside in your hard disk is that they may updated more easily than an application built into the hardware device alone. The Transwarp GS software is straightforward and simple. You have three speeds to run your computer at, an adjustment for Appletalk and a built in self-test.

The Zip Technology software is more complex. One can select a sliding scale of speeds, configure the hardware to a series of settings (dip switches or software) that adjust for computer and hardware setups. You can make these configurations permanent or temporary. On the Zip GSX 1600 the hardware DIP switches are helpful such that if you are an educator, your students cannot change configurations easily. Some individuals may prefer simple control software versus more sophisticated control software, but the Zip Technology software is my preference due the fact it gives the user more control over the accelerator.

For most application software, there are no problems with the accelerators; the exception being software that is geared for maintaining your hard disk. Backup and optimizing software for hard disk may crash at fully accelerated speed when in use.

What do you gain in speed? This is a difficult question to answer; if your computer is doing purely computational work such as redrawing a paint screen, the accelerator will help considerably. A RAM disk and large RAM memory make the



accelerator work better. However, booting up a hard disk, or a floppy disk will not lead to a great gain in speed, because the hard disk or floppy disk "reading" speed is the rate-limiting step. Other devices may determine the speed at which the accelerator can get work done; Appletalk works slower than the fastest speed of ZIP GSX 1600 by 13%. Some examples: with my computer booting up at fully accelerated speed (8 Mhz) versus the fast speed (2.8 Mhz), it takes 45 seconds versus 50 seconds to reach the finder; reformatting an AppleWorks GS document to change the font of a 124K document to another font, it takes 32 seconds versus 54 seconds; when changing the format of a paint file (54K), it took 13 seconds versus 24 seconds. In my speed trials, the Zip and TWGS performed at about the same speed. Buying an accelerator—Transwarp or Zip—should be determined by what you are doing and not relying on sales pitches. Your work won't be done any faster, but your frustration level will go down as you aren't waiting for the computer (the computer doesn't mind waiting for you).

In terms of reliability, the Transwarp GS seem to be a little more trouble-prone since it requires more voltage for the accelerator to work properly. This should not trouble the average user who does not have a large number of hardware devices in the computer, but the AE PC Transporter is said to have a particular problem with power consumption. If you wish to find out if you have a potential power problem, ask your computer-expert friend to measure the supplied voltage to your floppy disk drive of your computer on power-up. I won't give any details, since this measurement if done the wrong way, could damage your computer or your friend's measuring equipment. If you do have an insufficient-power problem, Applied Engineering (AE) sells a more powerful GS power supply than the GS' stock power supply. Other potential problems with the Transwarp GS is that heat buildup within the computer tends to make Transwarp behave erratically, and the flimsy TWGS cable can be another source of problems. Looking at the Zip GSX 1600, their cable appears to be no better. Once the accelerator is installed try to avoid putting it in and taking it out of your computer. If your accelerator does

not work the first time, check seating of the accelerator carefully and make sure its fully seated.

Zip Technology's Zip GSX 1600, being the second accelerator on the market has avoided the heat and power problem by its use of fewer integrated circuits and its use of static DRAM. What is static DRAM? It is the memory which the accelerator uses to very quickly do repetitive tasks. The more static DRAM that your accelerator has, the more efficiently the accelerator will be able to speed up your system. The Zip GSX 1600 has 16K of static DRAM and will able to be increased to 64K by Zip for a fee. On America Online there is a discussion on how to add additional DRAM chips to the accelerator by buying memory chips directly [*ed.-that will void your warranty!*].

The Transwarp GS has a more limited 8K cache, but does use its DRAM efficiently. Unfortunately it is not upgradable to higher amounts of DRAM. There are few quirks with either accelerator in that older RAM cards, noisy motherboards, a PC Transporter, or other hardware may not work properly or cause the accelerator not to work properly. It would be advisable before any purchase is made, that you talk to technical support of either company with detailed information about your system or if you get no satisfaction then leave a message on the Pi TCS or another large BBS for comments.

So how did I end up trying out two accelerators? Unfortunately, I had problems with my AE Transwarp GS running consistently for me, but many users have used the Transwarp without problem. Since I have changed to the Zip GSX 1600, I have had no problems. Prices tend to be competitive, but the top-of-the line Zip accelerator compares favorably to the AE Transwarp. My suggestion, if you are seriously considering buying an accelerator, that you buy both devices with a return guarantee, or buy a working used accelerator at considerable discount (\$350-new versus \$150-used). However, before you buy an accelerators, purchase a hard drive and a fast DMA SCSI card or RAM-cache SCSI card [see "Dueling SCSI cards-Feb. 1991]. Also you should upgrade your memory to truly get the most out of your GS.

An Apple IIGS is an excellent computer, and many used machines are entering the market as Apple is now pushing the Macintosh LC. If you support Applied Engineering or Zip Technology this will allow them to offer updates and new hardware for the Apple IIGS. It is a machine which is continuing to receive good hardware for the sophisticated computer enthusiast, and the GS is becoming cheaper as used machines are entering the market. The accelerators give it the effective speed of the Mac IICx with a color monitor, and you should be able to buy a used system of a CPU, RGB color monitor and 3.5 inch disk drive for \$1200; then add in a new HD for about \$500, an accelerator card for \$250 and upgrade the RAM from one to four megabytes for about \$400. The total price is \$2350. This is a much better price than the MAC-LC \$3500 (new and without the IIE emulator card).

TransWarp GS Zip vs.GSX 1600

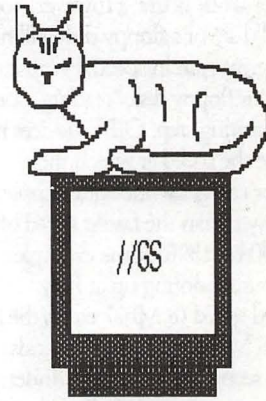
Price List	\$349	\$350
Price Discount	\$259	\$279
Ease of Installation	4	3.5
Hardware Software	4	5
Speedup of Applications	4	4
Speedup of Hardware*	2	2
Reliability	3	5
Technical Support	3	4

*-An accelerator itself does not speed-up hardware, but may allow some operations of loading system software or executing application software to proceed faster



View from the Cat House

by Kim Brennan



A Tale of two Postscripts

The after Christmas buying season has started and I have added to my toys. One thing I had determined from the beginning to get was the Hewlett-Packard Postscript cartridge for my HP Laserjet IIp printer. Actually, when I originally purchased the Laserjet I was intending to buy the HP Postscript cartridge, but got detoured to the Jetpage cartridge because HP's cartridge had yet to be released. As it turned out I was reasonably pleased with the Jetpage due to its low price, however what I didn't realize is worthy of note.

Postscript is a programming language create by Adobe Systems Inc. that was intended to be used as a page description language. In this Adobe was quite successful, and the spread of Laser printers equipped with Postscript is a part of the computing industry history books. Apple played its part in this with the introduction of its Laserwriter, which was equipped with Postscript right from the beginning.

Due to its popularity, Adobe charged a premium for the licenses needed to include Postscript inside of laser printers. This was the reason the laser printers were very expensive until this last year. And, due to its popularity and the pricing of those licenses other companies proceeded to attempt to duplicate (clone) Postscript. There have been quite a few companies involved in the clone Postscript industry, but a desktop publisher with a very discerning eye can usually tell true Adobe Postscript from one of these clones. I can't, unless the clone doesn't do something that it is supposed to do (something that Adobe Postscript would do).

And this brings up the HP Postscript cartridge. The HP cartridge is a licensed Adobe Postscript. This means that is far and away the most expensive Postscript cartridge available for the Laserjets. Even with discounts you are likely to pay \$600 for this cartridge. Most of the clones are available for only \$300 and they offer some features that the HP cartridge lacks, such as the ability to exit the cartridge without unplugging the cartridge.

But, for that hefty price tag you must be getting something worth while—and you are. First off, the HP cartridge is faster in producing documents than the clones are. A lot faster. And secondly, it is "true" Adobe Postscript which means it will do everything it is supposed to do. And it just so happens I was doing a couple of new things that the Jetpage clone cartridge were not able to do properly. Thirdly, the HP cartridge is the only Postscript cartridge that will work with HP's Appletalk interface for the Laserjet. Since I was determined to hook up the Laserjet with Appletalk, I had to get the HP Postscript cartridge.

I wanted to use the Appletalk interface for a simple reason. I wanted to print directly to the printer. Currently I print to disk by using the Open Apple F trick. While this is a usable technique, for a few applications I can't use it. With the printer hooked up via Appletalk I figured I should be able to print directly to the printer. So far, however, I've not been successful.

One of the things I've been using to test the capabilities (and speed) of the HP Postscript cartridge compared to the JetPage cartridge is Don Lancaster's Postscript Show and Tell. This is a disk with 20 different

Postscript programs on it, all developed by hand, rather than generated by some program. The point Don Lancaster is trying to make is that Postscript is a general purpose programming language and you can deal with it on exactly those terms. You don't need to have something generated your Postscript for you if you are a reasonably good programmer. The Show and Tell series, however is also a great way of showing if a Postscript clone is really up to the task of doing Postscript. Unfortunately, it showed me that the JetPage cartridge was not only much slower than true Adobe Postscript (HP's cartridge) but it was also incapable of performing some of the tougher tasks. Personal Publishing magazine did a review of various Postscript Cartridges for the HP Laserjet family which also revealed these limitations.

Printing speed does bring up another interesting point. Postscript printing tends to be slower in most cases than straight text printing using the built in fonts of the Laserjet. And my experiences with the Jetpage cartridge led me to believe that Postscript printing was slower than bit map printing with a native Laserjet driver such as Seven Hills Software's Independence driver. But, I was wrong. What is slow is using a Postscript cartridge on a Laserjet.

As it turns out laser printers that are designed with Postscript built in are much faster than Laserjets with Postscript cartridges added on even when the laser printer's built in electronics are slower than the Laserjet's! Locally, I've seen the NEC



Silentwriter II laser printer selling for \$1500 with built in Appletalk and Postscript. In fact I've used one on a Mac IIsi. It was much faster than my Laserjet IIP. It also rearranges what I would recommend in terms of a laser printer for future new purchasers. NEC is a quality name, and frankly that price is so much better than an equivalent HP Laserjet IIP. On the other hand, the HP Laserjet IIP was the laser printer that started the trend towards relatively lower prices. It is logical that there be new printers with lower prices and more features as time goes by. I don't regret my purchase as I've had a good time learning about laser printers and Postscript. Besides, I still love that great print quality.

Modems and Games

The trend towards more features and lower prices continues in other products too. I recently bought a Practical Peripherals PM9600SA modem. Almost all of the commercial Computer Bulletin Boards (BBS's) can only work at 2400 bps, so I never really considered going to a higher speed modem. But, the WAP TCS added 9600 capability and the notion began to creep into my thoughts. When the Practical Peripherals modem appeared with a list price of \$699 it was only a matter of time. Egghead Software has started selling them for \$519, and I decided I couldn't wait any longer.

9600 bps is really something. It is very quickly addicting, especially for long downloads (such as the latest GS/OS system disks V5.04). I did have a little bit of problem getting the modem to work with the America Online software (which has no settings for a 9600 bps modem), but was able to finally figure out the necessary settings. [The critical setting seems to be ATW2 stored in the modem when it is first turned on. Most of my other software seems to prefer ATW0.]

I've been hooked. I finally found a copy of Dragonwars GS, and have been playing the game incessantly since. It is well thought out and designed game. The GS version is not copy protected and is hard disk installable. The music is outstanding

(audible only if you have the new MIDIsynth toolset). My only problem with the game is that I seem to be playing it backwards. Somehow or other my band of merry men (and one female) keep tackling the tough jobs first and exiting through the entrance. This leads to some very puzzling clues being revealed to me before I know what they are for. Needless to say this is keeping me very occupied.

My copy, and a few others, was shipped with the standard Apple IIe, IIc player reference card which is totally inappropriate for the GS version. The standard II version mentions that you can import characters from other games. The GS version, however, does not let you import characters. The GS version has hidden pull down menus. They are hidden until you move the mouse to the top of the screen and click on the button. In addition, you can print text or maps by typing Control P, a useful feature for those who insist on documenting the slightest change in their favorite character's health.

I finally got the official release copy of Seven Hills Software's Independence Printer driver for the HP Laserjet and Deskjet printers. Along with the release copy of the driver, Independence also includes two font families, Times and Helvetica, with a complete selection of point sizes (from 9 to 96). I can heartily recommend this product. As an aside, AWGS doesn't allow you to SELECT point sizes larger than 48, but the printer driver will still use the higher point sizes when it is printing at higher quality. That is the real reason for their inclusion.

Vitesse has released Salvation Supreme which is their complete disk utility program series in one commercial product. Salvation Supreme includes Wings (a program launcher), Backup (a backup program), Deliverance (a disk recovery and repair program), Renaissance (disk optimizer program), and Exorciser (a virus detection program). Backup, was originally named Salvation and later renamed to Guardian when the series was named Salvation. Salvation

Supreme is the desktop equivalent to Glen Bredon's ProSEL 16. Salvation has better documentation and is easier to use right out of the box. ProSEL 16 has a better price and probably has more features, but its documentation is so bad (Glen Bredon has a new printed manual on its way, however) that the only way to learn all the features is through a user group such as WAP. As one person said, he's been using it for several years and is still learning about other features. I prefer Salvation, for now.

In Europe there is a collection of extremely gifted GS programmers known as the Free Tool Association. Their name comes from their intent to program the GS without using any of the GS toolsets. What ever their intent they put out some impressive demo programs. The latest that I have seen is their Christmas demo. Get a copy of this as some of the demo just has to be seen. A program like this is ample proof that the GS can do some truly remarkable light and sound shows.

ORCA

Way back, before the GS was available, I purchased an assembly language development system. I didn't make a rational choice in the selection process, I just chose one that was sitting on the software store shelf. As it turned out, I had made a very good choice, but it was to be a number of years before I realized just how good a choice it was. Orca/M was originally a DOS 3.3 assembler but shortly after ProDOS was announced Orca/M was converted to ProDOS. I found the command line structure of the environment extremely easy and logical to use and was quite pleased with the program. Apparently I was not the only one. Orca/M was designated the official programming environment for a new microprocessor that had just been released, the 65816.

Eventually even Apple adopted Orca/M (and called its version the Apple IIGS Programming Workshop, APW for short). Of course, by this point Apple was developing ProDOS 16 (what eventually became GS/OS) and The Byte Works was busy making a 16 bit version of the Orca/M



environment.

Now, of course, Orca/M has been around for a while, and while not everybody uses it, it is a lot better known now. Orca/M remains a nice assembler, but The Byte Works has other languages available, Orca/C and Orca/Pascal. All these are designed for the GS. The Byte Works still makes a ProDOS 8 version of Orca/M for those not using a GS. Each of the programming language packages is designed to work by itself, but they can be combined into one package. In other words, you could have one Orca programming environment running with your choice of three languages: Assembler, C, or Pascal. Actually, one of the designed capabilities of Orca is that you can use several different languages in one program and not have to worry about it all working together. It will.

The choice of languages that will work under Orca is not limited to those from The Byte Works. Programming languages designed to work with APW (which is a very close cousin of Orca) will also work. In addition, I believe that the TML products (Pascal and Basic) will also work under Orca (ed.note—the original TML Pascal had a system that would work under APW/Orca. However, the current version of TML Pascal is a stand-alone product which will not work under Orca).

Now, I haven't done any active programming in years. But, it was always my intention to get back to the joys and frustration of programming, which is why I have the Orca series. They just sit there quietly on my hard disk begging to be used. Sigh. One of these days.

Supplies

A couple of months ago I ran out of envelopes. Going to my nearest business supply store I made a slight mistake. Instead of buying simple envelopes I bought envelopes that have those see through windows on them. Not wanting to admit a mistake I decided I would figure out a way to use that window.

Normally, i.e. before I had bought those envelopes, I printed my mailing address and return address on mailing labels which I then attached to the blank envelope. However, I rarely send multiple letters to the same address, so I had many more return address labels than mailing labels laying about. With these window envelopes, I now carefully arrange the destination address on the letter so that it will show through the window. Printed on the Laserjet this gives a very professional appearance to my correspondence. I keep a 'blank' template in my Letters folder for Appleworks GS that will position the mailing address in just the right spot.

As a joke for my stepmother, I happened to one day create a 'bill' using the page layout module of AWGS. In that instance I used a careful selection of fonts to give the appearance of letterhead, along with a few lines to give the distinct impression of a bill. Once again, printed with the laser printer it looks very clean. It really is a nice toy that I have.

The mailing labels I bought are standard return address labels for laser printers. There are also labels for 3.5 diskettes. I print a couple dozen sheets of those for my backup disks for backing up the hard drive. A 150M hard drive takes a lot of diskettes to back it up and having preprinted labels for the diskettes makes things easier to organize.

Latest versions: Transprog is now up to v2.1, with a completely revised format. It is still shareware but is published by a commercial company that is working on some exciting new software, such as a GS MultiFinder (but not called MultiFinder, of course). Stay tuned.



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Number Squares

by Barbara Mutz

Do you remember the plastic "Fifteen" puzzle you played with in the car on the way to Grandma's? It had little squares with the numbers from one to fifteen and one blank space, in a plastic tray in a four-by-four arrangement. You slide the squares, one at a time, up or down, left or right, until the numbers are in the correct order. This computer program lets you do the same thing on your Apple II. It's less portable, but a lot more versatile, and lots of fun.

Number Squares, written by WAP's very own Phil Shapiro and Dave Lyons and published by Phil's new software company, Balloons Software, contains 15 different Number Squares puzzles (13 regular and 2 "weird"), each having a whole range of difficulty levels. This program was created as a reasoning puzzle for third and fourth graders, but preschoolers and great, great grandmothers have enjoyed it. My ten-year-old son likes it, my six-year-old loves it, and I enjoy it a lot.

To play Number Squares, you choose the size of the puzzle, from 3 by 3, to 15 by 15. (I'll get to the "weird" ones in a minute.) Then you input the level of difficulty (from 5 to 20, except in the "expert mode," which has no limit). The level of difficulty tells the computer how much to scramble the numbers. The machine then puts the scrambled array on the screen, and starts the timer. You use the arrow keys (or the "A" and "Z" keys instead of the up and down arrows) to move the numbers into the empty square. The program keeps track of the number of moves you take to solve the puzzle, and uses this along with the time you took and level of difficulty to compute your score.

The fact that the program scrambles the array is very good and very important. For one thing, it lets you decide how hard the puzzle will be. After all, the program

was originally written for children, and children (and the rest of us!) need to succeed at something soon to stay interested in it. You start out with level 5 puzzles, get good at them, and move on to puzzles that are scrambled up more. The other thing is that scrambling the array guarantees that the puzzle is solvable. Nibble magazine (April 1989) contained a program called Hand Puzzle, which is a 4 by 4 puzzle using letters instead of numbers. Unfortunately, it randomly generates the puzzle array. For some mathematical reason which I don't remember right now (I think I read it once in some Martin Gardner book), there is a fifty-fifty chance that a randomly generated puzzle will be impossible to solve. Since Number Squares starts with the correct array and scrambles it, it is always possible to unscramble it. You can make these Number Squares puzzles hard, but you (and the computer) can't make them impossible.

The "weird" puzzles are an interesting challenge. They are both variations of the 4 by 4 puzzle, and are a pleasant change. In the Horizontal Puzzle, the regular square has been transformed into a straight line, but the arrow keys work the same way as always. In the Partially-Screened Puzzle, the middle four numbers of the square are covered up, but you must solve the puzzle as usual.

A few minor technical quibbles: there's no way to pause the game, which can be frustrating. There's also no way to start a particular puzzle over. (The manual says that you press Escape to start over, but pressing Escape actually lets you quit one puzzle and choose to start a new one.) It would be nice if it were possible to replay a puzzle you just played, especially when you got off to a bad start and took 69 moves to solve a level 7 puzzle. It would also be fun to see if you can do the

same puzzle your brother just did, but faster and/or in fewer moves. Also, speaking of time, with the larger puzzles, it takes the computer a few seconds to realize that the puzzle has been solved, but the timer keeps counting. This lowers your score.

The program has a pleasant quirk, too. Usually, the level you set seems to be the least number of moves needed to solve the puzzle. Once in a while, though, much fewer moves are necessary. This increases your score tremendously, and adds to the fun. Once I solved a level 16 puzzle in ten seconds with eight moves, giving me 65,535 points!

A note on compatibility: Number Squares will run on any 64K Apple II, including the Apple II+; in fact, one of the goals of Balloons Software is to support the older Apple II+ computer whenever possible. It is also fully compatible with various Laser clones. We have an Apple IIGS, and I was very glad to see that the manual says to run the program at "Normal" speed, and tells you how to do that. When our IIGS was new, there were several games we gave up on as impossible because we didn't know enough to change the speed. (Number Squares will run on "Fast," but the seconds will tick off too fast, so the score will be too low.) One thing that the manual doesn't mention (but the program does) is that if your computer doesn't have the hardware to display 80-column text, puzzles larger than 9 by 9 will not run. I don't think that this is a particular hardship, since I regard the larger puzzles more as curiosities than anything else. Smaller puzzles scrambled more are a much more interesting challenge. Also, the 11 by 11 and larger puzzles are single-spaced, and I find it hard to tell which numbers are out of place.

The manual (about 25 pages long) is very good. There are Quick Start Instructions which will get you going and Regular Instructions which are well worth reading, with lots of tips about computers, this program, kids, etc. (I learned something about getting around the IIGS Control Panel Menu that I didn't know, after using it for four years.) The last section is Advice and Suggestions for Parents & Teachers, with ideas and

(Please turn to next page)





Apple adventures...

Audubon Wildlife Adventures: Whales

by Carol & Seth Hyatt

Interested in those mysterious creatures beneath the sea? If so, this software will allow you to learn more about the various types of whales and their characteristics as you play a role in four different stories.

"Whale Tracker" places you on board the "Mary Clyde" with a famous whale specialist who enlists your help in photographing whales. To take a picture, you simply press the "P" key to capture the image on the screen.

Whale Data Cards help you to identify the whales you see by providing you with a drawing and nine categories of information about each whale. Categories include type of whale, its common and scientific name, whether it has baleen or teeth and information about its dorsal fin, length, range, weight and other

important characteristics.

As you go on other voyages, you use what you've learned to find out more. Photos taken on your second trip are compared with those from the first to see if there is a match. Later you record whale sounds as well.

"The Secrets of Hosea Freeman" has you solve a mystery by finding clues in a three-story haunted house and in the surrounding town. The ghost of an old whaling captain provides the clues to you in your sleep. Moving around is easier with the mouse, but arrow keys may be used if you prefer. With persistence, you will discover why the captain gave up whaling.

In "Whale Rescue," you again assist the whale specialist - this time answering calls to help whales in trouble. You're able to make use of Bill's portable computer to look at the Whale Data Base as well as a Whale Rescue Guide as you attempt to rescue lost or stranded whales.

"Manatee Hotline" has you researching environmental dangers to manatees in Florida as a member of a hotline team for the State Dept. of Fish and Wildlife. When you receive a call, you board a helicopter and use a map provided by your pilot to reach your destination. Your job is to recommend preventive measures to keep the problem from occurring again.

In addition to the four stories, you can make use of the Whaling Museum (one of the sources of information in the "Secrets of Hosea Freeman" which can also be accessed directly from the menu) and the Whale Population

Model to learn even more. The "Population Model" provides you with information about how and why whale populations change through the use of a graph. As crucial factors affecting the whales change, you can observe the impact.

This software provides a wealth of information for someone interested in the largest marine mammals. A detailed Whales Guidebook accompanies the software and includes clear, easy-to-follow directions as well as a variety of other worthwhile activities which apply what has been learned.

My seven-year-old son, Seth, has been fascinated by undersea life since he was two. This software seemed to be right up his alley. Although age guidelines recommend it for 9+, we have found that manufacturer's recommended age often is not a good indicator. Seth has enjoyed other simulation games for older kids like MECC's "Oregon Trail," "Odell Lake," and Broderbund's Carmen San Diego series. There is a lot of reading involved, and it is probably at about the third or fourth grade level.

Seth found the games to be "interesting and fun." "Whale Rescue" is his favorite of the four. He says, "I like the music. The graphics are good. I would have liked the first game better if you didn't take pictures of the same kind of whale over and over. That gets a little boring."

I recommend this software for use at home by someone who is seriously interested in learning more about whales, as well as for classroom use. Unlike some other simulations, though, these games are not so engaging that someone with limited interest in the subject will find them entertaining enough to play again and again.

For ages 9 to adult
Apple IIe, IIcPlus, IIgs and compatibles
Requires 128K RAM
3 two-sided 5.25" disks (free exchange for 3.5")
Retail price - \$49.95
Advanced Ideas Inc.
2902 San Pablo Ave.
San Francisco, CA 94134
(415) 526-9100

(Continued from previous page)

terminology to use with various ages of kids, taking turns, giving suggestions, incidental skills you can learn from this game, and other neat stuff.

This program is available on both 5.25 and 3.5 inch disks, and is not copy-protected. It can be purchased from Balloons Software, 5201 Chevy Chase Parkway, NW, Washington, DC, 20015-1747. (Phone: 202/244-2223) for \$25.

My six-year-old just came by and asked, "Did you tell them it's fun?" Yes, Alex, I told them it's fun.

(The reviewer is a homemaker, mother of two, computer volunteer in a Fairfax County Public School, casual Basic programmer, and former math teacher.)



Memory Examiner

by Chester H. Page

Synopsis: A CDA is developed allowing the interruption of a running program at any time, and examining (or changing) its machine code program, then continuing the run. Operates under GS/OS 5.0.2 or later.

One of the first things I learned on my Apple][+ was the need for being able to get into the memory to examine the details of a program, either for understanding it better, or for modifying it with patches. One of the first commercial programs that I "broke into" to install a monitor break was my AppleWriter. In those days, AppleWriter was not copyable (nor disk modifiable) so it took some ingenuity to change the built-in RESET vector.

I have recently started learning to program my IIGS in C, and wanted to examine the memory to see how the code was compiled, particularly the difference between setting up subroutines as functions or by using labels with GOTOs. The biggest psychological change from IIE programming to IIGS programming is the use of built-in memory management instead of figuring where to put code segments and writing code accordingly. I just had to have a procedure for interrupting a running program, examining it in memory, and continuing the operation. I realized that the way to do this was to write a Classic Desk Accessory to run from the interrupt provided by CONTROL-OPEN APPLE-ESC. I hunted through my back issues of NIBBLE until I found the August 1988 issue, with Sandy Mossberg's article on "Classic Desk Accessories for Prodos 16". This was my starting point. I soon realized that I could make my program short and simple,

and with no need for macros. The need for macros was avoided by the simple expedient of counting the characters in the CDA title to be displayed, since this has to be entered as a Pascal-string, i.e., start with its character count.

It turned out to be a cinch to break into the monitor, and set up CTRL-Y to return to the Desk Accessory display - then go to the QUIT option and have the application continue to run from the point at which it was interrupted. Now came the hard part: how do you find what area of memory you wish to search after you get into the monitor? By playing with a short program which waited for a menu choice, I could control the interrupt point to be at this wait. Then by brute force memory examining, I could find my program and the target for the RTI (return from interrupt) command activated by QUIT on the desk accessory display. Actually, the interrupt during the keyboard-input wait has two possibilities. The request for key input comprised the usual short loop of examining location \$C000, checking for the high bit (negative sign), and trying again if the content of \$C000 is positive. In this loop of two instructions (LDA \$C000 and BPL), interruptions will be randomly distributed between these two commands, with the return target being the address of the other command. (On an interrupt, the operation of an instruction is finished, and the address of the next instruction is saved.) Thus there are two possibilities for the address to be saved by an interrupt during the input-waiting period. In the case of a BRK interrupt, produced by a 00 in the code, this next-instruc-

tion address is saved on the stack, but I soon discovered that the CTRL-OA-ESC interrupt is different. The problem was to find where this interrupt address is stored, so it can direct us to the memory area of immediate interest.

Brute force memory searching for one of these addresses, then the other if the first is not found, revealed that the RTI target address was stored at \$0037B8, which appeared to be part of a stack because it was apparently located via a pointer to \$37B6. This pointer was located at \$E01D52. I added a short routine to read this target address and store it in \$333. Once into the monitor, reading \$333 gave me the location of the program interruption, hence the area of memory where the program had been loaded. This all worked nicely until I tried interrupting during the operation of Tools - specifically, during the painting of a picture with QuickDraw. Then I found that the address was sometimes located at the address pointed to by \$E01D52, sometimes at the next byte, sometimes at the second next, where I had originally found it, and sometimes that pointer gave me no information whatever about the RTI address! It seems that in the handling of the CTRL-OA-ESC interrupt, the stack gets used and corrupted.

It turns out to be a very complicated situation. The interrupt managing system is primarily aimed at BRK interrupts, saving all sorts of data as to the state of things when the BRK occurred, with a Toolbox call for recovering all this information. Unfortunately, it does not do the same for a Control-OA-ESC interrupt. On such an interrupt, all the data pertinent to the latest BRK are stored! Fortunately, however, the stack pointer at the time of the Control-OA-ESC interrupt is stored, and if that information is studied before anything happens to the stack, the program address at the time of the interrupt can be found. In principle, this is done by inserting a "detour" in the interrupt handling routine to immediately extract the answer when Control-OA-



ESC is pressed, before the interrupt handler is allowed to continue with its allotted task.

This procedure turns out to be tricky. If you write a small program to create and insert a detour, this program itself "disappears" when it finishes and calls QUIT - this is before you get to use it! So you write the detour to be a fixed program on page \$300 so the memory manager won't drop it after creating it - but now QUIT removes the detour sign, putting the "road" back to its original route, even though the detour target program at \$300 is still there. To get around both these problems requires writing the detour to \$300 as a "Permanent Initialization File" routine which is activated on booting. All this management stuff can be frustrating to an old-timer who is used to putting programs where he wants them, with no interference from Big Brother! With DETOUR in operation, whenever the CDA menu is called by Control-OA-ESC, the program counter at that time is stored in \$333, whether or not any CDA is used.

The basic complication that requires all this indirection is that pressing Control-OA-ESC calls a routine that posts a desk accessory event - the system calls ChooseCDA the next time GetNextEvent is called, so the address when the interrupt was entered may be quite unrelated to the address when the CDA menu was entered. This is why the information must be obtained during a detour which intercepts the CDA vector to get the data before the CDA gets involved.

Control-OA-ESC calls IRQ.DESKACC, also called CDA Vector, at \$E00048, which holds a JSL to the interrupt manager routine. The detour is established by copying this JSL target to a detour exit at "leave", and replacing the target address by the address of the detour entrance. This address is known only as an assembly label; the memory manager will decide where to install the routine. The detour itself examines the stored interrupt data and copies the desired return address to \$333. This address is

solely for the information of the man at the keyboard; when the program leaves the detour it goes through the normal interrupt routine and sets up its own route back to the interrupted program. Having thus solved(?) my problem, I realized that having DETOUR always operate with all CDAs offered a potential for trouble, for example, if a CDA used the \$333/5 area. It doesn't make sense to try to outguess everybody and find a "safe" place for the interrupt data. It finally dawned on me that the operation of DETOUR should be optional, requiring an additional input, so I modified the program to require pressing Control-OA-ESC and SHIFT simultaneously. If the SHIFT key is not down, Control-OA-ESC instructs the detour to go directly to leave, i.e., to bypass the detour itself.

The use of DETOUR is transparent - the operator simply presses Control-Shift-OA-ESC at any point during the run, and chooses "Examine memory" from the CDA menu. \$333 shows him the memory area that was active when he interrupted; a custom-ary L(list) operation lets him examine details. He can also make byte changes at this time. CTRL-Y <CR> returns to the CDA menu; selecting QUIT continues the program from the point of interruption.

There is a caveat attached to my DETOUR routine. If Apple should change its Interrupt Manager in any future version, DETOUR might not work - it doesn't operate via "guaranteed entry points". DETOUR is just a convenient quick-and-dirty tool; for serious debugging, get GSBUG from APDA at Apple Computer, Inc.

Listing 1 is a simple assembly routine for the "Examine memory" CDA which loads and runs at \$300. After assembling and linking, enter FILETYPE EXAM CDA, and copy (or move) EXAM to the DESK.ACCE folder. Listing 1A is a data dump of the final code.

Listing 2 is the source code for DETOUR; after DETOUR is assembled and linked, enter FILETYPE DETOUR \$B6 which

marks it as a permanent-initialization file. It must then be copied (or moved) into the SYSTEM.SETUP folder. Listing 2A is the corresponding data dump.

LISTING 1 - CDA source code

```
*****
*   EXAM Source Code   *
*   by Chet Page      *
* *
*   December 1990     *
*APW/Orcas ASM code *
*****
KEEP EXAM
Toolbox GEQU $E10000
Exam START
  DC H'0E'; number of char-
acters in string
  DC C'Examine memory' ;
  (this avoids using macros)
  DC I4'Begin'
  DC I4'Finish'
Begin REP #$30
  LONGA ON
  LONGI ON
  PEA 0000; set output to
slot 3
  PEA 0000
  PEA 0003
  LDX #$100C
  JSL Toolbox
  PEA 0001; initialize
screen (HOME)
  LDX #$150C
  JSL Toolbox
* Save stack pointer *
  TSC; hold old stack
pointer
  LDX #$180 ; set new
stack
  TXS
  PHA; save old stack
pointer
  LDA #0 ; set data bank
to 0
  PHA
  PLB; for the following
program load
  LDA $FB38 at $300
  STA $300; SEC
  LDA $694C ; XCE enter
emulation mode
  STA $302; JMP $FF69 en-
ter monitor
  LDA $18FF ; The exit
routine is at $305
```




```

STA $304
LDA #$C2FB ; CLC
STA $306; XCE restore
native mode
LDA #$AD30 ; REP #$30
STA $308;
LDA #$017F ; LDA $17F
get old stack pointer
STA $30A;
LDA #$6B1B ; TCS re-
store old stack pointer
STA $30C; RTL return to
DESK.ACCS menu
* Set CTRL-Y for exit
program
LDA #$305
STA $3F9
* Routine for entering
monitor - jump to 0 bank,
enter
* emulation mode, then
enter monitor
* Now that page $300 pro-
gram is loaded, set direct
* page to zero and get to
the action
PEA 0
PLD; set direct page to 0
JML $000300 ; jump to
enter-monitor routine
Finish RTL ; dummy
Finish
END (needed by CDA
format)

```

LISTING 2 - DETOUR source code

```

keep detour
toolbox gequ $e10000
cdavector gequ $e10048
keymodreg gequ $c025
main start
longa off
longi on
sep #$20
rep #$10
php
phb
phx
phy
pha
lda cdavector+1
sta >leave+1
lda <enter
sta cdavector+1
lda cdavector+2
sta >leave+2
lda #>enter

```

```

sta cdavector+2
lda cdavector+3
sta >leave+3
lda #^enter
sta cdavector+3
pla
ply
plx
plb
plp
rep #$20
rtl After setting up
detour, return to caller
enter lda keymodreg
lsr a Is SHIFT down?
bcc leave No
php
clc
xce
rep #$30
phb
pha
phx
phy
pea 0
pea $320 Copy inter-
rupt data to $320
pea $10
ldx #$3103
jsl toolbox
ply
plx
pla
plb
plp
rep #$30
lda >$000326 Stack
pointer at time of inter-
rupt
tax
lda >2,x
sta >$000333 Store
program counter (2 bytes)
sep #$20
lda >$00032c
ror a
bcs emulIf program was in
emulation mode
lda >4,x
bra done
emul lda #0
done sta >$000335 Store
bank number
leave dc h'5c' End of
detour
ds 3
end

```

LISTING 1A

```

2000:01 00 00 00 00 00 00 00
00 77 00 00 00 00 0A 04 01
2010:00 00 01 00 00 00 00 00
00 00 00 00 00 00 00 00 00
2020:00 00 01 00 00 00 00 00
00 2C 00 40 00 20 20 20 20
2030:20 20 20 20 20 20 20 20
20 20 20 20 20 20 20 20 20
2040:F2 77 00 00 00 0E 45
78 61 6D 69 6E 65 20 6D 65
2050:6D 6F 72 79 17 00 00
00 76 00 00 00 C2 30 F4 00
2060:00 F4 00 00 F4 03 00
A2 0C 10 22 00 00 E1 F4 01
2070:00 A2 0C 15 22 00 00
E1 3B A2 80 01 9A 48 A9 00
2080:00 48 AB A9 38 FB 8D
00 03 A9 4C 69 8D 02 03 A9
2090:FF 18 8D 04 03 A9 FB
C2 8D 06 03 A9 30 AD 8D 08
20A0:03 A9 7F 01 8D 0A 03
A9 1B 6B 8D 0C 03 A9 05 03
20B0:8D F9 03 F4 00 00 2B
5C 00 03 00 6B 00 00 00 00

```

LISTING 2A

```

2000:01 00 00 00 00 00 00 00
00 87 00 00 00 00 0A 04 01
2010:00 00 01 00 00 00 00 00
00 00 00 00 00 00 00 00 00
2020:00 00 01 00 00 00 00 00
00 2C 00 40 00 20 20 20 20
2030:20 20 20 20 20 20 20 20
20 20 20 20 20 20 20 20 20
2040:F2 87 00 00 00 E2 20
C2 10 08 8B DA 5A 48 AF 49
2050:00 E1 8F 84 00 00 A9
3B 8F 49 00 E1 AF 4A 00 E1
2060:8F 85 00 00 A9 00 8F
4A 00 E1 AF 4B 00 E1 8F 86
2070:00 00 A9 00 8F 4B 00
E1 68 7A FA AB 28 C2 20 6B
2080:AD 25 C0 4A 90 42 08
18 FB C2 30 8B 48 DA 5A F4
2090:00 00 F4 20 03 F4 10
00 A2 03 31 22 00 00 E1 7A
20A0:FA 68 AB 28 C2 30 AF
26 03 00 AA BF 02 00 00 8F
20B0:33 03 00 E2 20 AF 2C
03 00 6A B0 06 BF 04 00 00
20C0:80 02 A9 00 8F 35 03
00 5C 00 00 00 00 00 00 00

```




SoftDisk GS

Do you have a limited amount of money? Do you have an Apple IIGS computer? Do you want more software for your computer than you already have? If your answers to these three questions is NO, then you probably do not need to read this article. However, if you are not filthy rich, have an Apple IIGS computer and have a burning desire to increase your current software library then you are about to read the right article.

This is a review of a publication named SOFTDISK GS (SDGS for short) for the Apple IIGS computer. SDGS is published monthly by Softdisk Publishers of Shreveport, La.

I discovered SDGS through one of the traditional advertising methods. I received a sales pitch in the mail telling me that this publication existed and asking me to try a subscription.

I had tried some of the disk based magazines like Microzine (tm) over the last 10 years. While there was quality in those, and while they worked as advertised, none of the previous publications I had tried suited my interests. These publications were just too elementary for me. I am certain, however, that there are many Apple II users who are getting much use and pleasure from these publications.

After trying the disk version of A2-Central, I gained more respect for the potential that this publishing medium might offer. When I considered the offer from Softdisk, I thought that I would not risk much since they have a 3 month trial offer that only cost about \$10/month so I sent off my money.

What did I find?

The first issue I received was issue #6 (the January 91 issue is #15). On this 3.5" disk there were 69 files, 12 folders for

a total of 788K in disk according to the Finder. Those 69 files included Jukebox, Clip Art, AWGS Templates, Fonts, Games, Reviews, a Question and Answer column, Letters to the Editor, and a feedback report for issue 6. In fact, there is so much material on this disk that there does not begin to be room available to make this a self booting disk. Not to worry, though, a System Disk is included with the first shipment of a subscription.

At that time I received Apple II GS Operating System (GS/OS) system 4.0 on the system disk. I do not know if they have switched to a more current version of the GS/OS and a quick call to their toll free number did not reveal that answer. If it is really important to you, call Tom Hall at 318/221-5134 and ask him which version operating system will be shipped with your subscription. If you do not have a current version of GS/OS, you will be able to use SDGS with their system disk. I am presently using SDGS with GS/OS 5.0.4 and am having no problems.

I also received a premium disk with my subscription. Occasionally they run a special incentive for new subscriptions. This extra disk I received contains about 200 Print Shop graphics. A nice touch and useful to many of us with a GS.

Hardware requirements

To be able to use the SDGS you first need to have an Apple IIGS computer system. You must have 768K of memory installed in your computer and at least one 3.5 inch disk drive. The recommended system has a color monitor, at least 1.25 M of memory and two 3.5 inch disk drives or one 3.5 inch disk drive and a hard disk drive from which to boot GS/OS. SDGS is distributed on a 3.5 inch disk so requiring at least one of these

drives on your system is understandable.

How it works

I use the Finder on my GS so I will tell you the steps that I go through in order to use the SDGS. If you use some other program launcher, the method of using SDGS will be left up to you. Isn't that why you refuse to use a GUI?

First off, I boot my GS from a hard disk drive and arrive at the Finder desk top. I then put the SDGS into the disk drive and see the SDGS* disk icon appear on the screen. The * represents the issue number of the disk, and each disk has its own disk name. If the SDGS disk is not automatically opened (configurable as with all ProDos disks in the Finder) double click on the SDGS disk icon to open the disk.

This produces the open disk which also comes from GS/OS automatically opening the disk. The icon (cute little picture) for the SDGS start file is quite nice looking. Double click on this icon to start the SDGS program.

After a few seconds you will be presented a screen of text admonishing honesty. Read this while more of the software is loading. Once the light on the 3.5 inch disk drive goes out, hit any key to replace the text screen with the cover of the magazine. A nice color picture which is likely to be from the feature program on the disk. After admiring this for as long as you like, hit a key or click once.

You are now at the main menu of the SDGS program. One thing that is obvious is the icons are different from anything you have seen before. In fact, each icon is created for that particular file.

A word of caution is in order at this point. The GUI with which we are familiar requires two clicks (double click) to run the program in question or open a file. The first click selects the program and the next click is the "run this program" command. SDGS GUI is a little different in that only one click is required to run the desired program. I can attest to the fact that usually, a double click does not confuse anything except me.

When you click on the first SDGS icon, go slowly. Watch the icon as you press the mouse button. Most of the

icons change in some way during the time that the button is pressed. A nice touch, and more fun than simply having the icon going black.

Upon releasing the mouse button you are presented with a decision box, assuming that you chose an icon for a program that could be run, like a game. This decision box offers the choices of Running the program, Reading the instructions or Canceling the request and going back to the main menu. Usually the instructions are a good first choice for new programs, as this is the only documentation you get from SDGS programs.

If you selected a non-executable file, like an Appleworks GS (AWGS) template, you will receive a text description of what the file contains and how to use it. If you selected a clip art file, you will be able to look at the pictures in the file but will not be able to use them for anything in SDGS. These are for use in programs like AWGS where clip art is supported.

In addition to the icons, there is a pull-down menu bar across the top of the screen. Many familiar options are contained here with their key stroke equivalents, like open-apple-Q to quit SDGS and return to the launching program. And yes, if you simply have to put your fingers on the keys, there are open apple key strokes for file selection.

What pleasures await

One of my favorite programs is the Jukebox. This program plays 3 short tunes (well, maybe as long as a minute or so) included in the jukebox folder. These tunes are Music Studio (tm) files, created for SDGS. You are not limited to only the tunes on the disk. From a hidden pull-down menu in the Jukebox screen, you can select any Music Studio (tm) tune that you would like to play, so long as you already have the tune. This is only a player, however. You may not create or edit a tune with Jukebox. If your system has been enhanced with a stereo card, amplifier and speakers you will be able to enjoy your Jukebox in amplified stereo. What a treat.

Once the household has settled down from the musical joys of the latest disk, there usually are games included on

each disk. Some are complete games that can be run from the SDGS disk or moved to a disk of your choice (you can put these on your hard disk, there is no copy protection). These complete games include arcade-style games and adventure games.

Currently there is a multi-part graphics adventure game called Dark Designs which is self mapping. So far there have been two installments of Dark Designs and I am looking forward to the next installment. (I cheat a little and enhance my characters in the character file after my first struggle through each game. I wish I could get a key to the code so I did not have to experiment so much with the hexadecimal code to learn how to give my fighters plate armor.)

In addition to complete games, there are level sets to be used with other popular games. There have been several courses for Mean-18 (tm) and level sets for Arkanoid (tm) included on recent disks. If you do not have those programs, these files will be of little use to you. I get the feeling that many folks who have a GS also have these two games. I am one of the odd people who did not have either until just recently. Now I am only half odd.

While the games on SDGS are not on the leading edge of gaming technology, they are usually quite good and fun to play. Not all games will appeal to all game players but some of the games on SDGS will hit you right.

Every disk has a font folder with a font set in it. A different font each month. While I feel that it is too easy to over do the use of a variety of fonts in a document, there are times when Shaston 10 simply will not do. Then I turn to one of the fonts more suitable to the task at hand and use it. The December disk, for example, had a font called Dickens & Dickens Bold. This font looks like the type of characters one expects to see used to print a poster advertising "A Christmas Carol."

Every disk has clip art. This art is for use with programs like AWGS that can use clip art. There is no way to use the clip art in SDGS but you can look at the pictures in these files. Some of these pictures are seasonal like Halloween, Winter and Christmas. Others are less

specific, like sports, and can be used through out the year.

Many of the disks have desk accessory files that you may choose to include in your system. A desk accessory is a program that may be run from the Apple pull-down menu or from the open-apple/control/escape key press, while you are in some other program. Many useful and clever accessories have been created for use with the GS. In fact people who use a lot of these sometimes need to have more than one set in order to be able to use all that they want to use.

Departments

There are several departments that are contained on each issue of SDGS. Are you a software author but do not have a commercial means to publish your work? Maybe you think too much of your creations to donate them to the public domain. Possibly you do not believe you will be able to get anyone to donate to you if you try the shareware route. And what about protecting your copyright? Help is available in SDGS because one of these departments covers submissions.

Your programs can appear in SDGS. You can receive international exposure through the friendly magazine on a disk that comes to your home every month by submitting your program for publication. The areas mentioned in this article are good types of programs that SDGS is looking for, but they do not publish public domain software nor do they jump at shareware, although sometimes they may publish a great shareware program. The key is that your program must be original and unpublished.

You want international recognition but do not know a nibble from a sector? There is a letters department where selected letters are printed. Write about the SDGS, Apple or whatever your personal passion happens to be. It might not be published, but I did have a letter to the editor published in a previous issue. What a nice feeling. Not unlike having an article printed in your computer club's newsletter.

What publication is complete without an editorial? SDGS is no



exception and the G-Essence column is where Tom Hall tells us what is on his mind from month to month. His style is friendly and easy to read. He covers the current disk, Apple, the computer industry, puns, bad jokes and anything else that may be available to him that he thinks we might like to read. I enjoy his column and look forward to it each month. (No, he did not pay me to say that.)

Many technical magazines have people review material pertinent to the subject of the magazine. In SDGS there are reviews of software and sometimes hardware for the Apple IIGS computer. These reviews are usually submitted by readers, rather than written by the SDGS staff, although the staff does get into the act from time to time. If you have a desire to write a review of software or some new gadget that just came on the market, consider submitting it to SDGS for publication. You might want to have it printed in your club news letter but where would you reach more readers? Part of my decision to buy a solitaire program was based on a review carried in SDGS.

Remember when you were in school? The work that you did, homework and tests, was graded by the teacher to show you (and your parents) if you were learning the information that was

required by the course. Now we can turn the tables and be the ones who fill out report cards. Report Card is another department on each SDGS disk.

This may be the most important department on the entire disk (sorry Tom!) This is a request by the folks at SDGS to have us grade them on the job they are doing. The form is contained in the report card file and may be printed as you are reading it from within SDGS. The two areas that you are to grade is the appeal of the programs to you and the quality of the program, in your opinion.

Through this report card we help to improve the content of our magazine by letting our opinions and desires be known at SDGS. Unless I tell them, they do not know that I do not have the golf game that every sane GS owner has as one of the required recreational packages for his system. Unless you tell them, they do not know if you like or dislike the desk accessories. Be gentle, but do tell them how it is with you and they may move to give you what you want. It can't hurt.

I must admit that I have not sent in a report card on every one of the issues I have received. I have sent in some, however, and pointed out the holes in my software library (like no golf program.)

Tom and the staff at SDGS really want these reports. If we do not like

something they want to fix it if possible. If we have praise, they will take that too.

Summary

Softdisk GS is a good way to build or increase your software library for your Apple IIGS computer. Through SDGS you will collect utilities, templates, fonts and games. You will pay less for this software, as little as \$5.83 per issue, than if you bought the same type of software through your friendly software source.

The quality of software in SDGS is good. It is not pushing the state of the art, but it is a lot better than the 1980 level text and block graphics styles of software. If you can write better software than what is on SDGS, do it and submit it for publication. SDGS has good Graphics and Sounds. The GUI is pretty slick. I like it.

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Shreveport, La. 71130-0008
1-800-831-2694
In La. 318/221-8718
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24 months \$139.95
12 months \$ 89.95
6 months \$ 49.95
3 months \$ 29.95 trial subscription

The Apple II Guide is Coming In!

Thanks to a special offer from Apple Computer's User Group Connection, Washington Apple Pi is receiving a shipment of The Apple II Guide, an exciting new book aimed at Apple II users all over. This book, published by Apple Computer, contains a short history of Apple Computer, Inc., some tips for the beginning Apple user, and a list of general resources that everyone could use. There are even a few "success stories," of people who put their Apples (That's right:

Apples as in Apple II!) to good use.

They're going to retail for \$19.95, but a limited supply (about 225) is available through the Pi for \$5 each. Be sure to reserve your copy early; they'll probably go fast.

Moreover, we'll be giving some away at the General Meetings (see your calendars for details). Bone up on your Apple trivia, because the giveaway questions are coming out of that book! (I'll have an easy question for the

beginners, don't worry.) By the time you read this, the January giveaway will have passed, but there will be two more copies reserved for February and March. Some will also be on sale those days, alongside the Disk Library and the Pi's cash register.

Remember: There's only a limited supply. Don't be fooled by imitations.

AppleWorks Tax Templates

by Paul Koskos

Greetings, fellow taxpayers. By the time that you read this, I will have delivered (ed.-he has) the 1990 Tax Template ShareWare package to the Disketeria. The only thing missing at this point is the 1990 update for Form 6251 (Alternative Minimum Tax), which is one of the last forms released by the IRS, year after year.

In addition to the Disketeria, the templates will be available on the TCS for those of you with modems and a password.

As in the past, the template will occupy both sides of a 5.25" floppy and will require AppleWorks. The forms available are:

Form 1040	Individual Income Tax Return
Schedule A	Itemized Deductions
Schedule B	Interest and Dividend Income
Schedule C	Profit or Loss from Sole Proprietorship Business (2)
Schedule D	Capital Gains and Losses
Schedule E	Supplemental Income
Schedule SE	Social Security Self-Employment Tax (2)
Form 6251	Alternative Minimum Tax (*See note below)
Schedule X	Tax Rate for Single Status
Schedule Y1	Tax Rate for Married-Joint Status
Schedule Y2	Tax Rate for Married-Separate Status

Schedule Z	Tax Rate for Head of Household Status
Table 1	Earned Income & Social Security Income
Table 1A	Other Income—Outgo
Table 2	Tax-Free Income

*Note: The IRS has not released the 1990 version of Form 6251 as of this writing. If the update is not available soon, I will leave the 1989 version of the Form in the template for preliminary estimation purposes. If you are subject to the Alt. Min. Tax, you will have to manually complete it and enter the result on Form 1040. For registered shareware users, I will update the template when the new 6251 is issued AT MY OFFICE.

Side 1 of the distribution disk will contain all of the above forms in one inter-linked template requiring data to be entered only once, after which it will automatically transfer to the other forms where they are applicable. This template will require about 100k of Desktop memory in AppleWorks, or at least 250k of RAM. A standard 128k IIE with no memory card will only provide 55k of Desktop memory in AppleWorks.

Side 2 of the distribution disk is for those who don't have expansion memory in their computer and have only a 55k Desktop. Here, the template will have been split into two or more parts, none larger than 50k. This will require some manual transfer of data a results between the segments.

There is also an AWP file on the disk with detailed instructions on use.

The template is shareware. I'd like to take this opportunity to thank those of you who sent in their shareware fee last year. If you use the template and find it useful, I hope that you'll do likewise this year.

NOTE TO MAC USERS: An Excel and/or Microsoft Works version of the template will also be available for Mac Users.

Paul Koskos
12310 Old Canal Road
Potomac, MD 20854
(301)279-0671

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Proposed Bylaw Changes		Apr	9	bylaws
Commentary on the Initial Proposal		Apr	10	bylaws
Proposed Bylaw Changes		Jun	11	bylaws
Welcome CAD-SIG	Sutton, Jeff	Jun	20	CAD
The Inpert's Corner	Bloom, Allan M., Ph.D., CDP	May	48	Catalyst
...making it pay	Evry, Ron	Aug	49	cheap computing
Capturing the Creativity of Young Minds	Shapiro, Phil	Jun	27	children
Hard Disk Hygiene: Resolutions for your health	Wolov, Robb	Mar	32	color
Columbia Slice	Childers, Tim	Mar	12	Columbia Slice
As American As Apple Pi	Shapiro, Phil	May	21	Community Outreach
Program				
Artists On Exhibit	Seferian, Nancy	May	16	computer art
Artists on Exhibit	Seferian, Nancy	Apr	16	computer art
Hartford-Macintosh Drive-In Theatre	Evans, Lorin S.	Sep	20	computer driving
Computers As Attention-Focusing Devices	Shapiro, Phil	Sep	19	computers
Copy II Plus v. 9.0	Oringel, Bob	Jul	58	copy software
View From the Cat House	Brennan, Kim	Apr	53	desk accessories
MaxFiles - the DA	Lange, Blake	Sep	24	desk accessories
Cheap Computing	Evry, Ron	Oct	69	economics
On Elections and Such	Editor	May	7	Editorial
Changing Times	Potter, Frank	Mar	7	Editorial
Out With the Old	Potter, Frank	Jan	7	Editorial
Election time...	Potter, Frank	Jun	5	Editorial
Hang In There, WAP	Potter, Frank	Feb	7	Editorial
More Feedback...	Potter, Frank	Jul	7	Editorial
Your Membership In the Pi	Potter, Frank	Dec	9	Editorial
EdSIG		May	13	Education
EdSIG	Shapiro, Phil	Apr	13	education
Look Mom, No Software!	Shapiro, Phil	Apr	67	education
EdSIG	Shapiro, Phil	Mar	13	education
EdSIG	Shapiro, Phil	Jun	12	education
Ed SIG	Shapiro, Phil	Jul	12	education
EDSig	Shapiro, Phil	Sep	13	Education
EDSig	Shapiro, Phil	Oct	12	education
EDSIG	Shapiro, Phil	Nov	11	education
EdSIG	Shapiro, Phil	Dec	11	education
Using Arrays in Excel	Moore, Tim	Jan	43	Excel
Excel Save As		Feb	29	Excel
Just The Fax, Ma'am	Board, Jim	Jun	43	FAX
Apple II GS Font Tables		May	60	Fonts
I Like Your Face	Donnelly, Jim	Apr	18	fonts
Typestyler	Donnelly, Jim	Apr	32	fonts
Building fonts	Donnelly, Jim	Aug	13	fonts
Building Fonts - 2	Donnelly, Jim	Sep	21	fonts
Building Fonts - 3	Donnelly, Jim	Oct	16	fonts
Typographic Pioneers	Donnelly, Jim	Dec	16	fonts
You Write 'em (part one) ...	Evry, Ron	Feb	54	free programs
Learn To Speak French	Leshinsky, B and Kowalczuk, S	Nov	30	French
Solitaire Royale (GS):	Wood, David	May	72	games
Cross Country USA (Pt. 2)	Shapiro, Phil	Apr	56	games

Moore, Paul
Payne, Steven
Wood, David
Moore, Paul
Slaven, Dan

Hall, Charles Don
Payne, Steven

Payne, Steven
Wood, David
Sofaer, Michael J.
Bastian, Chris
Payne, Steven
Payne, Steven
McQuinn, Mary ANn
Payne, Steven
Payne, Steven
Wood, David
Bastian, Chris
Shapiro, Phil
Payne, Steve
Page, David K. (and daughter)
Wood, David
Wood, David
Evry, Ron
Bastian, Chris
Evry, Ron
Zeman, Rick
Wolov, Robb
Willis, John

Heller, Paul
Pastura, Lou
Bakker, Dirk J.
Rall, Eric
Olsen, Peter C.

Shapiro, Phil
Evangelista, Frank
Bakker, Dirk & Hutmire, Chris
Mudd, David
Evry, Ron
Potter, Frank M.
Potter, Frank
McGraw, Tim

Bloomfield, Douglas M.
Yourshaw, Michael
FitzHugh, Richard
Lee, Christopher S.
Warrick, Thomas S.
Morganstein, D and Milrod, M
Trusal, Lynn R.
Trusal, Lynn R.
Trusal, Lynn R.
Schlosser, Paul
Schlosser, Paul
Trusal, Lynn R.
Wolov, Robb, M.D.
Schlosser, Paul
Trusal, Lynn R.
Schlosser, Paul
Trusal, Lynn R.
Wolov, Robb
Pastura, Lou
Weikert, Dave
Weikert, Dave
Weikert, Dave
Weikert, Dave
Begleiter, Ralph J.
Begleiter, Ralph J.
Begleiter, Ralph
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Begleiter, Ralph J.
Begleiter, Ralph J.
Begleiter, Ralph J.
Begleiter, Ralph J.
Jatta, John
Wolov, Robb
Bastian, Chris
DeVera, Manny

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Monitors For the GS	Shapiro, Phil	Dec	73	monitors
Download City	Schlosser, Paul	Jul	67	new TCS files
Nwesletter Production - Behind the Veil	Raesly, Lee	Nov	19	newsletters
CLub Logos	Raesly, Lee	Dec	20	newsletters
what, NeXT?	Evry, Ron	Jun	53	NeXT
Office News	Pochepko, Nancy	Nov	8	office
Office News	Pochepko, Nancy	Dec	8	office
New Wines In Old Macs	Jensen, William R.	Jul	19	old Macs
New Service	Hayman, Gary	Nov	8	Partners program
Photographing Your Computer Displays	Crosta, Pete	Feb	21	photography
View From the Cat House	Brennan, Kim	Aug	43	PostScript
Panasonic KX-Mov80 Printer	Shapiro, Phil	Mar	56	printers
MacPortable/Diconix Printer	Hoffman, Hans	Oct	53	printers
Sherlock Holmes: The Case of the Cut-Sheet Feeder	Hayman, Gary	Nov	65	printers/cut-sheet feeders
Fly Your GS Through A Massive Sort	Page, Chester H.	Mar	62	programming
Intelligent Carriage Return Stripper	Hayman, Gary	Mar	64	programs
Quicken and AppleWorks 3.0	Hayman, Gary	Jul	63	Quicken & AppleWorks 3.0
Cheap Computing	Evry, Ron	Jul	57	recovery of data
Apple II Repairs	Shapiro, Phil	Jun	50	repairs
Mailorder Computer Repair	Shapiro, Phil	Oct	74	repairs
Couple of Programs from Quality Computers	Oringel, Bob	Feb	51	RepairWorks & EasyDrive
Canvas 2.1	Baldridge, Bill	Aug	23	review
Great Sequencer, But what About My Dishes?	Baniszewski, Ellen	Aug	32	review
Number Muncher	Shapiro, Phil	Aug	60	review
Omega	Steteklueh, Jeff	Aug	65	review
WAP Reviewers Wanted	Pastura, Lou	Aug	5	reviews
Macinations	Wolov, Robb	May	25	rumors
Columbia Slice	Childers, Tim	Apr	12	slice
Annapolis Slice	Childers, Tim	Jun	25	slice
Columbia Slice	Childers, Tim	May	11	Slice activities
Columbia Slice	Childers, Tim	Jan	11	slices
Columbia Slice	Childers, Tim	Jun	23	slices
Columbia Slice	Childers, Tim	Feb	11	slices
Columbia Apple Slice	Childers, Tim	Oct	12	slices
Columbia Apple Slice	Childers, Tim	Nov	11	slices
Columbia Apple Slice	Childers, Tim	Dec	11	slices
Keeping Cool/Warm With Canvas	Urban, Bernie	Oct	19	software
Soft- and Hardware Review Status	Pastura, Lou	Oct	27	software
After Dark 2.0	Sicard Chuck	Oct	28	software
Endnote, Version 1.2.3	Saundon, Andrew	Oct	30	software
Desk	Bastian, Chris	Oct	44	software
Image Grabber 2.0 and Exposure Pro	Liao, Ambrose	Oct	51	software
PowerDraw vs 3.0	Hoffman, Hans	Nov	34	software
Draw Tools	Markey, John	Nov	40	software
Easy Color Paint	Schlosser, Paul	Nov	52	software
Payroll Solutions for the Macintosh Computer	Camerlengo, Robert	Nov	53	software
PrintShop: Old v. New	Evry, Ron	Nov	71	software
Renaissance Disk Optimizer	Tarantino, Paul	Nov	72	software
Guardian	Hayman, Gary	Nov	74	software
Talking First Reader	Slaven, Daniel	Nov	76	software
Software and Books Available Today!!	Evangelista, Frank	Jul	Oct	software & books for review
MacGIS Review	Cimmerly, Kim	May	27	software review
Sticky Business	Milrod, Marty	Apr	30	software review
MacGIS Review	Cimmerly, Kim	Apr	36	software review
Address Book Plus...	Bloomfield, Douglas	Apr	42	software review
MICOL Advanced BASIC	Robey, Adam	Apr	66	software review
Joys of Illustrator	Oringel, Bob	Mar	38	software review
Copy II Plus 9.0	Shapiro, Phil	Mar	53	software review
Cross Country USA (Pt. 1)	Hayman, Gary	Mar	54	software review
Mousetext and Ultramacros	Best, Al and Morganstein, David	Mar	59	software review
JMP	Oringel, Bob	Jan	26	software review
All the Right Type	Harman, Gary	Jan	45	software review
Change-a-File	Oringel, Bob	Jan	47	software review
Food Processor II	Hayman, Gary	Jan	49	software review
Photonix	Potter, Frank	Jan	51	software review
MacEnvelope 4.1	Shapiro, Phil	Feb	26	software review
DOS Mounter	Evry, Ron	Feb	27	software review
Facemaker - A Review	Jones, Pete	Feb	55	software review
geoFile: a review	Pastura, Lou	Feb	60	software review
Large-Text JoyReader: A Review	Hayman, Gary	Feb	66	software review
LapLink Mac, Release III	Seferian, Nancy	Jul	34	software review
Publish It! 3	Goldberg, Gary	Jul	61	software review
Fontina	Potter, Frank	Dec	28	software review
True Form	Clark, Rob	Dec	33	software review
Claris CAD 2.0	Potter, Frank	Dec	36	software review
Dynodex	Pye, Brent	Dec	37	software review
9Mov Utilities	Smith, Dale	Dec	40	software review
Norton Utilities For The Macintosh	Shapiro, Phil	Dec	54	software review
Wings Across the GS	FitzHugh, Richard	Dec	69	software review
StoryWorks	Hayman, Gary	Dec	78	software review
Sounds and the IIGS	Board, Jim	Mar	57	sound program
Draft Standards of Conduct for WAP Members	Morganstein, David	Mar	1-	Standards of Conduct
Strip Those CRs...		Feb	69	stripping CRs
Sum Of Its Parts		Feb	32	SUM
The President's Corner		May	9	sundry

Bits & Bytes	Trusal, Lynn R.	May	34	sundry
AppleWorks GS-otérica: The Article	Wood, David	May	51	Sundry
Bits and Bytes	Trusal, Lynn R.	Apr	39	sundry
President's Corner	Morganstein, David	Mar	9	sundry
Mac Q & A	Morgenstein, D & Milrod, M	Mar	34	sundry
Bits and Bytes	Trusal, Lynn R.	Mar	36	sundry
President's Corner	Morganstein, David	Jan	9	sundry
President's Corner	Morganstein, David	Jun	7	sundry
President's Corner	Morganstein, David	Feb	9	sundry
President's Corner	Morganstein, David	Jul	8	sundry
President's Corner	Rall, Eric	Aug	9	sundry
President's Corner	Rall, Eric	Sep	8	sundry
President's Corner	Rall, Eric	Oct	9	sundry
President's Corner	Rall, Eric	Nov	9	sundry
View From the Cat House	Brennan, Kim	Jan	46	sundry Apple II
Bits & Bytes	Trusal, Lynn R.	Jan	36	sundry Mac
Dr. No's Rambling Prose	Noguchi, Phil	Feb	25	sundry Mac
View From the Cat House	Brennan, Kim	Mar	52	sundry on Apple II
Zap! Goes the Computer	Wolov, Robb, M.D.	Sep	26	surge suppressers
Best of the TCS - Apple II	Kaye, Harvey	Jan	58	TCS Apple II
Best of the Apple II TCS	Kaye, Harvey	Mar	80	TCS Apple II stuff
Download City	Schlosser, Paul	May	78	TCS downloads
Download City	Schlosser, Paul	Apr	78	TCS downloads
Download City	Schlosser, Paul	Mar	78	TCS downloads
Download City	Schlosser, Paul	Jun	60	TCS downloads
As the TCS Turns, Mac Version 1.1	Pasture, Lou	Jan	67	TCS Mac
Best of the Mac TCS	Pastura, Lou	Mar	79	TCS Mac stuff
Download City	Schlosser, Paul	Feb	39	TCS new files
Office News	Pochepko, Nancy	Sep	8	TCS Office
Mac Telecommunicating	Pastura, Lou	May	73	telecommunications
Mac Telecommunicating	Pastura, Lou	Apr	75	telecommunications
Telecommunications for Kids	Shapiro, Phil	Jan	53	telecommunications
Best of the Mac TCS	Pastura, Lou	Feb	82	telecommunications
Best of the Apple II TCS	Kaye, Harvey	Feb	83	telecommunications
Macinations	Wolov, Robb	Jul	26	telecommunications
Tele-Foster Grandparent Program	Kercher, Mary	Jul	66	telecommunications
Best of the TCS - Mac	Schlosser, Paul	Aug	66	telecommunications
Best of the TCS - Apple II	Potter, Frank	Aug	68	telecommunications
On Trackballs ...	Clark, Rob	Oct	26	trackballs
WAP Tutorials	Clark, Rob	Jul	76	tutorials
WAP Tutorials	Clark, Rob	Aug	70	tutorials
WAP Tutorials	Clark, Rob	Sep	80	tutorials
WAP Tutorials	Clark, Rob	Oct	89	tutorials
WAP Tutorials	Clark, Rob	Nov	86	tutorials
I Like Your Face-Part 6	Donnelly, Jim	May	18	Typefaces
I Like Your Face-Part 4	Donnelly, Jim	Mar	18	typefaces
I Like Your Face-Part Two	Donnelly, Jim	Jan	18	typefaces
I Like Your Face — Part 7	Donnelly, Jim	Jun	28	typefaces
I Like Your Face — Part 3	Donnelly, Jim	Feb	18	typefaces
Ultramacros, Primer	Hayman, Gary	May	50	Ultramacros
FINDing Out	Hayman, Gary	Apr	68	UltraMacros
Messing With Messages	Hayman, Gary	Sep	70	UltraMacros
Micro-Mentor Clearinghouse	Knorr, Walter	Jan	20	user groups
Spreading the WAP Word	Ottalini, David	Sep	15	WAP
New Apple II Disks	Shapiro, Phil	Nov	79	WAP Apple II Disks
IIGS Disketeria	Hutmire, Chris	Dec	80	WAP Apple II Disks
Apple III Disk Library	Ottoloni, David	Jun	71	WAP Apple III Disks
Apple III Disk Library	Ottalini, Dave	Aug	74	WAP Apple III Disks
Appli II Disk Library	Shapiro, Phil	Sep	76	WAP Disketeria (Apple II)
Macintosh Disk Library	Weikert, Dave	Sep	42	WAP Disketeria (Mac)
Apple IIGS Disketeria	Hutmire, Chris	Jun	63	WAP Disks
Mac Disketeria	Weikert, Dave	Jan	71	WAP Mac Disks
Mac Disketeria	Weikert, Dave	Jun	66	WAP Mac Disks
Mac Disketeria	Weikert, Dave	Feb	90	WAP Mac disks
Macintosh Disk Library	Weikert, Dave	Jul	70	WAP Mac Disks
Macintosh Disk Library	Weikert, Dave	Aug	34	WAP Mac Disks
Macintosh Disk Library	Weikert, Dave	Nov	80	WAP Mac Disks
Macintosh Disk Library	Weikert, Dave	Dec	86	WAP Mac Disks
MacVolunteers Needed	Milrod, Martin	Jul	33	WAP MacWorld booth
Office News	Pochepko, Nancy	Jun	21	WAP office
Office News	Pochepko, Nancy	Jul	8	WAP Office
Office News	Pochepko, Nancy	Aug	8	WAP Office
On Warranties and Bylaws	Editor	Apr	7	warranty/bylaws
Windows Hype	Wolov, Robb, M.D.	Aug	30	Windows
Off To See the Wizard	Potter, Frank	Sep	28	Wizard
WordMaker	Schlosser, Paul	Mar	28	word processing
WorksSIG	Bastian, Chris	May	14	Works

Classified Advertisements

Classified advertisements can be placed by mailing copy to the business office of Washington Apple Pi. Ltd., 7910 Woodmont Avenue, Suite 910, Bethesda, MD 20814. Be sure to include your WAP membership number and indicate area codes with your phone numbers. Ads must be received by the 1st of each month for inclusion in the following month's issue. Any ads postmarked after that time will be included at the discretion of the Editor. Cost is \$2.00/line (40 characters per line), maximum 12 lines. Members of Washington Apple Pi., Ltd., may place ads up to 3 lines at no charge. The editor reserves the right to refuse any ads deemed inappropriate.

VOLUNTEERS NEEDED

Your Users' Group needs you!! Washington Apple Pi needs volunteers to coordinate and/or help with the following tasks:

Apple II Tutorial Coordinator
Hotline Volunteers
Apple II Disk Annotators
Hotline Volunteers
Magazine/Newsletter Library Coordinator
Hotline Volunteers

If you are interested in lending us a hand, please call Nancy at 301/654-8060.

VIDEO PRODUCTION SERVICE

Network quality video production is now affordable to both large and small businesses, thanks to special "Wholesale Pricing" of award winning company: International Television Productions, Inc.

Full production and editing services, special effects, animation, all you need is available, and cost-effective. Call Guy Durant at I.T.P. District Sales Office: (202) 575-0414.

FOR SALE

HLA CONNECTING POINT is having its BIG APPLE II - MACINTOSH CLEARANCE

Macintosh computers 30% off. Apple monitors 30% off. Apple & Macintosh software 30% - 70% off. All Apple & Macintosh peripherals 30% to 70% off. BRING THIS AD WITH YOU TO RECEIVE YOUR DISCOUNT.

Store Hours: Mon. thru Fri. 9:00 to 5:30
HLA CONNECTING POINT, 5700-J Sunnyside Ave., Beltsville, MD 20705, Phone: (301) 345-1123.

FOR SALE

Apple II with Applesoft card \$100; Apple II Plus \$100; Apple Disk II 5-1/4" drive (DOS 3.3) with controller card \$45; Apple Disk II 5-1/4" drive (DOS 3.3) no card \$30; Apple Disk II 5-1/4" drive controller card \$15; Okidata Micro 92 printer with tractor feed and Epson interface card \$125; Apple II language card (unopened box) \$25; Grappler Orange Micro card \$15; Sanyo 9" green monitor \$25; Sanyo 9" B/W monitor \$15
All prices negotiable. Call Paul O'Connell 301/424-2585.

FOR SALE

Macintosh Plus, 4 MB memory, PL30 external hard disk, Kensington System Saver, Applecard to 8/91. \$1100. Call Walker (703) 533-0457.

FOR SALE

Mac 512K (not E), ImageWritewr I, external 400K drive, 2400 baud modem, cable, software. \$600. Call Nancy or Peter (202) 398-3056 (answering machine).

FOR SALE

Computer desk, 51"x24," raised monitor platform, drawer, shelf. Excellent condition—cost \$250 new. Make an offer Frank (703) 620-8886

FOR SALE

Apple II+ 64k, Q-Disk 128K RAM disk, RF Modulator, Applewriter II, manuals \$200. Call Frank 301/855-6511 or 301/855-4515.

FOR SALE

INSIGHT ACCOUNTING series, v2.0 + upgrades, includes: G/L, A/R, A/P, Payroll and Inventory. Training manuals with demo disk, also. Good solid accounting system. Best offer. Call Larry or Wendy at RSO, Inc., (301) 953-2482 M-F 8:30 - 5:00.

FOR SALE

Timbuktu version 2.0.1, not even open. Best offer (703) 237-5581.

FOR SALE

Mac SE/30 with 5 MB of RAM; 40 MB internal hard disk, several thousand dollars worth of software. \$3200 or best offer. Call (301) 566-2658 work or (301) 566-2804 home.

SOFTWARE SALE

MS Word 4.0 \$179 or version 3.02 \$39
Pagemaker 3.0 \$199 or version 2.0a \$59
MS Excel 1.5 \$139
Filemaker+ \$99
MacDraw (orig.) \$29 or MacDraw II \$189
Borland Sidekick 1.0 \$10
Excellent condition w/ complete documentation. Will accept best offer. Call Ramon at: (301) 963-8438 home or (301) 670-0884 work.

FOR SALE

ImageWriter I, excellent condition, with its own Sessions overseas carrying case. \$200 or best offer. (301) 243-6873.

FOR SALE

Mac 512K upgraded to Plus with accessories. Call (301) 469-0737.

FOR SALE - TAX SALE

MacProject II \$89 Works 2.0 \$99 John N. Williams - Front Royal 703/636-2487.

FOR SALE

IIGS, 786K, RGB, 3.5", 5.25", PC Transporter, Joystick: \$1000 o.b.o.
SuperMac Prodigy SE Accelerator, 1M for Mac SE: \$200 o.b.o.
II+, 48K, mono, 5.25", 80 column card, joystick, paddles: \$100 o.b.o.
Call Mike (202) 328-8827.

FOR SALE

PLP Laserjet (original model for Mac) needs new developer, but otherwise is fine. Best offer accepted. Call Betty (202) 686-0470.

HELP WANTED

MAC consultant wanted for user technical support and training for HyperCard based chemical emergency planning and response software. MAC, HyperCard, training experience required. Knowledge of chemistry, environmental health and safety, emergency response preferred. Send inquiries to: National Safety Council, 1050 17th St., NW, #770, Washington, DC 20036. Attn: CAMEO.

HELP WANTED

DESKTOP PUBLISHING: Composition of scientific and technical books on Macintosh Pagemaker thru MS Word. Clients supply manuscript and IBM WordPerfect disks. Knowledge of copy edit marks helpful. Full-time, great benefits. Send resume to: NRC, GR146 (ECA), 2101 Constitution Ave., N.W., Wash., DC 20418.

WANTED

Paint my Mac SE black (shell, keyboard and mouse). Call Bob at (703) 455-9541 evenings before 9 p.m.

WANTED

Meet w-p users with Asian language fonts (Thai, Lao, Chinese, Burmese, Shan, Vietnamese, Khmer). Call Bob at (703) 455-9541 evenings, before 9 p.m.

WANTED

Free Press \$25 and After Dark \$10. Call John at Front Royal (703) 636-2487.

HELP WANTED (Part time)

Light typing on Mac IILC, working in printshop. General help needed. (703) 237-5581.

HELP WANTED

Thompson Publishing Group is seeking a free-lance Mac consultant and trouble-shooter. Located 1/2 block from Farragut Square, we have about 40 Macintoshes and assorted other hardware. We are looking for a knowledgeable Mac person who can solve hardware/software problems when they arise. Person must be able to come to our office when needed, preferably during regular working hours. Immediate response (within 24 hours) required in emergency situations. Please call Paula Keogh, (202) 872-4000 for more information.



Macintosh Disk Library

by Dave Weikert

GENie downloads

During this past month, we started to use GENie as one source of files for our Macintosh disk collection. GENie has a character based interface like our own TCS although the interface commands and structure are quite different. GENie has a wide variety of files available for download and many, many other features that we have yet to explore. Next month's new disks will bear the first fruit of the GENie downloads and will include a number of PostScript Type 1 fonts for our LaserWriter Fonts series. The Apple II and GS libraries will also be using GENie for downloads although I don't know if they have started yet. Paul Schlosser has been using GENie for quite some time as a source of information for the TCS and to stock the TCS download area.

For those who may be interested in subscribing to GENie STAR, it costs \$4.95 per month for basic services (such as airlines reservations, travel, E-Mail, etc.) that appear to be comparable to those offered by Prodigy. The rate for GENie is much less than Prodigy and the GENie character interface is not likely to be daunting to any of our TCS members. GENie services such as the RoundTables and downloads are not covered under the STAR rate; for these you pay \$6 per hour for non-prime time hours (6:00 PM through 8:00 AM plus all times on weekends and holidays) and \$18 for prime time.

New and Recent Disks

We have six disks this month; one Miscellaneous series (Mac Disk #10.03), one Programmer/Hackers (Mac Disk #14.22A) and four HyperCard StackWare series (Mac

Disks #19.36-1, #19.36-2, #19.37 and #19.38).

The most recent disks include Anti-Virus Utilities series updates (Mac Disks #1.01C through #1.03C and #1.04B and #1.05), Desk Accessories series (Mac Disks #2.11 through #2.16), LaserWriter Fonts series (Mac Disks #6.06 through #6.09), INITs/cdevs series (Mac Disks #9.14 through #9.17), Telecommunications series (Mac Disk #13.10 through #13.12), Programmer/Hacker series (Mac Disks #14.21A and #14.22 through #14.25), System Utilities series (Mac Disks #16.09B through #16.13B), Word Processing Utilities series (Mac Disks #17.04 through #17.06), a special HyperCard StackWare set of six disks (Mac Disks #19.35 Disks 1 through 6) and Mac II series (Mac Disks #20.08B, 20.09B and 20.12A). We also have Apple System Software 6.0.5 (5 disks), Apple System Software 6.0.7 (4 disks) and HyperCard 2.0 (five disks).

Miscellaneous series Tax Templates

It's that favorite time of year again—time for the reckoning with Uncle Sam. To make the job a little less daunting, many of us use our Macs to help out. For the complex return or for those who just enjoy the look and feel of elegance, there is the commercial program MacInTax from Softview. For others, it is time to dust off the spreadsheets and update last year's templates. To make this latter task easier, we are presenting tax spreadsheets from three different authors this year including one from member Paul Koskos.

Just a note of caution, however. All of these tax templates are heavily

caveated by their authors that they are used at your own risk. The Washington Apple Pi, Ltd. makes no representations as to the suitability or correctness of any of these templates and takes no responsibility for any errors or any other problems that you might encounter.

Programmer/Hacker series

This month we received an update to Herb Goodman's ResEdit Primer (version 6.0) and have included it on revised Mac Disk #14.22A. This is a cookbook for using ResEdit version 2.X to edit icons, install sounds and all the other hacker tricks. However, the details in the Primer bring this capability to almost any experience level of Mac user, not just the experts. We have continued to include version 3.2 of the ResEdit Primer on this disk since it is tailored to ResEdit versions 1.X. We had to archive ResEdit Primer 3.2 with Compactor this time in order to get it to fit. If you need to use it, just move it to a blank disk and double click on the Icon.

StackWare series

The recent release of HyperCard 2.0 has piqued our interest in StackWare again. Just in time for this issue comes Dave Condit, our HyperCard StackWare and Externals librarian, with four new disks. Two of these include program notes by Dave and the other two are aptly annotated by Luke Froeb. Thanks Luke, we hope to see more disks from both you and Dave in the coming months.

Dave has assembled a two disk set (Mac Disks #19.36-1 and #19.36-2). This two disk set includes the entire Developer Stack 2.0 program release from Steve Drazga and AnalytX. Long considered the premier stack for icons, specialized scripts, XCMDs and XFCNs, this version of the Developer Stack includes buttons, icons, cursors, scripts, externals of all sorts and a complete hypertext quick reference section. Developer Stack is a tool designed for HyperCard developers of all levels of expertise and provides a

centralized, indexed location where you can keep all your development tools. The Developer Stack comes as four stacks, along with two demo stacks from AnalytX, on two disks in an Auto UnStuffit format. NOTE: A hard disk is required as the external stack is larger than 800K.

Luke has assembled two disks, Mac Disk #19.37 on Bird Anatomy and #19.38 on Education and Utilities. Even if you do not care about birds, or have no interest in their anatomy, the Bird Anatomy stack is highly recommended. It has bird sounds, great illustrations, and presents information in a delightful and informative way. The second disk includes a collection of good education stacks and HyperCard utilities. Icons, graphic flashcards, a measurement converter and an excellent periodic table highlight this disk of StackWare. The Software Licensing Issues stack is particularly effective in distributing information.

Mac Disk Catalog

The newest Disketeria Catalog is still available for purchase and is being included in Macintosh New Member packets. The catalog covers all Macintosh disks issued through August 1990 and includes disk descriptions and alphabetical lists of programs and files. The catalog price is \$3.00 and it is available at the office or at the monthly general meeting from 8:30 to 9:30. You may also have it sent to you for an additional \$1.50 to cover postage; use the Macintosh Disk order form in the back of the Journal.

The office also has a supplement to the catalog that includes descriptions of all the programs on the disks released since the catalog was last updated. However, it does not include the alphabetical list of files. If you stop by the office, you may copy the supplement for the cost of using the copier. If you are doing business by mail, call the office and ask the staff for the current price.

Disk #10.03 — M3

Tax Templates 1990

1990 Basic TaxPack.f: By Richard Williams. The Basic TaxPack includes Form 1040 and 1099 summaries and all tax tables and linking worksheets for MS Excel version 1.5 and later. Schedules A, B, C, D, E and SE and Forms 2441, 8814 are available in the Supplemental TaxPack mailed upon receipt of the shareware fee. The well commented macro included in this package is instructional in a number of design techniques. **Instructions (TeachText)** is the documentation. *Shareware* — \$14.

90 US Tax Forms.f: By Donald P. Levine. This package includes Form 1040 and Schedule A worksheets for MS Excel version 1.5 and later. You may need to edit the • **Opener** - 90 US macro to change the path information so that the spreadsheets can properly load unless you locate the templates in the same folder as Excel. • **Info** - 90 US is the text format documentation. *Shareware* — \$14.

IRS 1040 1990.f: By Paul Koskos. A Tax Template for 1990 Federal taxpayers. The template includes Federal Form 1040 with Schedules A, B, C, D, E, SE and Form 6251. Paul developed the original tax template for Apple II AppleWorks and ported this version over to the Macintosh. You may have to adjust the font and or column widths to achieve proper alignment of text. This is due to the way AppleWorks outputs text that crosses column boundaries. A linked Maryland 502 Resident spreadsheet will be mailed upon receipt of the shareware fee. *Shareware* — \$15.

IRS 1040 1990 Excel.f: **IRS 90.EXCEL**: This version runs under MS Excel. The **Readme 90.EX** MS Excel document provides an overview of the template.

IRS 1040 1990 Works.f: **Irs 90.WORKS1.1** and **Irs 90.WORKS2.0**: These versions run under MS Works. The **Readme 90.WORKS** MS WP document

provides an overview of the template.

Disk #14.22A — P/H 22

RESEdit PRIMER

HMG™ ResEdit Primer 6.0: By Herb Goodman. The newest version of HMG ResEdit Primer explains the use of the mysterious ResEdit 2.X to non-programmers. This is the definitive freeware tome for using ResEdit 2.X to modify and or install resources into files. Topics included include resources, adding program icons, animated cursors, desktop alterations, Get Info comments, file info window and menu editing. This manual is in DocMaker (previously named the DOctor) format, just double-click the icon and read away.

HMG™ ResEdit Primer 3.2.sea. By Herb Goodman. An earlier version of the same reference source but designed around version 1.X of ResEdit. Because of space limitations on the disk, this document has been compressed with Compactor. Just move this file to a blank disk and double click the icon; it will automatically unstuff itself. Then double-click the resulting icon to read the Primer.

Another useful source for using ResEdit is ResEdit™ Reference, by Apple Computer (\$12.95) distributed by Addison-Wesley Publishing Company, Inc. (APDA #M0015LL/C). and the MPW Assembler.

Disk #19.36-1/2 — SW 36-1/2

DEVELOPER STACK 2.0

To use these stacks you need to copy the Auto UnStuffit file on disk 1 to a new folder on your hard disk and then just double click on the icon. The Auto UnStuffit program will automatically UnStuff the files and copy them on to your hard disk in the correct folder. You may then delete the Auto UnStuffit file. Copy the Auto UnStuffit file on disk 2 into the same folder and double click on the icon. After installation on your hard disk you can delete the Auto UnStuffit file.



DevStack 2.0.sit 1 (Disk 1):

DevStack 2.0: By Steve Drazga and AnalytX. This is the interface to the **Developer Stack**. It provides a smooth interface to all the capabilities of the **Developer Stack**. This portion of the release includes approximately 400 different cursors along with approximately 760 different icons, all usable in any HyperCard stack. The stack also includes icon and cursor editors for modifying the included icons and cursors and for making your own icons and cursors for HyperCard.

DevStack•Buttons: By Steve Drazga and AnalytX. This is the repository for all specialized buttons in the **Developer Stack**. It includes 10 buttons including: text importer button, a merge stacks button, an autoscroll button and a slider button.

DevStack•Scripts: By Steve Drazga and AnalytX. This is the repository for 35 specialized scripts within the **Developer Stack**. You can add your own favorite scripts along with any scripts you use a lot.

AnalytX XCMDs: By Steve Drazga and AnalytX. This stack has been designed to be a reference guide to XCMD and XFCN resources available for licensing from AnalytX. Most of the XCMDs are functional but none may be used outside this stack.

Inside Demo: By Steve Drazga and AnalytX. A demonstration stack for AnalytX's developmental system XCMD **Inside**. An interesting and useful XCMD for the advanced HyperCard developer.

DevStack•Externals.sit (Disk 2):

DevStack•Externals: By Steve Drazga and AnalytX. This stack includes the best development efforts of many dozens of HyperCard developers, a total of 185 different XCMDs and XFCNs. This is probably the most complete collection of externals for HyperCard available in one stack. The interface from the **Developer Stack** is smooth and functional. The

externals are indexed, syntax is given, and credit is given to the original developer of the external. Steve Drazga and AnalytX ask that if you use anything from this stack, please give the original author credit in your stack.

Disk #19.37— SW 37**BIRD ANATOMY STACK**

Bird Anatomy-v1.2d: By Patrick J. Lynch, M.S. This is an educational stack about the surface anatomy of birds. It is part of a larger project that includes access and use of a video disc. Alone this stack is an outstanding example of what an education stack can accomplish. It has excellent sound, very professional drawings, and good program design. It has references, a glossary, and an outline of the course. What makes the stack so enjoyable is that the information is presented in a way that allows you to go only as deep as you want into the subject. If you are only into the entertainment value of the stack, you can page through, look at the pictures, listen to the sound, and read only the introductory notes with each picture; if you really want to learn about bird anatomy you can click your way into deep discussions of the anatomy of different parts of birds. It is a very enjoyable stack. The author copyrights the stack, but does not say whether he wants money for it.

Disk #19.38— SW 38**EDUCATION & UTILS 2**

amino acids: By Steven Needell. Flash cards for identifying the structure of some 20 different amino acids. Good for organic chemistry class memorization and a good example of visual flashcards for HyperCard.

CalcConverter 1.01: By David R. Eike. This is a standard numerical calculator that is capable of converting many measures of weight, length, area, or volume, into equivalent units, especially English measurements into metric units. *Shareware - \$5 or the equivalent amount of barter.*

cardMover 1.1: By Lawrence J. (Larry) Smith. This stack allows you to easily

move or copy cards from one stack to another. *Shareware - \$5.*

ChemElements: By John G. Cramer. This is an excellent periodic table of the elements with a lot of additional information. Clicking on an element gets you information about the element, and an illustration of its electron orbit shell. John Cramer writes "It's a nice stack, as I'm sure you'll agree, but, frankly, it's a medium for getting your attention long enough to tell you about my first novel, **TWISTOR**." *Freeware, but must include notice about Twistor.*

iConcepts: By William Thomas Wimbish of imMedium Design. This is a collection of 128 icons you can use for buttons. The icons are quite different from the run of the mill icons, imMedium Design created the icons for the newer Windoid stacks. What really sets this stack apart is the unique way that you can copy a button to your own destination stack. Very clever. *Shareware - \$5.*

Math Stack: By Bob Bolt. A simple addition and subtraction game for children. Mostly addition and subtraction of integers less than 20.

Software Licensing Issues 0.96: By David R. Johnson and Chris D. Jagel. This is a stack designed to advise you of the issues that arise in software copyright protection. It was written by two authors and is designed to help you spot issues, so you can ask your lawyer better questions. It is also designed to demonstrate one method by which legal expertise of any kind might be distributed. This is a good example of using HyperCard to distribute information.

Star 3.0: By R.-Daniel Paris. This is an XCMD that allows you to put a picture you select inside a moving frame. It is well designed and documented and allows you to try it out within the stack.

(Continued from page 13)

doesn't guarantee an audit. So, if all of your records are in good order, your office legitimately qualifies as a home office for IRS purposes, and the dollar amount of the deduction you'd be entitled to is sizable enough, the risk of audit may be worth the tax savings realized from the deduction.

To qualify for the home office deduction you must use your home office regularly and exclusively as your primary place of business. If you are not self-employed, you must prove your employer required you to maintain a home office.

Example: if you work in the dining room 90% of the time, but clear the table and use it to serve dinner when you have guests, the dining room does not qualify for the home office deduction.

The total amount of the deduction is limited to your net income from the business. Thus, you cannot use the home office deduction to show a business loss. If you have a business loss due to other business expenses, you can declare that loss, but you can't use the home office deduction to make a marginally profitable home-based business show a loss.

Warning: If you are contemplating selling your home in the near future, don't take the home office deduction. Normally, capital gains on the sale of a residence are deferrable. However, if you've taken the home office deduction you may lose your right to defer that part of the profit attributable to the sale of your (home) office, since that portion would be considered business property.

If you do decide to take the home office deduction, or at least to evaluate its worth to you, be sure you understand all the rules and regulations that apply, including those on depreciating your home. You can get pamphlets explaining the rules in detail from your local IRS office.

You don't have to take the home office deduction to be able to claim deductions of other expenses related to your business. Thus, whether or not you take the home office deduction

you can deduct all legitimate business expenses for advertising, professional fees, subscriptions related directly to your business activities, mileage for any kind of trip associated with your business (even trips to the library to do business research), depletable office supplies (such as computer disks used to store business data, computer paper, printer ribbons, laser cartridges, postage, etc.).

The cost of professional magazines, books, membership dues, etc., are fully deductible on Schedule C. They must have a direct relationship to your business. When deducted as a miscellaneous employment-related expense on Schedule 1040A they are worth less to you, since they are subject to the 2% of gross income limitation rules.

Deduct health insurance

If you purchase health insurance, up to 25% of the premiums for yourself and your dependents may be deducted if no other health insurance plan is available to you or your spouse. The insurance must also be offered to any employees you may have. The total allowable deduction is limited by the income from your business.

Home office telephone expense is completely deductible if you have a separate telephone line for your business. If you do not have a separate line you cannot deduct any part of the basic monthly phone charges, but you can deduct long distance costs. This is a change from previous years.

Keogh and certain other types of pension plans can be set up

The allowable contributions are deductible on Form 1040. Since rules regarding pension plans are complex, and have a tendency to change, see a professional tax advisor before setting up a pension plan.

Deduct the business use of your car or truck

If you use your car only occasionally for business, the easy way to figure this deduction (which gets recorded

under car and truck expense on Schedule C) is to track your business mileage and take the mileage deduction. For 1989 you may deduct 25.5 cents per mile for each mile of the first 15,000 miles of business travel if the car is not considered fully depreciable, and 11 cents per mile for miles over 15,000. Your car is considered fully depreciated when you have driven it 60,000 business miles.

Example: You began using your car for business when it had 70,000 miles on the odometer. You drove 12,000 miles for business in '88 and another 10,000 in '89. You are entitled to the full 25.5 cents per mile deduction since the total business mileage driven since putting the car into service is only 22,000 miles.

To take the mileage deduction, you must keep a timely, accurate record of business miles driven, a simple task done with a small notebook in the car and jotting down the mileage at the start and end of every trip to a client's office, office supply stores, etc. Also make a note of, and include as a deduction, any tolls or parking fees you have to pay.

An alternate method, which may result in a higher deduction if you use your car frequently for business, is to depreciate the car and then take deductions for the actual operating expense of the car, adjusted for personal use of it. Such operating expenses include insurance, gasoline, oil, maintenance, tires, registration and license fees, automobile club membership, and interest on car payments.

Tax Tip: If you take a loan for a car used solely for personal use, only a small portion of the interest on that loan is deductible this year. However, if the vehicle is purchased for use in business, the interest, prorated to reflect the percentage of business usage of the car, is totally deductible. Thus if you use the car exclusively for business all of the interest is deductible. If you use the car half for business use and half for personal use, half of the interest may be deducted on Schedule C. The remaining half, subject to the phase-out rules, will be partially deductible on Form 1040A.

Depreciation and operating expenses have to be prorated to reflect only the business use of the car. The rules over depreciation of a business vehicle are somewhat complex, so be sure you know what they are and understand them before proceeding. IRS instruction booklets and tax guides available in book stores and on the newsstands may be helpful to you.

Deduct computer hardware and software

Computer hardware you purchase for use in your business is considered depreciable; however, the first \$10,000

of equipment costs may be "expensed" (treated as a deduction). To take this deduction, or to depreciate the hardware over time, your computer must be used more than 50% of the time for business. The deduction must be prorated to the percentage of time the computer is used in business, and the deduction may not exceed the income from your business. If the computer is used only part of the time for business, you must keep a log showing the business use.

Computer software must be treated as depreciable property unless it has a useful life of one year or less. It can either be included with other items

being expensed, or depreciated over its useful life.

If you have difficulty understanding the rules and regulations that apply to your business, consult a professional tax preparer. Not only can the fee be worth the peace of mind you derive, but he or she may discover tax deductions you've overlooked and wind up reducing your overall tax bill.

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Tutorials — March

by Rob Clark

Washington Apple Pi provides training to its members on a regular basis. These classes are also available to non-members, at a slightly higher rate. We've provided complete course descriptions for the Macintosh tutorials, and a general description for the Apple II courses.

We urge you to bring your computer with you to most classes, since we have no computers for you to use at the office. If you can't bring your own computer, you'll have to look over someone else's shoulder. Please note that some classes not require you to bring your computer with you.

Occasionally, the WAP class schedule changes due to circumstances out of our control. Please call the office at least one business day prior to the class date to confirm that your class will be held as scheduled. We regret an inconvenience that may arise.

Payment for Courses

The fee for each session are generally \$15 for members, \$20 for nonmembers. Please refer to specific class for exceptions. Mail or phone in your registration to the WAP office. We request that you pre-register for the class or classes you wish to take by either sending in the registration form or by phoning your registration into the office. Please do not ask to register with any of the Education Program volunteer. If you've signed up for a class and need to cancel, please do so 2 business days prior to the class—otherwise we cannot refund your money.

Apple II GS Tutorials for March

We're providing the Apple II GS Introductory Tutorials, a three part series in March. The courses are held each of the first three Tuesday evenings in March

from 7:00 to 10:00 pm at the WAP office. The dates are March 5th for Part I (course # GS 10391), March 12th, for Part II (course # GS 20391), and March 19th, for Part III (course # GS 30391). You may sign up for just one, or for all three, if you wish. Of course all three courses provide you with the most benefit. These classes are designed for beginners, not experienced users.

Macintosh Tutorials for March

This month's courses, in addition to the three beginning courses, are *Introduction to Learning Adobe Illustrator, Part IV; Introduction to Microsoft Word, Learning Microsoft Word, Part II; and Introduction to Microsoft Excel*. If you live in the Columbia, Maryland area, you're in luck. One of our introductory Macintosh classes will be held at the Mt. Hebron High School, near Columbia. Please, call the office for directions. Most classes are held at the WAP office; please refer to the listing below for more details.

Introduction to Macintosh, Part I (Course # M10391). This class is designed for the beginning user. You should go through the Guided Tour disk that came with your computer before you come to this class. You'll learn each of the components of your Macintosh, both hardware and software. You'll discover what the System, Finder, Icons, the Active Window, and how they all work. You'll also investigate the components of the Control Panel.

Materials required: Your Macintosh, external drive or hard drive, start-up disk, and an unformatted disk.

Course Date: Monday, March 11th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Introduction to Macintosh, Part II (Course # M20391). This class is designed for the beginning user. You should go through the Guided Tour disk that came with your computer before you come to this class. You'll learn each of the components of your Macintosh, both hardware and software. You'll learn the finer points of the Menu Bar, various error messages, what the Clipboard and the Scrapbook are, various peripherals and how they are connected to your Macintosh, and, finally, you'll learn about command key equivalents (key board shortcut for Menu Bar commands).

Materials required: Your Macintosh, external drive or hard drive, start-up disk, and an unformatted disk.

Course Date: Monday, March 18th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Introduction to Macintosh, Part III (Course # M30391). This class is designed for the beginning user. You should go through the Guided Tour disk that came with your computer before you come to this class. You'll learn which version of the System software you should be using; you'll learn how to update your system files; about the Set Start-up command; how to use the Font/DA Mover; learn about MultiFinder; and finally, you'll learn about the various RAM configurations possible with each Macintosh.

Materials required: Your Macintosh, external drive or hard drive, start-up disk, and an unformatted disk.

Course Date: Monday, March 25th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Introduction to Microsoft Word (Course # MW10391). This class is for those who little or no experience with Microsoft Word. Topics covered are: the many uses of Microsoft Word, Word's environment, a simple demonstration of Word's features, menus and menu commands, window icons, keyboard shortcuts, formatting exercises, and Word's different views of your document.

Materials required: Your Macintosh, an external drive, copies of your Microsoft Word software.

Date: Saturday, March 2nd, 1991, at 9:00 am.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Learning Adobe Illustrator, Part IV (Course #AI40391). This class is for the beginning user of Illustrator. The class will focus on *Illustrator 3.0*, but will also cover some of the features of *Illustrator 88*, as well. This will be the fourth of a series of classes designed to fully exploit power of Illustrator. Please bring your computer; you will gain only a fraction of the total benefit of the class if you just watch. Each class will cover specific technics to boost your skills using the program. *It is not necessary to take these classes in order; completely new techniques are covered each month.* Techniques covered this month include charting, aligning objects and text, creating two types of grids to help you with your graphics, and layering techniques.

Materials required: Your Macintosh, an external drive, and a copy of Adobe Illustrator.

Date: Saturday, March 9th, 1991, at 9:00 am.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Course Date: Wednesday, March 13th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Introduction to Microsoft Excel (Course #ME10391). This class is for those who little or no experience with Microsoft Excel. Topics covered are: the many uses of Excel, what Excel is used for, environment, a demonstration, Excel window and tools, menus and menu commands, keyboard shortcuts, advanced features, exercises, and other views.

Materials required: Your Macintosh, an external drive, copies of your Excel disks.

Date: Saturday, March 16th, 1991, at 9:00 am

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Learning to Microsoft Word, Part II (Course #MW20391). This class is a continuation of the Word training we offer. Topics covered are: the many uses of Microsoft Word, Word's environment, a simple demonstration of creating tables, outlines, review of Word's style sheets, the glossary function, and using the "Com-

mands..." menu to completely alter the appearance of your Word program.

Materials required: Your Macintosh, external drive or hard drive, start-up disk, and an unformatted disk.

Date: Wednesday, March 27th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Introduction to Macintosh, Columbia Slice Version. (Course #M30391cs). This class is designed for the beginning user. You should go through the Guided Tour disk that came with your computer before you come to this class. You'll learn which version of the System software you should be using; you'll learn how to update your system files; about the Set Start-up command; how to use the Font/DA Mover; learn about MultiFinder; and finally, you'll learn about the various RAM configurations possible with each Macintosh.

Materials required: Your Macintosh, external drive or hard drive, start-up disk, and an unformatted disk.

Course Date: Monday, March 25th, 1991, at 7:00 pm.

Location: WAP Office

Fee: \$15 for members, \$20 for nonmembers

Washington Apple Pi Tutorial Registration Form

Washington Apple Pi
7910 Woodmont Avenue, Suite 910
Bethesda, Maryland 20814
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Please fill in the course number of the class you wish to take...

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THESE ARE ALL 5.25" DISKS

APPLE SYSTEM DISKS

APSD-01 Apple II System Disk - Utilities V. 3.1

APPLEWORKS

APWK-01 Desk, Printer and Money Helpers
APWK-02 Food, Lists, etc. (815/816)
APWK-03 Reserved for Tax Templates

COMMUNICATIONS

COMM-01 TCS Instructions 1.05 A & B - Disk 1
COMM-02 TCS Instructions 1.05 C & D - Disk 2
COMM-03 WAPABBS.1 Documentation (121)
COMM-04 WAPABBS.1 (135/136)
COMM-05 DI COMM - Shareware (503)
COMM-06 Kermit 3.78 - Kermit File Transfer
COMM-07 Comm Term and Telecom (808/817)
COMM-08 MicroModem II (SW) - Hayes Term

CP/M

CP/M-01** Master Catalog (401)
CP/M-02 Utilities I and II (402/404)
CP/M-03 Communications (403/409)
CP/M-04 ZCPR2 Install and Utilities (406/408)
CP/M-05 ZCPR2 Docs /Essential Utils (407/410)
CP/M-06 Text Editor and Spreadsh (411/412)
CP/M-07 MDM740 (SSC//7710, & A-CAT)
CP/M-08 Kermit Source and Running Codes
CP/M-09** Kermit Documentation (417)
CP/M-10 Utilities (419)
CP/M-11 Small C. Compiler (420)

EAMON ADVENTURES

EAMN-01 Utilities II and III (220/221)
EAMN-02* Dungeon Designer and City /Clouds
EAMN-03 Beginners Cave (Master) & Alt
EAMN-04* Lair of Minotaur and Cave of the Mind
EAMN-05* Zephyr Riverventure and Castle/Doom
EAMN-06* Death Star and Devil's Tomb
EAMN-07* Caves of Treasure Is. and Furioso
EAMN-08* Magic Kingdom and Tomb of Molinair
EAMN-09* Lost Island and Abductor's Quarters
EAMN-10* Quest and Undergr City (194/195)
EAMN-11* Merlin's and Hogarth Castle (196/197)
EAMN-12* Deathtrap and Black Death (198/199)
EAMN-13* Temple of Ngurct Black Mountain
EAMN-14* Nuclear Nightmare /Feast of Carroll
EAMN-15* Master's Dungeon /Crystal Mountain
EAMN-16* Lost Adventure and Manxome Foe
EAMN-17* The Guntlet and Caverns of Langst
EAMN-18* Future Quest and House of Secrets
EAMN-19* Sewers/ Chi /Slave Pits of Kzorland
EAMN-20* Lifequest and Swordquest (215/216)
EAMN-21* Priests of Xim! and Heroes Castle
EAMN-22* Temple of the Undead and Quest
EAMN-23* Caves/Mondamen & Orb of Polaris
EAMN-24* Death's Gate /Escape From Orc's Lair

EDUCATION

EDUC-01 Education and Personal Education
EDUC-02 Personal Education 2 and Education 3
EDUC-03 Math / Science and Education 4
EDUC-04 Advanced Math and Vectors / Motion
EDUC-05 Albert Camus Int and Elementary Math
EDUC-06 French Vocab/ Tutorial (46/123)
EDUC-07 Boot for L'Hote and L'Hote (48/49)
EDUC-08 Tic-Tac-Toe in French /L'Hote Quiz
EDUC-09 French Poetry Tut and Appollinaire
EDUC-10 Rafel Boot Disk and Rafel (55/56)
EDUC-11 Tic-Tac-Toe in Spanish /Rafel Quiz
EDUC-12 Matute and Lo Fatal (58/59)
EDUC-13 Reading Fun (Shareware) (505)
EDUC-14 Language Arts Treasures
EDUC-15 Floppy Book 1
EDUC-16 Computation Game /AW Temp
EDUC-17 Algebra Tutorial and Bagels Disk
EDUC-18 Newton's Apple (Cocaine)
EDUC-19 Newton's Apple (Teeth)
EDUC-20 WAP Stack and Tutorial Demo

FORTH

FRTH-01 Assembler/Disassmbler /Screen Editor
FRTH-02 Go Forth Tutorial and Fig/Forth 78
FRTH-03 Forth and Floating Point Arithmetic

GAMES

GAME-01 Games A and B (102/107)
GAME-02 Games C and D (111/128)
GAME-03 Games E and F (162/164)
GAME-04 Keyboard and Paddle Games (72/74)
GAME-05 Pinball and Arcade Games (142/157)
GAME-06 Text Adv /Mystery House (SIERRA)
GAME-07 Educational Games G and H (508/509)
GAME-08 Sports and Utilities / Games (143/160)
GAME-09 Adventures /Game Room (811/812)
GAME-10 Haunted House (176/810)
GAME-11 Mostly Games /Wizard Worker I

LOGO

LOGO-01 Logo Tool Kit and \DocS (145/146)
LOGO-02 Sample Disk and Dallas Apple Logo

MISCELLANEOUS

MISC-01 SS (Coin Collect) and Misc. (95/115)
MISC-02 Miscellaneous (119/120)
MISC-03 Miscellaneous and Recipe Files
MISC-04 Glag and No Name Yet (129/175)
MISC-05 Special Databases /Jim's Data Base
MISC-06 Misc and Applesoft /AppleWriter IIe)
MISC-07 Astronomy Short Programs (506)
MISC-08 Griffith and Weise Astronomy (507)
MISC-09 Aviation - General (Disk 1 of 2) (514)
MISC-10 Aviation - Navigation (Disk 2 of 2) (515)
MISC-11 Gardner's Assistant (518)
MISC-12 Music and Sights / Sounds (71/126)
MISC-13 Merry Christmas and Happy Holidays
MISC-14 Graphics and Cat Graphix (108/171)
MISC-15 Print Shop Graphics (172)
MISC-16 Color Graphics for Fun/Science / Engi.
MISC-17 Plots / Graphs and Charts / Graphs
MISC-18 Business/Math Stat and SS (70/90)
MISC-19 SS (Investment) and SS (Business)
MISC-20 Business A and B (104/113)
MISC-21 Investments A and B (153/154)
MISC-22 Spreadsheet A and Miscellaneous
MISC-23** Riley's Personal Instrumentation (173)

PASCAL

PASC-01 AttachBios for Pascal 1.1 and Utilities
PASC-02 Crypto / Graphics and Bios / Printers
PASC-03 Misc and Read/Write DOS / Printers
PASC-04 Cataloger and Hires Printing / Lisp
PASC-05 Puffin / Holiday Music -CPM-Pascal
PASC-06 3D Education /Drill /Hackers Stuff
PASC-07 Stocks / Weightwatch/Guerilla Guide
PASC-08 Pascal / To & From DOS /(133/314)

PILOT

PILT-01** Pilot Language (167)

UTILITIES

UTIL-01 New Member's Disk - 2.01 A/ B (821)
UTIL-02 New Member's Disk - 2.01 C/D (822)
UTIL-03 Utilities A and B (100/101)
UTIL-04 Utilities C and D (112/118)
UTIL-05 Utilities E and F (124/132)
UTIL-06 Utilities G and H (138/43)
UTIL-07 Utilities I and J (44/77)
UTIL-08 Mach. Lang. Utilities and One-Key DOS
UTIL-09 Beginners Choice /Intermediate Utils.
UTIL-10 Diversi Copy and Diversi DOS (45/130)
UTIL-11 Additions to ProDOS and Zap Utility
UTIL-12 Utilities A (ProDOS) and File Cabinet
UTIL-13 Imageworks (174/807)
UTIL-14 DOS 3.3 System Master and Tutorial
UTIL-15 Visi-Trend / Visi-Plot and Calculink
UTIL-16 AppleSoft Tutor and Picture Packer
UTIL-17 AppleWriter Utilities (168)
UTIL-18 AppleSoft Programs and Love's Follies
UTIL-19 "Old" New Member's Disk (134)
UTIL-20 JoyReader (Shareware) (819)
UTIL-21 Large Type JoyReader (SW) (823)
UTIL-22 DB Master V. 5 - Program Disk
UTIL-23 DB Master V. 5 - Sample Files /Docs

APPLE IIGS DISKS

THESE ARE ALL 3.5" DISKS

IIGS SYSTEM DISKS

GSAS-01 System Disk V. 5.0.3
GSAS-02 System Tools V. 5.0.3

IIGS COMMUNICATIONS

GSCM-01 FreeTerm GS (2003)
GSCM-02 SnowTerm

IIGS DESK ACCESSORIES

GSDA-01 Desk Accessories I (2020)
GSDA-02 Desk Accessories 2
GSDA-03 Desk Accessories 3
GSDA-04 Desk Accessories 4
GSDA-05 Desk Accessories 5
GSDA-06 Desk Accessories 6

IIGS FONTS (10 DISK SET \$30)

GSFT-01 Fonts A-1
GSFT-02 Fonts A-2
GSFT-03 Fonts B-1
GSFT-04 Fonts B-2
GSFT-05 Fonts C-1
GSFT-06 Fonts C-2
GSFT-07 Fonts D-1
GSFT-08 Fonts E/F-1
GSFT-09 Fonts G-1
GSFT-10 Fonts H-1

IIGS GAMES(5 DISK SET \$15)

GSGM-01 Mean 18 Golf Courses 1 (2007)
GSGM-01 Mean 18 Golf Courses 2 (2018)
GSGM-03 Bouncing Bluster Boot Disk
GSGM-04 Bouncing Bluster Data and Docs
GSGM-05 Bouncing Bluster Consn Set

IIGS GRAPHICS(16 DISK SET \$48)

GSGX-01 Demo Disk A (2002)
GSGX-02 Slide Show 1 (2004)
GSGX-03 Slide Show 2 (2016)
GSGX-04 Slide Show 3 (2017)
GSGX-05 Nucleus Graphic Demo (2024)
GSGX-06 GIF Graphics 1
GSGX-07 Pics and Utilities 1
GSGX-08 Pics and Utilities 2
GSGX-09 Pics and Utilities 3
GSGX-10 Pics and Utilities 4
GSGX-11 Modulae
GSGX-12 Paula Abdul demo
GSGX-13 Pics and Utilities 5
GSGX-14 Slide Show 4
GSGX-15 Slide Show 5
GSGX-16 Nucleus Graphic Demo

IIGS HYPERSTUDIO (12 DISK SET \$36)

GSHS-01 HyperStudio System - Demo
GSHS-02 HS.Demo - Demo Version
GSHS-03 HS Sounds - Demo Version
GSHS-04 More Stacks - Demo Version
GSHS-05 More Stacks 2 - Demo Version
GSHS-06 Video Demo - Demo Version
GSHS-07 Com Stack - Demo Version
GSHS-08 MUG 087 - Demo Version
GSHS-09 USA - Demo Version
GSHS-10 Hs Art 2 - Demo Version
GSHS-11 Misc. HS stacks 1
GSHS-12 Misc. HS stacks 2
GSHS-13 Arizona Stack Disk 1
GSHS-14 Arizona Stack Disk 2

IIGS ICONS (7 DISK SET \$21)

GSIC-01 Finder Icons 1 (2022)
GSIC-02 Finder Icons 2 (2027)
GSIC-03 Finder Icons 3
GSIC-04 Finder Icons 4
GSIC-05 Finder Icons 5
GSIC-06 Finder Icons 6
GSIC-07 Finder Icons 7

FOR YOUR REFERENCE - THE NUMBERS SHOWN IN PARENTHESES () AFTER THE DISK NAMES ARE THE OLD DISK NUMBERS

IIGS MUSIC (7 DISK SET \$21)

- GSMU-01 SoundSmith and Songs
- GSMU-02 SoundSmith Songs 1
- GSMU-03 SoundSmith Songs 2
- GSMU-04 SoundSmith Songs 3
- GSMU-05 SoundSmith Songs 4
- GSMU-06 SoundSmith Songs 5
- GSMU-07 Diversi Tune (C) Songs 1

IIGS MISCELLANEOUS

- GSMS-01 New Member's Disk (2000)
- GSMS-02 Demo Source Code 1 (2005)
- GSMS-03 Demo Source Code 2 (2006)

IIGS SOUNDSIIGS MISC.

- GSSN-01A Sounds 1 (2014)
- GSSN-02A Sounds 2 - Nostalgia (2015)
- GSSN-03 Sounds 3
- GSSN-04 Sounds 4
- GSSN-05 Sounds 5 - Simpsons 1
- GSSN-06 Sounds 6 - Simpsons 2
- GSSN-07 Sounds 7
- GSSN-08 Sounds 8
- GSSN-09 Sounds 9
- GSSN-10 Sounds 10

IIGS TUTOR TECH

- GSTT-01 WAP Stack- REV. (2019)

IIGS UTILITIES

- GSUT-01A Utilities 1 (2001)
- GSUT-02 JumpStart Program Sel V. 3
- GSUT-03 Utilities 2 (2028)
- GSUT-04A Utilities 3 (2029)
- GSUT-05 Utilities 4
- GSUT-06 ZZ Copy - v 2.12
- GSUT-07 Utilities 5
- GSUT-08 UtilityWorks GS
- GSUT-09 Utilities 6

APPLE ///DISKS

THESE ARE ALL 5.25" DISKS

/// ACCOUNTING

- 3ACT-01 Easy Accounting
- 3ACT-02 Easy System and Accounts Rec.
- 3ACT-03 Easy System and A/Cn. Ledger

/// 3EZP & AW TEMPLATES

- 3AWZ-01 AW - EZP Bus Templates
- 3AWZ-02 Checkbook Plus by Lomartire

/// BUSINESS BASIC

- 3BSB-01 Pohlman Disk 01 (1017)
- 3BSB-02 Pohlman Disk 02 (1018)
- 3BSB-03 Pohlman Disk 03 (1019)
- 3BSB-04 Pohlman Disk 04 (1020)
- 3BSB-05 Pohlman Disk 05 (1021)
- 3BSB-06 PPT Demo / BASIC Helps
- 3BSB-07 BASIC 1.23 & Utilities / Auto BASIC Editor by Boston

/// GAMES

- 3GAM-01 Games 01 (1001)
- 3GAM-02 Games for Kids (1007)
- 3GAM-03 A Cap'n Magneto - Revised 1/89

/// GRAPHICS

- 3GRX-01 Sketchpad and Slideshow
- 3GRX-02 Fig Factory Manual (1069)
- 3GRX-03 Fig Factory - Black and White
- 3GRX-04 Fig Factory - Color (1071)
- 3GRX-05 Raster Graphics Tool Kit (1072)
- 3GRX-06 3-D Modeling Tool Kit (1073)
- 3GRX-07 Chartmaker III (1074)
- 3GRX-08 Graphics Utilities (1075)
- 3GRX-09 Graphics Disk 01 (1062)
- 3GRX-10 Graphics Disk 02 (1076)
- 3GRX-11 Graphics Disk 03 (1077)
- 3GRX-12 Graphics Disk 04 (1078)
- 3GRX-13 Graphics Disk 05 (1079)

- 3GRX-14 Graphics Disk 06 (1080)
- 3GRX-15 Calendar by Bloom (1081)
- 3GRX-16 Typewriter Art Disk 01 (1082)
- 3GRX-17 Typewriter Art Disk 02 (1083)
- 3GRX-18 Poster by Bloom (1084)
- 3GRX-19 Raster Demo / Tmapio
- 3GRX-20 Icon Demo / Tfont
- 3GRX-21 Trixelmap Demo / Mask Demo
- 3GRX-22 Tmem Demo / Trechts Demo
- 3GRX-23 GIF Graphics 01
- 3GRX-24 GIF Graphics 02
- 3GRX-25 GIF Graphics 03
- 3GRX-26 GIF Graphics 04
- 3GRX-27 Grafixworks 1 and 2 (Shareware)
- 3GRX-28 Grafixworks 3 and 4 (Shareware)
- 3GRX-29 Sign by Bloom

/// INFORMATION

- 3INF-01 AWAP III SIG PD Catalog - 7/1/90
- 3INF-02 A New Member's Disk - 7/8/90
- 3INF-03 Best of MAUG (1008)
- 3INF-04 Best of The Source (1009)
- 3INF-05 Best of TAU (1010)
- 3INF-06 Best of ATUNC (1055)
- 3INF-07 Best of III's Company - Disk 01
- 3INF-08 Best of III's Company - Disk 02
- 3INF-09 The Best of Bloom (1035)
- 3INF-10 Impert's Corner by Bloom (1096)
- 3INF-11 Phase III Conference Plus! (1047)
- 3INF-12 Best of Ottalini - Disk 01 (1040)
- 3INF-13 Best of Ottalini - Disk 02 (1058)
- 3INF-14 Best of Ottalini - Disk 03 (1059)
- 3INF-15 Best of Ottalini - Disk 04 (1087)
- 3INF-16 Best of Pair BBS
- 3INF-17 Reviews by Bloom
- 3INF-18 III Cheers (Boot and Program)
- 3INF-19 III Cheers (V 1 and 2)

/// MISCELLANEOUS

- 3MSC-01 File Cabinet / Sort Directory (1046)
- 3MSC-02 Contributions - Disk 01 (1053)
- 3MSC-03 Contributions - Disk 02 (1061)
- 3MSC-04 Contributions - Disk 03 (1086)
- 3MSC-05 Le Grayhaven Cookbook Plus!
- 3MSC-06 Double Boot - SOS and ProDOS
- 3MSC-07 Apple III Demo Disk 01
- 3MSC-08 Apple III Demo Disk 02
- 3MSC-09 Apple III Demo Disk 03
- 3MSC-10 Apple III Plus Demo - Pascal
- 3MSC-11 Best of Salerno
- 3MSC-12 Apple II Boot Disk

/// REPAIRS

- 3REP-01 Apple 3 Diagnostics - Disk 01 (1013)
- 3REP-02 Apple 3 Diag - Disk 02/Block Edit
- 3REP-03 Repairing your Apple III (1088)
- 3REP-04 Brain Surgeon (1089)
- 3REP-05 Disk Map (1090)
- 3REP-06 Disk Check and Pro Health (1091)
- 3REP-07 Vindicator and Catalyst Fixer (1092)
- 3REP-08 Block Editor and Block Byter (1093)
- 3REP-09

/// TELECOMMUNICATIONS

- 3TEL-01 Telecom - Disk 01 (1063)
- 3TEL-02 Telecom - Disk 02 and Access III
- 3TEL-03 Telecom - Disk 03 (1065)
- 3TEL-04 Kermit III (1066)
- 3TEL-05 XModem III (1067)
- 3TEL-06 ATerminALL Manual - 7/89 (1032)
- 3TEL-07 ATerminALL Program - Revised 1/89
- 3TEL-08 WAP TCS Disk

/// UTILITIES

- 3UTL-01 System Utilities and Data (1004)
- 3UTL-02 Apple II Emulation - Disk 01 (1043)
- 3UTL-03 Apple II Emulation - Disk 02 (1044)
- 3UTL-04A SOS Drivers - revised 9/90 (1052)
- 3UTL-05 Basic Boot Disk (1014)
- 3UTL-06 Basic Utilities - Disk 01 (1002)
- 3UTL-07 Programmers Power Tools (1056)
- 3UTL-08 Applecon (1016)
- 3UTL-09 Diskmaker and Appleseeds (1045)
- 3UTL-10 Basic XT and Basic Utilities - Disk 02
- 3UTL-11 The Retriever (1023)
- 3UTL-12 Power Print III (1024)
- 3UTL-13A Disk Window III Plus - 2/89 (1025)
- 3UTL-14 Source Window and Data Window
- 3UTL-15 Powercat and Basic XRF (1027)
- 3UTL-16 Basic Extension (1031)
- 3UTL-17 Power Keys DM Plus (1034)
- 3UTL-18 RAM Plus III and Two-n-Fro III /128K
- 3UTL-19 Basic GTO (1051)
- 3UTL-20 Custom Font Manual (1037)
- 3UTL-21 Custom Font (1038)
- 3UTL-22 Fonts - Disk 01 (1039)
- 3UTL-23 Disk III Backup by Bloom (1011)
- 3UTL-24 Gucspar by Bloom (1042)
- 3UTL-25A ASCIIDIF by Bloom - 4/88 (1028)
- 3UTL-26 Mail List Manager Manual by Bloom
- 3UTL-27 MLM Utilities by Bloom - Disk 01
- 3UTL-28 MLM Utilities by Bloom - Disk 02
- 3UTL-29 MLM Utilities by Bloom - Disk 03
- 3UTL-30 AppleWriter to 3 EZP by Bloom
- 3UTL-31 Pascal Menu Maker (1054)
- 3UTL-32 Catalyst Release
- 3UTL-33 Reformatter III

/// WORD PROCESSING

- 3WDP-01 AppleWriter (1006)
- 3WDP-02 Footnote III (1003)
- 3WDP-03 Ink Well Manual (1029)
- 3WDP-04 Ink Well Program (1030)
- 3WDP-05 AppleWriter Demo
- 3WDP-06 Script III - Pascal Text Editor

THESE ARE ALL 3.5" DISKS

APPLE II DISKS

APPLE SYSTEM DISKS

- 2APS-01 System Disk - Utilities V. 3.1

COMMUNICATIONS

- 2COM-01 TCS Instructions 1.05
- 2COM-02 Appleten V. 1.3

EDUCATION

- 2EDU-01 Newton's Apple / Cocaine & Teeth

TECH NOTES

- 2TEN-01 IIGS-GSOS-About-Index
- 2TEN-02 Ilc-Ile-IMWR — etc.
- 2TEN-03 FTNS-STDS-Tidbits

UTILITIES

- 2UTL-01 New Member Disk 2.01
- 2UTL-02 DB Master V.5 (Shareware)

MACINTOSH DISKS & WAP DISKETTERIA ORDER FORM

Anti-Virus Utilities	6.05 - LW 5	12.15 - S 15	14.22A - PH 22	18.11A - AF 11	20.07 A- M II 7
5 disk set; \$15	6.06 - LW 6	12.16 - S 16	14.23 - PH 23	18.12A - AF 12	20.08 B- M II 8
1.01C - AV 1	6.07 - LW 7	12.17 - S 17	14.24 - PH 24	18.13A - AF 13	20.09 B- M II 9
1.02C - AV 2	6.08 - LW 8	12.18 - S 18	14.25 - PH 25	18.14A - AF 14	20.10 A- M II 10
1.03C - AV 3	6.09 - LW 9	12.19 - S 19		18.15A - AF 15	20.11 A- M II 11
1.04B - AV 4		12.20 - S 20	Miscellaneous Utils	18.16A - AF 16	20.12 A- M II 12
1.05 - AV 5	INITs & cdevs	12.21 - S 21	11 disk set; \$33		
	17 disk set; \$51	12.22 - S 22	15.01A - MU 1	HyperCard StackWare	HyperCard Externals
Desk Accessories	9.01 - I/C 1	12.23 - S 23	15.02A - MU 2	44 disk set; \$132	5 disk set; \$15
16 disk set; \$48	9.02 - I/C 2	12.24 - S 24	15.03A - MU 3	19.01A - SW 1	21.01 - HE 1
2.01B - DAs 1	9.03 - I/C 3	12.25 - S 25	15.04A - MU 4	19.02A - SW 2	21.02 - HE 2
2.02B - DAs 2	9.04 - I/C 4	12.26 - S 26	15.05A - MU 5	19.03 - SW 3	21.03 - HE 3
2.03B - DAs 3	9.05 - I/C 5	12.27 - S 27	15.06A - MU 6	19.04 - SW 4	21.04 - HE 4
2.04B - DAs 4	9.06 - I/C 6	12.28 - S 28	15.07A - MU 7	19.05 - SW 5	21.05 - HE 5
2.05B - DAs 5	9.07 - I/C 7	12.29 - S 29	15.08A - MU 8	19.06 - SW 6	
2.06B - DAs 6	9.08 - I/C 8	12.30 - S 30	15.09A - MU 9	19.07 - SW 7	System Software 6.0.5
2.07B - DAs 7	9.09 - I/C 9	12.31 - S 31	15.10A - MU 10	19.08 - SW 8	5 disk set; \$15
2.08B - DAs 8	9.10 - I/C 10		15.11A - MU 11	19.09 - SW 9	SS1.ST
2.09B - DAs 9	9.11 - I/C 11	Telecommunications		19.10 - SW 10	SS2.PT
2.10B - DAs 10	9.12 - I/C 12	12 disk set; \$36	System Utils	19.11 - SW 11	SS3.U1
2.11B - DAs 11	9.13 - I/C 13	13.01 - T 1	13 disk set; \$39	19.12 - SW 12	SS4.U2
2.12B - DAs 12	9.14 - I/C 14	13.02 - T 2	16.01B - SU 1	19.13 - SW 13	SS5.NI
2.13B - DAs 13	9.15 - I/C 15	13.03 - T 3	16.02B - SU 2	19.14 - SW 14	
2.14B - DAs 14	9.16 - I/C 16	13.04 - T 4	16.03B - SU 3	19.15 - SW 15	System Software 6.0.7
2.15B - DAs 15	9.17 - I/C 17	13.05 - T 5	16.04B - SU 4	19.16 - SW 16	4 disk set; \$12
2.16B - DAs 16		13.06 - T 6	16.05B - SU 5	19.17 - SW 17	SS1.ST
	Miscellaneous	13.07 - T 7	16.06B - SU 6	19.18 - SW 18	SS2.PT
FKeys (Function Keys)	3 disk set	13.08 - T 8	16.07B - SU 7	19.19 - SW 19	SS3.U1
2 disk set	10.01 - M 1	13.09 - T 9	16.08B - SU 8	19.20 - SW 20	SS4.U2
4.01A - FKs 1	10.02 - M 2	13.10 - T 10	16.09B - SU 9	19.21 - SW 21	
4.02A - FKs 2	10.03 - M 3	13.11 - T 11	16.10B - SU 10	19.22 - SW 22	HyperCard Update 1.2.5
		13.12 - T 12	16.11B - SU 11	19.23 - SW 23	HC & Stacks - HC.01
ImageWriter Fonts	Paintings (MacPnt)		16.12B - SU 12	19.24 - SW 24	HC Help - HC.02
15 disk set; \$45	5 disk set; \$15	Programmer/Hacker	16.13B - SU 13	19.25 - SW 25	HC Ideas - HC.03
5.01 - IW 1	11.01 - P 1	25 disk set; \$75		19.26 - SW 26	
5.02 - IW 2	11.02 - P 2	14.01 - PH 1	Word Processing Utils	19.27 - SW 27	HyperCard Update 2.0
5.03 - IW 3	11.03 - P 3	14.02 - PH 2	6 disk set; \$18	19.28 - SW 28	5 disk set; \$15
5.04 - IW 4	11.04 - P 4	14.03 - PH 3	17.01 - WP 1	19.29 - SW 29	HC.01 - Program
5.05 - IW 5	11.05 - P 5	14.04 - PH 4	17.02 - WP 2	19.30 - SW 30	HC.02 - Help
5.06 - IW 6		14.05 - PH 5	17.03 - WP 3	19.31 - SW 31	HC.03 - Stacks
5.07 - IW 7	Digitized Sounds	14.06 - PH 6	17.04 - WP 4	19.32 - SW 32	HC.04 - More Stks
5.08 - IW 8	31 disk set; \$93	14.07 - PH 7	17.05 - WP 5	19.33 - SW 33	HC.05 - Tutorial
5.09 - IW 9	12.01 - S 1	14.08 - PH 8	17.06 - WP 6	19.34 - SW 34	
5.10 - IW 10	12.02 - S 2	14.09 - PH 9		19.35 - SW 35 †	Serially Numbered
5.11 - IW 11	12.03 - S 3	14.10 - PH 10	Adobe Screen Fonts	19.36 - SW 36 †	Disk 30/92
5.12 - IW 12	12.04 - S 4	14.11 - PH 11	16 disk set; \$48	19.37 - SW 37	Disk 74/75
5.13 - IW 13	12.05 - S 5	14.12 - PH 12	18.01A - AF 1	19.38 - SW 38	Disk 77/78
5.14 - IW 14	12.06 - S 6	14.13 - PH 13	18.02A - AF 2		Disk 80/84
5.15 - IW 15	12.07 - S 7	14.14 - PH 14	18.03A - AF 3	Mac II Series	Disk 85/89
	12.08 - S 8	14.15 - PH 15	18.04A - AF 4	12 disk set; \$36	Disk 91/95
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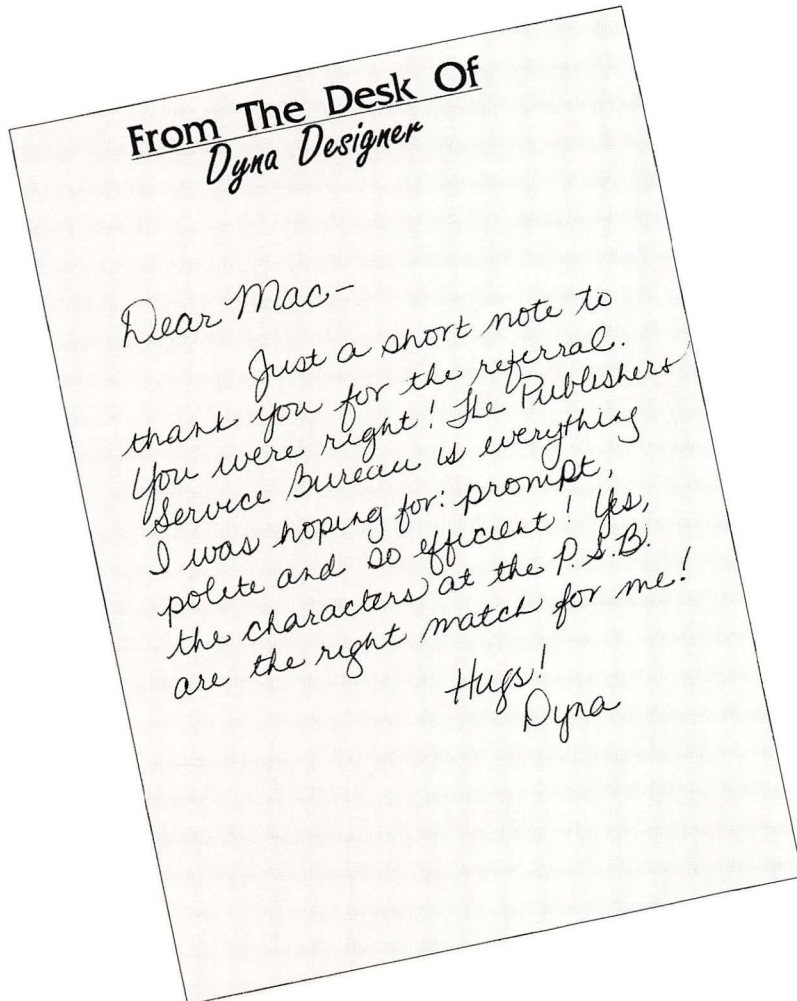
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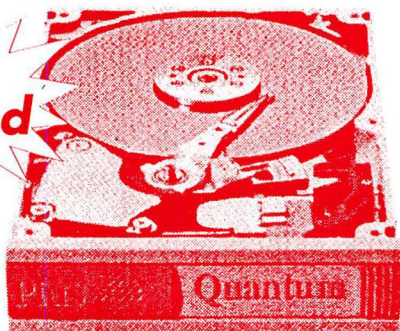
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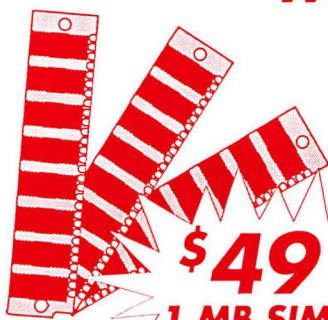
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