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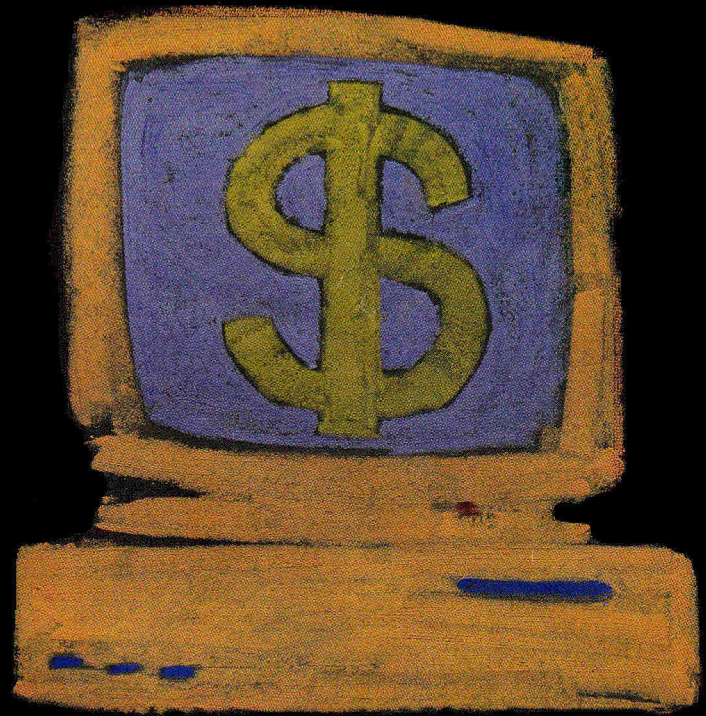
BRIDGING THE GAP, P. 18

EASY MONEY

A Guide to Finding Computer Grants

TO HELL AND BACK

In the Trenches with AppleWorks and ClarisWorks



WHERE?

REVIEWS

- DreamGrafix 1.02
- Prince of Persia
- ShoeBox 1.0
- Just Grandma and Me
- Signature GS
- Spelunx and the Caves of Mr. Seudo

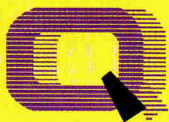


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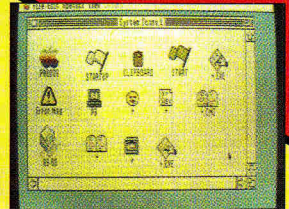
QC System 6 Bonus Pack

Leave it to Quality Computers to take something good like System 6 and make it great. We looked at the list of System 6 features and asked ourselves, "Self, what would make System 6 even better?" Here's the answer:

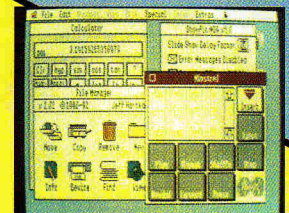
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- **Fonts.** Using the same font for everything is very un-cool, so our Bonus Pack includes over 30 display and text fonts.
- **FlashBoot.** What is faster than a speeding disk drive? A RAM disk. FlashBoot lets you automatically set up a super-fast, super-convenient RAM disk.
- **The Apple II Enhancement Guide.** This handy little book is packed with information to help you upgrade your Apple II. It covers RAM, hard drives, accelerators, the Finder, and more.



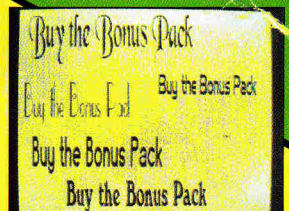
Clip Art & Sounds



Icons



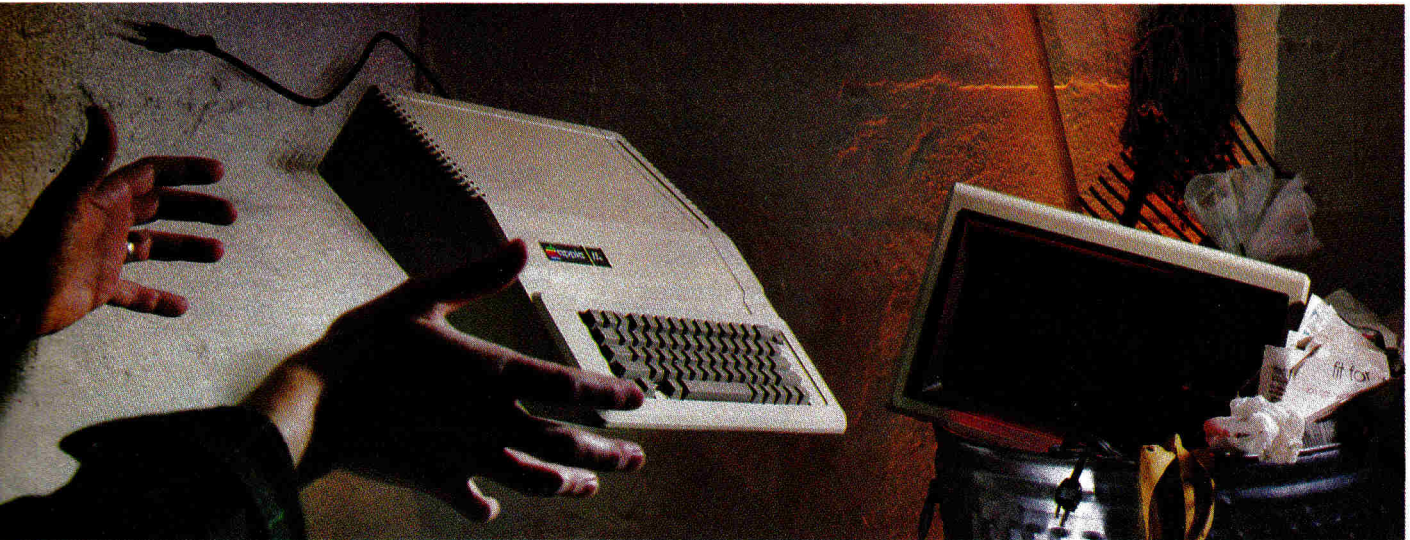
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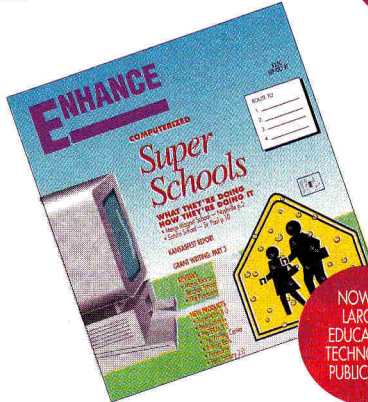
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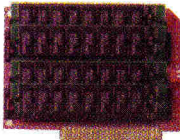
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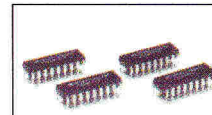
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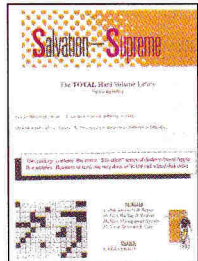


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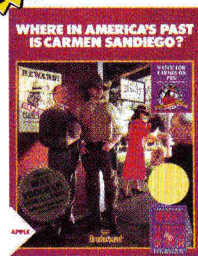


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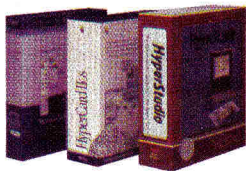
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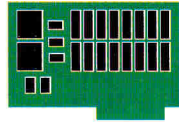
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ASK ABOUT RAM CARD TRADE-INS

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See inside front cover

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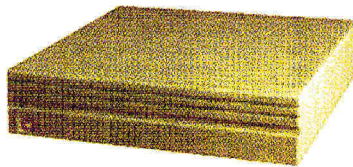


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Fund Seeking by Cynthia E. Field 28
 Invest in the future: Computer equipment is the key that opens new worlds of discovery and opportunity for kids of all ages. *inCider/A+* surveys a selection of funding sources that can lend your school or community group a helping hand.

Works in Progress by Gregg Keizer 36
 Combine the popularity of integrated software and the hot new Apple II-to-Mac connectivity trend and you've got a unique opportunity — to not only stick with an all-in-one piece of software, but swap files and data as well. Too good to be true? *inCider/A+* boots up AppleWorks and ClarisWorks: a report from the field, plus tips on surviving the translation wars.

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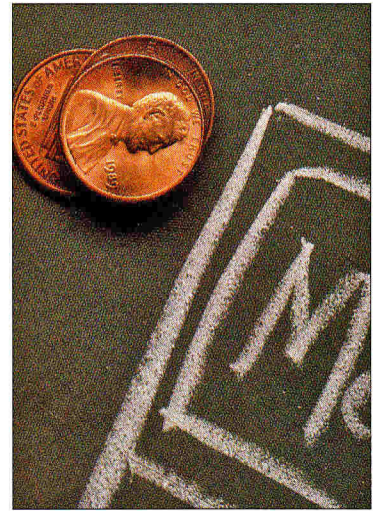
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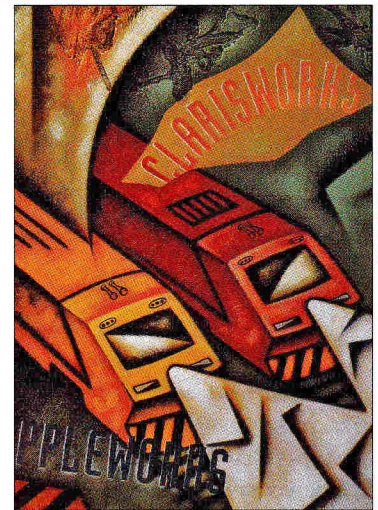
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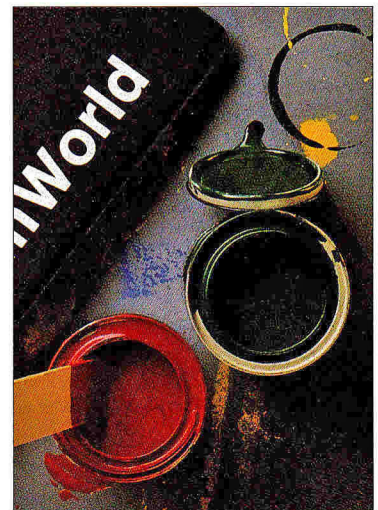
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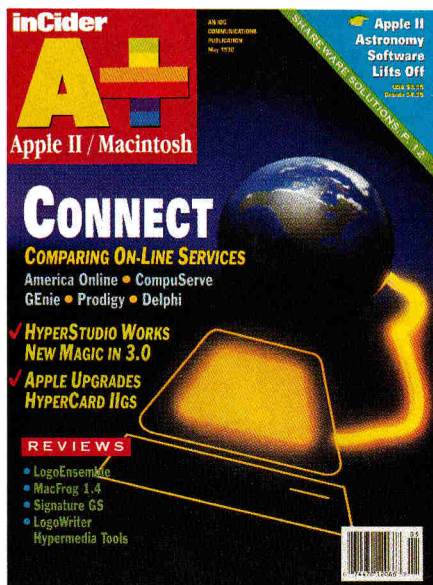
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P A G E 2 2



LETTERS



THE DOG ATE IT

AS AN EDUCATOR OF ADULTS, I agree with Dr. Thornburg's opinion regarding the potential problems of switching to computer-based education as expressed in his May 1992 column ("Homecoming," Learning Curve, p. 64). Students will now have to be particularly imaginative when it comes to explaining missing homework assignments. Perhaps teachers will soon hear, "I don't understand — I guess I just lost my memory," and "The dog took a byte out of my disk." Let's continue to support nontraditional education.

Bill Pawlyshyn
714 Griffin Drive #166
Aurora, CO 80045

PUPS WITH FLEAS

I DON'T KNOW WHICH VERSION of **BeagleWorks** your reviewer was lucky enough to have received ("Integrated Software: Weighing Your Options," February 1992, p. 28), but it sure isn't anything like the one I bought. My version of **BeagleWorks** is slow as molasses and so filled with

bugs that it would take 50 tanker cars filled with Raid to kill them all.

Even though I have a Mac LC with 6 megabytes of memory (and am still using System 6), **BeagleWorks** crashed when I attempted to create a simple 10-by-10 grid in the drawing module. The spreadsheet program is no bargain, either. The lookup function works sporadically at best, and the entire program locks up if you move too quickly between cells. In addition, if you import a formula **BeagleWorks** doesn't recognize, it creates a file that freezes the machine when you open it.

It's hard to believe that **Beagle Bros** could be responsible for a program that's so well conceived but so poorly executed. The only explanation I can think of is that my copy was intercepted by Martians and replaced by an inferior **BeagleWorks** clone.

Robert M. Berkman
831 Carroll Street #4
Brooklyn, NY 11215

*As we stated in the February issue, we examined a prerelease version of **BeagleWorks**. According to **Beagle Bros**, **BeagleWorks** owners who are having difficulties with their software should check the version number. Version 1 of the program contained some bugs and physical disk-related problems that may cause errors. Mail in your registration card and **Beagle Bros** will send you a program update free of charge (6215 Ferris Square, Suite 100, San Diego, CA 92121). For more information, call **Beagle Bros** technical support at (619) 452-5500.*

— eds.

POSTCARD FROM THE EDGE

ATTENTION, GS/OS USERS: THE **HFS FST** (hierarchical file structure file-system translator) that comes as part of System 6 (see "Smooth Operator," July 1992, p. 34, for details) works very well with GS/OS 5.0.4 as well. Install it just

as you would under System 6, and you'll have complete access to Mac volumes even though you aren't running System 6.

I've tested the combination extensively and found no surprises. **Platinum Paint**, with its *MacPaint Import* capability, runs fast and smoothly, as do **SuperConvert** and **Graphics Exchange** as well. Programs such as **My Word** access **Mac Read Me** and text files without a hitch. I even went so far as to attach a Mac hard drive to my Apple IIgs. System 5.0.4 worked flawlessly, letting me retrieve graphics, data, and text files directly. Other file activities (delete, copy, rename) also worked fine.

On another subject, the Apple Programmers and Developers Association (APDA) now has a CD-ROM called **Twenty Thousand Leagues Under the CD**, which contains a partially completed application called **AppleScan GS** ("partially completed" because it's missing a functional *Save* command). Aside from that, the application works with the Apple OneScanner, connected to a GS, to produce superb grey-scale 320-mode graphics at speeds comparable to those of midrange Macs.

Even though the *Save* function doesn't work, there are ways of getting around this limitation. One is to use an NDA (new desk accessory) called **Clip-It** to transfer the scanned image to the clipboard and then to a paint program. Another approach is to use a hardware screen-capture board such as **FingerPrint GSi**.

The CD-ROM comes in Mac format only, requiring you to convert all Apple II material to Apple II format before you can use it, but the rewards are worth the time and trouble. Credit for research and conversion of **AppleScan** goes to Scott Jennings. It was also his suggestion that I try the **HFS FST** with GS/OS 5.0.4.

Vern Mastel
807 5th Avenue NE
Mandan, ND 58501

Back issues of **Apple Developer CD-ROMs** are available for \$10; a subscription to the quarterly mailing costs \$27. For more information, contact APDA at Apple Computer Inc., 20525 Mariani Avenue, MS 33-G, Cupertino, CA 95014-6299, (800) 282-2732. Whether you're an Apple II or a Mac enthusiast, you'll find several interesting "hacks" scattered throughout most Developer CD-ROMs. None of the material is ready for commercial release, so you may be playing with fire, but most of the tidbits are relatively stable. GS users may also want to check out the **System 6.0 Golden Master CD-ROM**, available for \$99 from Resource Central, P.O. Box 11250, Overland Park, KS 66207, (913) 469-6502. — eds.

GOTCHA

ARE YOU KIDDING? I'M REFERRING to "Trade-In Offer Announced" on p. 24 of your April 1992 issue (in "Jokers Wild," Bridging the Gap, p. 22). We went to a CENSORED CENSORED Association meeting last week and

CORRECTIONS

In the text of our feature "Good Earthkeeping" (April 1992, p. 38), we state that only a black-and-white version of **Eco Adventures in the Rainforest** is available. Since then, Chariot Software has released a color edition of the program, as shown in the accompanying photos and noted in the "Product Information" box. We apologize for any confusion. In addition, "Product Information" states incorrectly that the National Audubon Society's **Wildlife Adventures** series has been discontinued. Top Ten Software Inc. (40308 Greenwood Way, P.O. Box 1450, Oakhurst, CA 93644, 209-683-7577) was appointed publisher of the series in August 1990, and provides support for its **Whales!** and **Grizzly Bears** programs. According to Judy van Aman, vice president of Top Ten, additional titles in the series are slated for release later this year and in 1993.

In the "Hard-Driving IIc" section of June's Apple Clinic (p. 18), our response omitted part of the BASIC command you type at the bracket prompt. The command should read **PRINT PEEK(64447) <CR>**.

approached an Apple representative about the offer. She said she knew nothing about it. I'd hope we could depend on your magazine to do your research before announcing such an offer if you're not sure it will come to pass. Do you print hearsay or facts?

Name Withheld
(We're Not Going to Tell You
Where He Lives, Either)

Neither — just jokes. We remember a time when April 1 was recognized as a national

holiday for people with a sense of humor. Apparently, we're living in the past. We apologize to all customer representatives working for companies whose "products" we announced in April's *Bridging the Gap*. We mean it. Honest. We're really sorry. We're not worthy of our readers' support. — eds.

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Simply pull-down the Font menu and your TrueType fonts show up along with your other GS fonts. But unlike regular GS fonts, Pointless will instantly create any point size you need from a single TrueType font.

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Now that you've seen what Pointless™ can do, wouldn't it be pointless to use your GS without it?

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This ad's headline was created using Pointless™ (excluding the first line) and printed with a DeskJet.

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Apple II Software Bonanza

W

ondering what's happened to all the new Apple II software out there? Wonder no more — it's all listed, categorized, filed, and neatly described in the latest

issue of **Apple II Software: Opportunities for Apple II Users.**

If you haven't seen this attractive 12-page tabloid published by Apple Computer, you really don't know what you're missing.

First, you're missing the names, addresses, and telephone numbers of more than 100 companies that write, build, or market Apple II hardware and software.

You're also missing software in categories from *Accounting* to *Word Processing (Talking)*. The guide even lists 30 new entertainment packages — bet there's at least one game there you don't have yet.

If this embarrassment of software riches makes choosing difficult, you can peruse an enlightening "10 Tips for Parents" contemplating a software purchase.

You can also read all about HyperCard IIcs or the Macintosh LC's Apple IIe Card in articles by *inCider/A+*'s own Contributing Editor Cynthia Field and Associate Editor Cameron Crotty.

In fact, if you're a fan of Cynthia Field's famous "do it yourself" projects in *inCider/A+*, you'll be happy to hear that she's the editor of *Apple II Software*. She even contributes an article on how to "chest-top publish" your T-shirts with your Apple II.

Apple II Software: Opportunities for Apple II Users is available from your local Apple-authorized user group, or from Apple Computer. Just call Customer Assistance at (800) 776-2333 and ask for a free copy (part number L0052LL/B). Then your only wonder will be how you ever did without it.

— Paul Statt, Senior Editor

FTA GAME CONTEST

The Free Tools Association, better known as the FTA — a small group of French programmers, artists, and musicians — burst upon the Apple IIcs scene at the 1989 San Francisco AppleFest when the group's free-ware demo Nucleus dazzled all who saw it during Jean Louis Gassée's mind-blowing presentation.

The group continued to awe the GS community over the next two-plus years, releasing one smash hit after another. The group's demos and games pushed the machine to the limit with 3D animation and rock-'n'-roll soundtracks.

But as 1991 drew to a close, the FTA disbanded. The group has left us a legacy: They showed us what the GS could do, and they inspired us by demonstrating just how much fun it can be to own a GS.

Then in late spring this year a package arrived here postmarked Dijon, France. It contained a number of disks, described by Olivier Goguel as "the latest gifts from the former FTA group to the GS community." Just as the FTA's software gave GS fans lots of fun and learning while the group was still churning out hits, we'd like to share these newest programs with you. We're pleased to announce *inCider/A+*'s first-ever "Shareware Solutions Contests" — one for programmers, one for non-programmers.

One of the new programs is **Bouncin'Ferno**. It's a Marble Madness-type game, complete with incredible graphics, sound effects, and music. Three levels of 25 fields each are already defined, and you can play with either mouse or joystick. On each level, you'll try to roll over small objects and pick them up before advancing to the next level. Some are suspended high above the ground and you'll need to jump to get them, while others are hidden under 3D ramps.

As it is, Bouncin'Ferno is a lot of fun, but it's not quite finished — there's no scoring module. The authors have provided the entire Merlin 16 Plus source code, however, and that's the heart of the programmers' contest. Rules are straightforward: Use the Bouncin'Ferno source code to create a completed game.

We don't care if you make it a desktop program or use the toolbox. We don't even care if you translate it to run under ORCA/M or APW or use the source code to create a totally different game. What we do care about is game play, artistry, creativity, fun, sound, animation, documentation, user friendliness, and compatibility with both ROM 01 and 03 machines. Make our eyes bug out, make our toes tap. Let the FTA guide you in spirit — create a program they'd be proud of. Prizes will include free software from noted publishers. Look for details in an upcoming issue of *inCider/A+*.

Nonprogrammers can participate, too. Included with Bouncin'Ferno is a screen editor that lets you create your own levels. Make them hard or easy, fun or frustrating. Submit your favorite new Bouncin'Ferno levels and you'll be eligible to win valuable software prizes.

Bouncin'Ferno is hard-drive installable; double-click on P8.LOADER to run the game. If you run it from a floppy instead, just boot the disk. (If you have a problem booting it, run P8.LOADER from either ProDOS-8 or GS/OS.) Documentation in both French and English is also provided.

The FTA has donated Bouncin'Ferno to the public domain; therefore all contest submissions, as derivative works, will also be in the public domain. To enter, just print, complete, and sign the contest form provided on disk as a standard text file, and send it along with your disk to FTA Contest, c/o *inCider/A+*, 80 Elm Street, Peterborough, NH 03458. All entries must be postmarked by December 31, 1992.

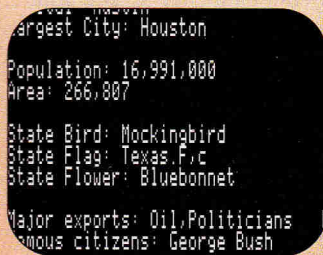
We'll make Bouncin'Ferno, along with the contest-entry form, available for downloading from America Online, CompuServe, and GENie — or send \$5 (U.S. funds only) to Joe Kohn, 166 Alpine Street, San Rafael, CA 94901. Add \$2 for shipping outside North America. You don't have to be an *inCider/A+* subscriber to enter, so spread the word — tell your friends, tell your fellow user-group members. After judging, we'll upload winning entries to the on-line networks. — Joe Kohn, Contributing Editor

NEW SOFTWARE

PICTURE THIS

DB Pix, a new AppleWorks 3.0 enhancement from JEM Software, lets you insert graphics into your database files. Just press Open apple-B while the cursor's on a picture's filename to display the image. You can display full-screen pictures in both single and double hi-res, and Print Shop graphics on screen next to the database record.

DB Pix can help you keep track of your graphics library: Use AppleWorks' record-selection rules to narrow down the list of files you want to view, and then scan them. Add scanned images to genealogy



and inventory files, or add maps and graphics to geographic databases.

DB Pix is fully compatible with JEM's other AppleWorks database enhancements, Total Control and DoubleData, as well as Beagle Bros' TimeOut series, but no other software is necessary. It works on any Apple II, and requires only a simple one-time modification.

DB Pix sells for \$25, plus \$3 shipping, from JEM Software, 7578 Lamar Court, Arvada, CO 80003, (303) 442-4856. For more information, circle number 350 on the Reader Service card.

NETWORK SOLUTION

The Mastery School Network and Tracking

System has one big advantage over many other networks: It uses Apple IIs and Apple IIgses exclusively. Cables link as many as 48 Apple IIs, equipped with a Mastery Development Network Card, with a printer and file server that also runs on an Apple II.

But Mastery is also unique in letting educators track individual student performance personally. It prescribes further student activities and reports progress to student and teacher. It also delivers a detailed principal's report evaluating the progress of the entire student body.

With its open hardware architecture, the network runs all Mastery, MECC, and other commercial software. Schools adopting the Mastery Network continue to use the software they already own, saving money and time.

And when a number of students are using the same program, the teacher can save still more time by using the software's "group load" command, which boots the software on all student computers simultaneously.

Mastery Development's theory is that a network

should let the teacher teach and the computer do what it does best: monitor and manage.

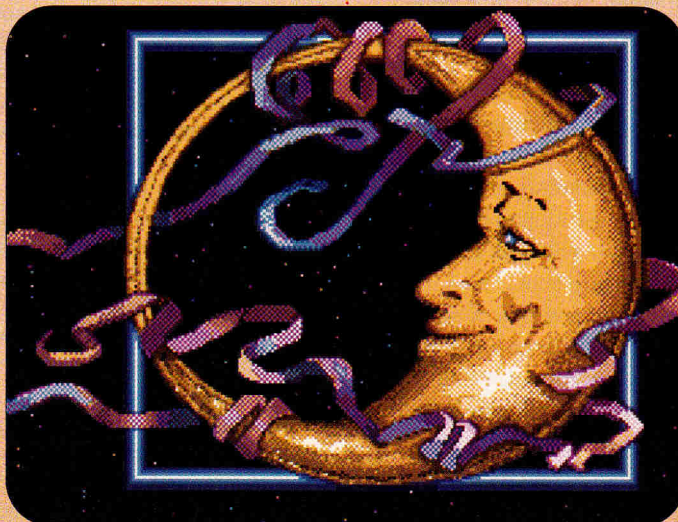
The Mastery System can create a functioning computer lab for as little as \$5000. For information about a trial program, write on your school's letterhead to Mastery Development, P.O. Box 3126, Redmond, WA 98073, (206) 885-6927, or circle number 351 on the Reader Service card for more information.

PAINT JOB

Imagemaster: Basic Paint is a new graphics program that fully utilizes the power and color capabilities of the Apple IIgs.

Imagine 136 brilliant hues on screen at one time, 64 built-in palettes and an unlimited number of custom palettes, and sophisticated color editing — as many as 8 million color mixtures — all for only \$44.95.

Basic Paint works in 320 graphics mode only, for maximum color range. A number of innovative options make painting easy; the program's "test"



Basic Paint's custom palettes and editing bring the GS' screen to life, with 136 simultaneous colors, 8 million possible mixtures.



feature, for instance, lets you try out complex changes before making them permanent. Basic Paint also offers 10 levels of magnification — all tools work at every level — and a number of backgrounds.

Imagemaster: Basic Paint requires only 1 megabyte of RAM, works with GS/OS System Software 5.0.4 or later, and isn't copy protected.

For more information, contact Jada Graphics, 7615 South 48th Street, Omaha, NE 68157, (800) 634-4552, or circle number 352 on the Reader Service card.

SEE THE USA

MacUSA, new from PC Globe, offers instant profiles of all 50 states and Puerto Rico, with detailed maps, colorful graphics, and annually updated data. You can compare state information instantly, thanks to bar charts and thematic maps. You can also export maps and images to graphics, word-processing, spreadsheet, and desktop-publishing programs.

MacUSA's maps show major state features, elevations, locations of major cities, and state flags; you can also play each state's official song. Other features include a self-adjusting time-zone map, point-to-point distances, and information on tourist attractions, state history, demographics, and state politics.

It's an ideal tool for business, education, travel, and home.

MacUSA, like last year's popular Mac-Globe, sells for \$59.95, from PC Globe, 4440 South Rural Road, Tempe, AZ 85282-7044, (602) 730-9000.

For more information, circle number 353 on the Reader Service card.



Winter Springs, FL 32719, (407) 365-4209.

For more information, circle number 354 on the Reader Service card.

NEW HARDWARE

WINGED WORKHORSE

The **Pegasus Oi** combines a hard-drive case and a power-supply kit inside your Apple IIGs.

It accepts half-height or low-profile 3.5-inch SCSI mechanisms of the type that are popular for Macs, and may include the SCSI mechanism in your external GS hard drive. The Pegasus is a great way to upgrade from an external to an internal drive.

To install the Pegasus Oi, remove your GS' power supply and replace it with a special case designed to fit an internal SCSI drive.

It contains a smaller but more powerful power supply — 80 watts, twice the power of the stock supply and 80 watts more than an external hard drive offers.

A cable connects to your internal SCSI card (Apple's High Speed SCSI or CV Technologies' RamFast, for instance) and to other SCSI devices in a daisychain.

You can reclaim the desk next to your computer with a Pegasus Oi for \$179 (\$199 with a cooling fan) from Econ Technologies, P.O. Box 19536,

LOOK MA, NO MAGNETS

Floptical" disk drives are the hot new data-storage medium: They combine the speed and reliability of an optical disc — which uses lasers rather than magnets to store your data — with the small footprint and flexibility of a floppy-disk drive.

Now Tulin's new **21MB Floptical Drive** promises to bring optical technology to the Apple IIGs. The device features a removable disk drive for portability, and can also read and write standard 1-megabyte floppies.

This is a drive you can use with a number different operating systems, including GS/GS, Macintosh, and MS-DOS, yet it uses only as much power and desk space as a standard floppy drive.

At press time, the company estimated the price would be set at approximately \$779. For details, call or write Tulin Technology, 2156H O'Toole Avenue, San Jose, CA 95131, (408) 432-9057 or circle number 355 on the Reader Service card.

SHAREWARE SOLUTIONS * BY JOE KOHN



SUMMER FUN 2

While the rest of the world is relaxing at the beach, thousands of Apple IIGs owners are having their best summer ever, and they're not even leaving the comfort of their own homes. Instead, they're traveling to distant galaxies to blast alien spacecraft, or solving mind-teasing puzzles while trying to outwit their computers. Thanks to a number of freeware and shareware games, you too can spend your vacation practicing hand/eye coordination and sharpening your reflexes while playing any of a number of low-cost arcade, strategy, and board games.

- **Baseball Trivia**, a \$10 shareware program by professional baseball writer Russ Eagle, is a wonderful way to spend a hot day inside. This two-player game tests current and historical facts about our Great American Pastime.

It's set up just like a real game of baseball. Each inning, the game asks each player three questions, with 30 seconds to supply the correct answer. Guess right, and go to first base. If you know who the all-time home-run leader is, or the only player to pitch two no-hitters in a row, you'll soon be filling the bases with runners. If your clean-up batter does well, you'll rack up runs on the super-hi-res scoreboard. Baseball Trivia offers almost 400 questions, and no two games are ever the same. Upon payment of the shareware fee, you'll be eligible to receive additional editions with all-new questions. Requires 1 megabyte of RAM.

- **Blue Helmet**, a public-domain Formula 1 car-racing game from the French Free Tools Association, has been rumored for years. That rumor has come partially true. Blue Helmet is incomplete; more than an FTA demo but less than a full-blown game, it's a 10-minute timed qualifying heat that ends abruptly. (See "FTA Game Contest," p. 10, for details on Bouncin'Ferno, another unfinished game from the Free Tools Association.)

This program is so much like high-resolution coin-operated arcade games, you'll find your heart racing as you take curves at 180 miles per hour, and you'll be twisting and turning your joystick while trying to avoid obstacles in the road. Blue Helmet comes with beautiful animation, rock-'n'-roll music, and digitized sound effects; this is one FTA title you won't want to miss. Requires a joystick.

- **Computix** is a public-domain educational strategy exercise disguised as a talking super-hi-res game. Written by French programmer PepeGS, this game requires quick math calculations as you try to outthink and outscore your GS opponent.

Set up on an 8-by-8 grid, you'll be trying to remove the highest-numbered tiles from each row while the GS does the same in each column. It's a unique game — and if you think fast you'll beat your computer.

- **Floor Tiles** is a fantastic \$10 shareware strategy board game by noted GS programmer Karl Bunker. The premise is simple, yet game play is challenging: You'll be placing multicolored tiles — something like Tetris' — onto a large- or small-sized grid; surround any tile on three sides with a similarly colored tile, and the original tile will disappear and you'll score points.

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It's not an easy game, as you get only five seconds to think about each move. There's a save-game option and a player's hall of fame. It's guaranteed to keep you thinking long after the summer sun goes down.

• **Mah Jongg**, by Chris Heckman and Scott Mathews, is a delightfully addicting \$5 shareware implementation of an ancient Chinese board game — the same game that served as a model for the commercially available smash hit Shanghai. You start with 144 colorful tiles in 36 patterns, and try to remove tiles in pairs until the board is cleared.

Each time you play, the software places tiles at random, so no two games are ever the same. Three stunning tile sets are included, along with instructions and a template for designing additional tile sets with any 16-bit GS paint program. Mah Jongg is bound to result in many late summer nights spent in front of the GS.

• **Quintette**, by the French programming team of Kwisartz and Ticks and translated into English by Rick Gast and Andy Stein, contains two beautiful one- or two-player strategy board games: Quintette and Go Moku.

With lovely music, special sound effects, and dynamic animation, you'll try to outthink and outmaneuver your opponent. Played on a 17-by-17 grid, the game includes eight levels of difficulty. Whether you challenge another player or the GS, your strategy is to place five stones in a row. Good luck.

• **Space Whiskey** is Lane Roathe's wildly amusing \$10 shareware outer-space shoot-'em-up arcade game. The premise is comical; your crew has gotten drunk and gone AWOL to carouse and party with aliens. It's your job to rescue them and your precious cargo.

You'll race around the galaxy trying to pick up jugs of space whiskey before your crew does. Aliens like booze, too, so they'll be attacking you on sight. You'll pick up points by shooting enemy ships and collecting the jugs, while shooting your own ships loses you points. Nearby whiskey jugs will set off your ship's passive nasal-sensor alarm. Filled with humor, fast action, and digitized sound, Space Whiskey is bound to become a classic, long after the hot summer is over.

• **Xpurpose** is Bob Owen's \$5 shareware game of skill and logic — something like Chinese checkers. The basic idea is to remove pieces from the playing board by jumping over them onto an empty square. The goal of the game is to leave only a single piece on the board — no easy task. Completely mouse driven and containing great sound effects, Xpurpose will keep you delightfully frustrated all summer long.

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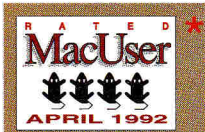


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Steven W. Disbrow, Publisher *GS+ Magazine*, Mar/Apr '92



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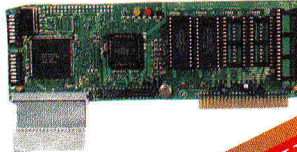


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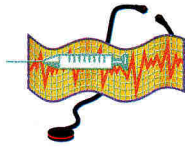
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PINATUBO SPEAKS

Of volcanoes and floppies: Digging out and booting up after a shower of fire and ash.

By **CECIL FRETWELL**

DUST IN THE WIND

I WAS STATIONED IN THE PHILIPPINES when Mount Pinatubo decided to erupt. Although I survived intact, my 3.5-inch disks didn't.

Volcanic dust and ash has filtered into our building's air-conditioning system and corrupted most of my floppies. Is there any way to clean them?

Darril Gibson
Pensacola, FL

It happens. Despite your best efforts, your absolutely irreplaceable 3.5-inch floppy disks sometimes get covered in potting soil or thrown in the garbage — or coated with ash when the major volcano in your area erupts. If you don't have backups, the only thing to do is check your nerves at the door and clean your disks by hand. Don't panic — we're going to walk you through it.

First choose a clean 3.5-inch floppy disk you can afford to destroy — you're going to sacrifice it so that your essential data may have a chance at life.

Carefully pry off the metal shutter and pop open the case holding the donor disk; 3.5-inch cases are usually fastened only at the corners, so you should be able to slide a thin-bladed knife between the halves of the shell and break the contact with a gentle twist at each corner.

Do as little damage as possible, as you'll use the empty case as a caddy to hold the dirty floppy after you've cleaned it. Now remove the original floppy you find inside the case (a circular greyish-brown disk with a metal center) and the plastic write-protect tab.

Use the same method to open the case holding your damaged original disk. Be careful not to slide the knife blade in more than a quarter-inch — otherwise you could damage the storage media irrevocably.

Remove the floppy disk and gently rinse it with lukewarm water and nothing else. If the dust doesn't seem to be coming off with a light rinse, add just a touch of dish detergent to the water and wipe gently from the center of the disk out, not around in circles. Blot the disk dry with a soft cloth — don't rub the disk surface.

Now let the disk dry thoroughly for a day or so to make sure the emulsion is fully hardened. Put the disk in the caddy you made, tape the case together, and copy your data to your hard drive or to a fresh floppy.

For tougher cleaning problems (and more-desperate situations), you can also try spray freon and optical-grade cloth or tissues (lint-free and abrasive-free). These supplies should be available at any camera store.

Theoretically, this approach should also work with 5.25-inch disks, but you'd have to slit the sleeve open with a razor blade to get at the floppy inside.

Special thanks to Walt Roshon and Sheldon Greenwell for sharing their hard-won experience with us. [Editor's Note: Darril wrote back to us and said the first method worked fine — he was able to recover data from several disks.]

HUNTING FOR VOLUMES

I HAVE A ROM 01 APPLE IIgs USING System 5.0.4, and a CMS SCSI card with factory settings in slot 7. Daisy-chained into this card are two 20-megabyte CMS hard drives and one 40-megabyte hard

drive. The Finder recognizes all three drives, which I've set up as four volumes. Using the Finder, I can move, copy, and display data from any hard drive, any volume, to another.

No matter what I try, though, I can't launch any program from volume 3 or 4, regardless of configuration. When I double-click on an application, the system asks me to insert the disk. If I press Escape, I get the message "System error 45, path not found."

It sounds as though you're trying to launch ProDOS 8 applications from these last two volumes. The problem is that ProDOS versions 1.9 and earlier can handle only two SCSI partitions. An upgrade to System Disk 6's ProDOS 8 v2.0.1 should solve your problem. Thanks to Chris Adams and Daniel Zimmermann for their assistance.

KEEP IT CLEAN

ARE DISK CLEANERS SAFE? HOW do you activate an Apple IIGs 3.5- or 5.25-inch drive for 30 seconds or longer while using a cleaner?

Samuel Perez
Alameda, CA

Disk cleaners are considered safe if you use them correctly and not too frequently. Before you start, note that if you clean a drive too often, you may damage the heads owing to the abrasive nature of the cleaning process. Modern disk drives shouldn't need cleaning more than once a year.

To spin the disk drives attached to your Apple IIGs, follow the steps in this simple scheme:

- 1. Boot AppleWorks Classic and create a new word-processing document.*
- 2. Insert the head-cleaning disk in the drive you want to clean.*
- 3. Press the key combination Open apple-S (OA-S) for the slot and drive you want to clean. In the process, hold down the S key for as long as you want to clean the drive (30 seconds or whatever).*

Any program that can save data to a file should provide you with the same capability. Just put your disk cleaner in the drive and "save" a file to it. Thanks to Terry Brewster for his advice.

SIMPLE ASSEMBLY

WHAT COMPUTER BOOKS OR media resources would you recommend to a beginning assembly-language programmer? I'm specifically interested in the 65C02 microprocessor.

Robert C. Fiduccia
Annapolis, MD

One excellent reference is based on a series of articles by the developer Roger Wagner. They're found in his **Assembly Lines: The Book**, priced at \$19.95. There's also a companion floppy called **Assembly Lines: The Disk**, priced at \$15.95. Order from Roger Wagner Publishing, 1050 Pioneer Way, Suite P, El Cajon, CA 92020, (619) 442-0524 or (800) 421-6526.

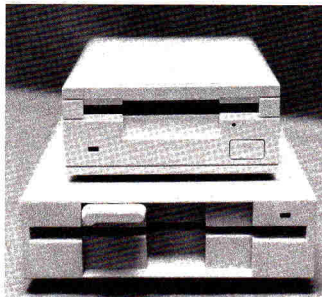
ZIPGS TEST

I'VE HAD A PROBLEM EVER SINCE I purchased the ZipGS accelerator from Zip Technology. When I run the self test on my Apple IIGs, it says the system is bad, and the number 0C000005 appears three times at the top of the screen. What's happening to my machine?

Alden Cates
Redwood City, CA

According to the the tech-support folks at Zip Technology, the error message is normal. It seems that when the engineers at Apple Computer wrote the GS' internal-diagnostics code, they didn't predict the use of an accelerator system such as the Zip Chip or Applied Engineering's TransWarp board. For your own peace of mind, you might try removing the ZipGS and replacing your original micro-processor, then running the self test. It should come out clean and green.

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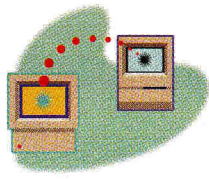
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BRIDGING THE GAP

TEAMWORK

Apple-based solutions get IIs, Macs, and PCs speaking one another's language.

By GREGG KEIZER

BRIDGES COME IN ALL SHAPES, sizes, and styles. Some span chasms across canyons, others just leap gullies. Computer bridges run the same gamut, connecting like-minded machines in simple networks or disparate systems that have almost nothing in common. The bigger the gap, the more complex the bridge.

Joining Apple IIs and Macs is tough enough — but at least they share the same parent. What can you do when you need to tie together computers even further apart — like PCs and Macs and Apple IIs? You work harder, that's what.

I THINK I CAN, I THINK I CAN

It can be done, this symbiosis of different operating systems. You just can't expect it to be quite as easy as snapping together a LocalTalk network. Why bother?

Because Apple users do. *inCider/A+* just tabulated its most recent readers' survey, and the results are illuminating. Almost half of you use an IBM PC or compatible at work or at school. That's a lot — not as many as own or use a Mac, but still a substantial number.

Perhaps you have a PC at the office, and an Apple II or Mac at home. You'd like to put in some extra hours away from the workplace, but you're not sure what you can do with your documents. Or maybe your school is a MixMaster of computers, with Apple IIs, Macs, and PCs scattered across the campus. You'd like to integrate this hodgepodge into an intelligent whole. We're not blazing a new trail here, just following a big crowd already on the move.

APPLE ON ITS OWN

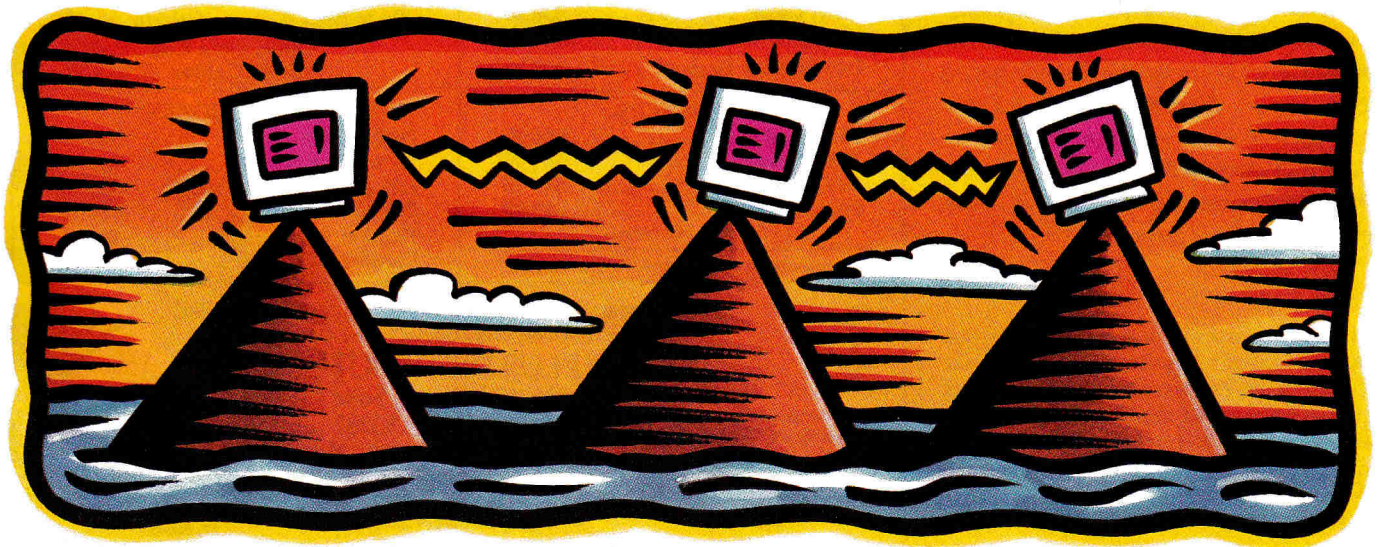
Forging the PC into a bridging span is easiest when there's a Mac to play the

middleman. That's because networking solutions for PCs and Macs are numerous, thanks to business acceptance of the Mac as a viable office addition. But connecting Apple IIs to PCs is tough without at least one Macintosh to act as translator.

There are ways to move directly from the Apple II to the PC and back, though. One of the more-reliable methods is **Cross-Works**, a cable/translation-software combo from SoftSpoken. After plugging the cable into the serial or printer ports of both computers, you run the file-transfer and translation utility on the PC and the Apple II. Cross-Works copies files from one computer to the other — much like a telecommunications program transfers data, though there's no modem — and then once at its destination translates a limited number of popular file formats.

For instance, you can turn an AppleWorks spreadsheet file into a Lotus 1-2-3 file, transmute a DOS WordPerfect word-processing document into AppleWorks form, or make a Microsoft Works file acceptable to AppleWorks.

Cross-Works' limitations, though, make the bridge shaky. The two machines must be close together, close enough for the cable to stretch between them. Restricted translation possibilities don't help, either



— you're limited to major formats on both machines, such as AppleWorks, WordPerfect, 1-2-3, dBase, and Microsoft Works. Still, Cross-Works is a time-tested solution, and will serve you well if your Apple II work is all in AppleWorks.

MAC IN THE MIDDLE

When you drop a Mac into the mix, you open up a new frontier in PC bridge building. That's because Mac-to-PC connectivity opportunities exceed those available to Apple IIs; you'll use the Mac as a middleman, a stop along the translation route.

To build a small-scale bridge between the Apple II and the PC, for instance, you can rely on a combination of the Mac's **Apple File Exchange** (AFE) utility, System 6 for the GS, and XTND technology. Let's say you want to move several files from your Apple II at home to your PC at work; the Apple II files are AppleWorks word-processing documents, and you're using WordPerfect 5.1 on the PC in the office.

The lowest level of file sharing involves text files that retain words and numbers, but none of the formatting of the original. Unless you have a Mac program that uses XTND file translators (such as **ClarisWorks**, **MacWrite II**, or DataViz's **MacLink Plus/PC** utility), you're forced to use this lowest-common-denominator approach. Start by saving the AppleWorks files to a ProDOS disk as text files. Take the disk to a Mac, fire up AFE, and insert the disk. Translate the ProDOS files to Mac format, then save them to the Mac's hard-disk drive (**Figure 1**).

Last step in the process is to run AFE again, this time translating the files from Mac to PC format, and saving them to a DOS disk as you do. Now you can take the disk to your PC, run WordPerfect, and retrieve the text files. You'll have to reformat them, of course, by replacing specifications such as boldface, margin and tab settings, and page length — all lost when you turned them into text files on the Apple II — but at least you don't have to retype everything.

A slightly more-elegant technique is possible only if you have an XTND-capable program on the Mac, say **MacWrite II** or **ClarisWorks**. If you do, you can take the AppleWorks word-processing documents right to the Mac. And if you're using a System 6-equipped GS, you can even save those files directly to a 3.5-inch Mac disk.

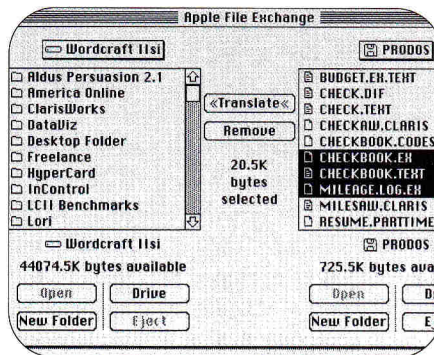


Figure 1. The Apple II-to-PC link: The Mac's Apple File Exchange program works as middleman to convert ASCII text files on your ProDOS disk to Mac format. Save them to the Mac's hard drive, then translate from Mac to PC format and save to a DOS disk.

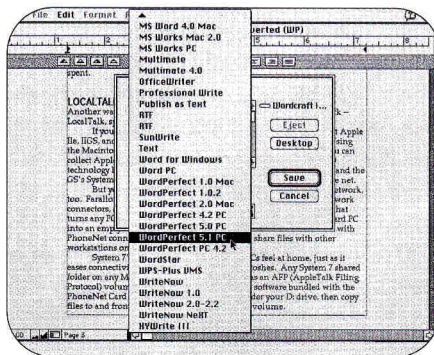


Figure 2. If you're running XTND-capable software on your Mac, you can open AppleWorks files directly, with formatting intact (skipping the ASCII step). Pick an appropriate translator and save in that format to your Mac's hard drive. Then boot up Apple File Exchange to transfer the file to a DOS disk.

You must run AFE to move files to the Mac if they're on a ProDOS disk; a Mac disk used with System 6 on the GS goes right into the Mac's drive. Next, run the XTND-capable software and import the files with the *Open* command. Using the *Save As* command and the WordPerfect XTND translator, save them as WordPerfect files (**Figure 2**). Finally, transfer the files — still in Mac form — to a DOS disk via AFE. This DOS disk now goes to the PC, where you can open its files with WordPerfect. Most of the formatting remains intact, so there's little touch-up necessary.

The saving grace here is that the machines at each end of the translation process — Apple II and PC — don't need to be in the same place. The Apple II can be at home, miles away from work or school, so you can use the least-expensive

network, "sneakernet," to make the connection. The process is regrettably tedious, especially for frequent translations, but if you're moving large amounts of data from one system to another, it's time well spent.

LOCALTALK MEANS PC, TOO

Another way to link Apple IIs, Macs, and PCs demands an actual network — LocalTalk, specifically — but improves communication dramatically.

If you're network savvy, you already know that you can connect Apple IIs, IIgses, and Macs in a low-cost LocalTalk network. Using the Mac's System 7 file sharing or an AppleShare file-server Mac, you can collect Apple II files and distribute them to other workstations. XTND technology lets you open and save files quickly in numerous formats, and the GS' System 6 offers a fast connection to any AppleShare volume on the net.

But you may not know that PCs can play a part in a LocalTalk network, too. Farallon, widely known for its LocalTalk-compatible **PhoneNet Card PC**, a hardware/software bundle that turns any PC into a LocalTalk workstation. You plug the PhoneNet Card PC into an empty slot inside the PC, and link the PC to the LocalTalk network with PhoneNet connectors and cables. Now the PC can share files with other workstations on the net.

System 7's folder-sharing features help PCs feel at home, just as it eases connectivity between Apple IIs and Macs. Any System 7-shared folder on any Mac is accessible from a PC as an AFP (*AppleTalk Filing Protocol*) volume. With PhoneNet Talk, the PC software bundled with the PhoneNet Card PC, you can make the shared folder your D: drive, then copy files to and from it as you would any other DOS volume.

Getting from Apple II to PC and back with LocalTalk requires, at some point, a middleman Mac. For instance, you may want to share several AppleWorks GS documents with someone using an IBM PC compatible. The easiest solution is to save those AWGS documents as text files, then copy them to a shared folder on a Mac. Once there, the PC user can copy them to his or her own hard-disk drive simply by connecting to that shared folder. Of course, the text file won't include any

BRIDGING THE GAP

formatting. Accounting for that demands more work; much as in sneakernet, Mac XTND-capable software can intervene and translate the AppleWorks GS files into an appropriate PC word-processing format.

Another important benefit of including PCs in your school or office LocalTalk network is printer sharing. A LocalTalk-ready PostScript laser printer on the network is not only available to Macs and Apple IIs, but to the PC, too.

PhoneNet Talk lets you send chores to the printer just as if it were cabled to the PC; the only caveat is that your PC software must be able to print in PostScript, or that the printer itself be capable of emulating the more-traditional Hewlett-Packard LaserJet standard.

MORE TOOLS OF THE TRADE

Other connectivity tools ease your bridge-building job. **DOS Mounter**, a Mac INIT from Dayna Communications, is one; Central Point Software's **Option Board Deluxe** is another.

Install DOS Mounter in a Mac's *System* folder, and the machine treats 3.5-inch PC disks as if they were Mac floppies. Though AFE and the Mac's SuperDrive accomplish the same thing — albeit in a roundabout way — DOS Mounter simplifies the job.

Rather than transfer PC files to the Mac via the cumbersome AFE process, you just

put the PC disk in the drive, double-click to open its icon, and copy files by dragging and dropping.

In fact, this article was written on a PC compatible using Microsoft Word for Windows. I saved the file to a DOS-formatted floppy, then inserted it into a DOS Mounter-equipped Mac IIs. I copied the file to the Mac's hard-disk drive by simply dragging its icon to a folder, then opened the document MacWrite II. That program then used MacLinkPlus/PC's extensive collection of XTND translators to turn the Word for Windows document into a MacWrite-formatted file. (I do practice what I preach.)

Option Board Deluxe, a hardware/software combination, puts a card inside the PC and special utilities onto your hard drive. Installation isn't for the nervous, but once in place, Option Board Deluxe lets the PC recognize 400K and 800K Mac disks (though not high-density 1.44-megabyte floppies).

Use both solutions — or any of a number of alternatives — and you can easily swap PC and Mac disks from one machine to the other.

Apple II owners aren't left out in the cold, either. If you're using System 6 on the GS, you can save files directly to a 400K or 800K Mac disk (but, again, not a 1.44-megabyte disk), then take the floppy and insert it into a PC equipped with

Option Board Deluxe. Non-text files may be worthless, since very little PC software imports Apple II formats, but at least you can skip the Mac middle step.

TRANSFERS AND TRANSLATIONS

Bridging to the PC is no different, at least in principle, from connecting Apple IIs and Macs: First you must find a way to transfer or copy files from one computer to the other, then you must find a way to translate those files into a form the receiving computer can understand.

Unfortunately, although the Apple II and the Macintosh communicate, and although the PC and the Mac talk to each other, PCs and Apple IIs aren't exactly on speaking terms. That's why the Apple II-to-PC bridge is the hardest to build and maintain.

Solutions to explore range from the basic (the Applied Engineering's **PC Transporter** card, a DOS emulator for the Apple II) to the sophisticated (Ethernet connections that link Apple IIs, Macs, and PCs). Peripherals such as Insight Development's **MacPrint** and Orange Micro's **Grappler IIsp** let you share printers among Mac and DOS systems. **SoftPC**, from Insignia Solutions, and **RunPC**, from Argosy Software, let the Mac actually run DOS programs (though slowly). **LapLink Mac III**, from Traveling Software, eases transfer and translation between a PC portable or notebook computer and a Mac. **MacLinkPlus/PC**, mentioned above, includes more than 400 translation combinations among PC, Macintosh, and even Apple II word-processing, graphics, spreadsheet, and database formats.

The kinds of bridges you build depend on the machines you work with and the demands you place on them. Like it or not, the PC is a big part of many an Apple II and Mac user's life — but thanks to a variety of hardware and software solutions, the connections you construct can link even DOS machines into an Apple-based system of computer communication. □

GREGG KEIZER IS A CONTRIBUTING EDITOR AND WRITES FREQUENTLY FOR *INCIDER/A+*'S REVIEW AND FEATURE SECTIONS. ADDRESS YOUR CORRESPONDENCE TO 4420 HILYARD STREET, EUGENE, OR 97405. ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE IF YOU'D LIKE A PERSONAL REPLY.

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DOS Mounter

Dayna Communications
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Salt Lake City, UT 84144
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Grappler IIsp

Orange Micro
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LapLink Mac III

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MacLinkPlus/PC

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\$199

MacPrint

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Emeryville, CA 94608
(510) 652-4115
\$149

Option Board Deluxe

Central Point Software
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Greenbrier Parkway #200
Beaverton, OR 97006
(503) 690-8090
\$179

PC Transporter

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Carrollton, TX 75011
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REVIEWS



DREAMGRAFIX 1.02

You're Picasso for a day — sophisticated design tools urge you to venture where no artist has gone before.

Paint your wagon — or your house, car, boat, plane, or truck — red, orange, light mauve, festive, ochre, puce, or any combination of 3200 colors with DreamGrafix, an innovative illustration package for the Apple IIgs from DreamWorld Software. This super-high-resolution (SHR) graphics application invites you to grab a mouse and throw bit maps to the wind. DreamGrafix offers no fewer than five paint modes: One uses a 640-by-200-pixel display, while the other four display screens of

320 by 200 pixels. The program's palette in 640 mode provides four "true" or 16 "dithered" colors. Dithering simulates true shades by using two colors instead of one to produce a single color effect — for example, alternating black and blue pixels to project dark blue. In standard 320-by-200 mode, on the other hand, you use 16 colors from a range of 4096 shades to create pictures. In 256-color 320 mode, DreamGrafix lets you paint with up to 16 distinct color palettes. Each palette holds 16 shades, for a total of 256 colors.

The remaining two 320 modes generate pictures with as many as 3200 colors. Both let you set 200 palettes of 16 colors each. To achieve this effect each horizontal line must have its own color palette. In "3200 color mode," a 14-pixel-wide strip of color follows the cursor around the screen as it moves. Everything outside the strip appears in gray scale. In "SBC color 3200 mode" (slow but cool), the entire screen displays full color. Both 3200 modes offer sophisticated color options, but owing to limited documentation, artists will find them hard to learn.

DREAMS INTO VISON

To put DreamGrafix through its paces, I copied the application to my GS' hard drive (after making a backup). Installation proceeded without any problems. Note, however, that you must place color application icons in the *Icons* folder if you want to see them on your GS desktop. (This tip isn't in the DreamGrafix manual.) DreamGrafix doesn't ship with a system disk. To launch the program, you must first boot a copy of GS/OS, then run the program from the Finder. If your configuration includes only one floppy disk drive (and no hard disk), be prepared for disk swapping and long waits as the computer retrieves floppy-based information.

A DreamGrafix screen is divided into three areas. You paint pictures in the center in a large *Edit* window; a conventional menu bar at the top of the screen



DreamWorld Software
P.O. Box 830
Iowa City, IA
52244-0830
(319) 338-6491

- 3200-color paint program
- 1.25MB Apple IIgs/ROM 01
- 1.125MB/ROM 03
- requires System 5.02 or later
- 256-color mode on ImageWriter II requires System 5.04
- hard-drive installable
- \$99.95 plus \$5 shipping

provides familiar pull-down options such as *File*, *Edit*, and *Color*; an icon-based toolbox in the *Command Center* at the bottom of the screen contains a color-selection bar, several paint tools, variable pen widths, X and Y coordinates for the cursor's position in the *Edit* window, and more.

If you intend to work in conventional 16-color 320 or 640 mode, you may be able to use DreamGrafix without reading its rather skimpy manual. Conventional freehand and geometric shape tools sketch lines, arcs, polygons, rectangles, circles, and more. But DreamGrafix offers so many additional command-key, option-key, double-click, and menu functions that reading the documentation (limited though it may be) is absolutely necessary. This is even more the case in 3200-color mode, where you must also contend with options such as *closest color*, *force color*, *force closest color*, *3200-color editor*, *scan-line control bytes*, and more. On-line help, while available, is limited to *Command Center* tools: You read a description of a particular function as it streams across the bottom of the screen as a one-line read-out. The manual lacks an index, though, so you can't retrieve more information about specific topics very quickly.

To its credit, the program does feature four levels of split-screen fat-bits editing, customized start-up preferences, the option to create a spare (auxiliary) page (as additional workspace), 32 regular brushes, user-definable brushes, and much more. Flexible paint and special-effects tools handle operations such as cut, copy, paste, flip, invert, halve, and rotate. Double-clicking on a hue in the color-selection bar lets you adjust its RGB composition. There's even a *Show Animation* option to link, then play back, painted screens saved in PaintWorks-type animation files. The *Show Animation* option doesn't work with 3200-color pictures, though.

POWER AT A PRICE

DreamGrafix permits only one open document on the desktop and restricts you to just one level of *Undo/Redo*. In addition, as noted above, working in 3200-color mode isn't easy. For example, in SBC 3200-color mode, you can work in a 14-line strip of color while you're in the *Edit* window, but when you move the cursor to the *Command Center* or menu bar, the picture in the *Edit* window turns gray to speed up

APPLE II REPORT

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Children create "environmentally correct" posters, signs, mobiles, and newsletters with this simple desktop publisher. It's a science-oriented package containing background scenes, clip art, borders, fonts, and type styles for designing great-looking activity sheets, stories, flash cards, and bulletin-board displays. On-screen menus and prompts provide directions. Posters print in two or three strips suitable for taping together. Color output is available for printers equipped with a color ribbon. A well-written manual provides activity suggestions. This is a wonder-

ful program for introducing young children to the plants and animals of pond habitats.

CLIPART PLUS

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This package contains more than 200 colorful 640-mode art clips for use with Apple IIgs paint programs, HyperCard IIgs, or HyperStudio. High-quality images include pictures of animals, boats, Christmas themes, construction items, foods, fruits, sports, and more. In addition, ClipArt Plus comes with four new desk accessories (NDAs), four HyperCard IIgs XCMDs (external commands), and a module that converts GS System icons to HyperCard IIgs icons. The package's ClipIt NDA lets you copy a portion of an SHR (super high resolution) screen to the clipboard. A PrintShr NDA prints whatever is on the GS screen. An Icon Button NDA captures a portion of an SHR screen for use as a HyperCard IIgs icon, while Instant Icon saves the selected image as a Finder icon. XCMDs include VClip, which lets you view or print the contents of a standard clipboard from within HyperCard or a script; MovelIt, which copies HyperCard IIgs icons from one stack to another; Get Pic, which imports ClipArt Plus, Print Shop IIgs, and other GS-compatible graphics into stacks; and GetPrefix, which selects and returns a filename from the file dialog box. This package delivers good value for the money.

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- plus \$99 LCSI Logo II

This Logo-based package teaches geometry concepts and skills to children of different ages and abilities. Exercises, however,

Continued on p. 24

command operation. The switch back and forth between gray scale and color is as disorienting as the 14-line color strip. A *Mini Color Editor* function, however, lets you adjust the main hue on the selected palette without leaving the screen.

You'll also feel a bit lost the first time you design a new 3200-color picture. Initially, everything on screen appears in gray; you have yet to create color palettes, and doing that isn't as easy as the program developers would have you believe. The *Color Editor*, which utilizes the red/green/blue model, comes with seven preset palettes and seven commands that affect color appearance. DreamGrafix can accommodate 200 palettes, however.

It's nice to have that many color options, but the process of drawing with dozens of different palettes boggles the paintbrush. You're better off simplifying your color choice by making multiple copies of the same palette, even if that defeats the luxury of having so many colors available. Later you can switch to 256- or 3200-

color mode and use the *Mini Editor* to alter specific colors and create new palettes as you need them.

If you're familiar with other GS paint programs, DreamGrafix's 640 or 16-color 320 mode won't be hard to learn. There's only one palette to work with, and the color editor lets you modify shades as needed. But in 256- and 3200-color modes, the program becomes a lot more difficult because the manual doesn't adequately explain mapping palettes to different screen regions. There are no step-by-step tutorials.

The DreamGrafix file type differs from those used by other GS paint applications — you can't export your paintings to other programs if you've saved them in DreamGrafix's unique format. You can load or save files in certain more conventional picture formats, however, such as PaintWorks or Apple Preferred.

I found I could open, then modify, Platinum Paint and Deluxe Paint II files, for example, but not Print Shop IIGs graphics.

In addition, the program doesn't support images larger than one screen in size (320 by 200 pixels).

SCREEN TO SHINING SCREEN

DreamGrafix has both the potential and the power to be truly great — a lack of documentation and an off-screen palette editor are its only Achilles' heels. Without tutorials to introduce application functions and a quick-reference card to summarize keyboard commands, 256- and 3200-color modes are unnecessarily difficult.

DreamWorld says that an updated manual complete with tutorials, quick-reference card, and index is in the works. Until then, you can get help by calling the company's knowledgeable technical-support staff. In a time when the decline of new Apple II sales looms heavily across the desktop, it's nice to know that GS aficionados are still maintaining the style to which they've become accustomed.

Carol S. Holzberg, Ph.D.
Shutesbury, MA

APPLE II REPORT Continued from p. 23

require LCSI's Logo II, an antiquated version of the language; they don't work with either LogoWriter GS or LogoWriter 2.0. The manual contains grade-specific lessons, activity sheets, discussion questions, and overhead transparencies. Each grade-level curriculum consists of three units (Paths, Shapes, and Motion), taking six weeks to complete. An additional GeoTools unit is available for grades 4 to 6. All materials complement Silver Burdett & Ginn's textbook series Mathematics: Exploring Your World.

MIND WINDER

Educational Activities, Inc.
P.O. Box 392
Freeport, NY 11520
(800) 645-3739

- new critical-thinking-skills builder
- 48K enhanced Apple IIe
- \$59.95

This program uses game-like activities and geometric shapes to encourage thinking in children aged 10 and up. Players must answer questions involving matching, solving problems by considering attributes such as size, color, position, shape, and rate. Correct answers score points, and spelling counts. The program features five levels of difficulty. One other note:

This intriguing package would be much improved if it didn't "punish" youngsters (and reviewers) for using the delete key to erase mistakes.

READING IN THE WORKPLACE: AUTOMOTIVE

Educational Activities, Inc.
P.O. Box 392
Freeport, NY 11520
(800) 645-3739

- new job-based reading program
- 64K Apple II
- \$295 3-unit bundle
- \$119 individual units

Three sets of real-life "how-to" stories improve vocabulary and comprehension skills in high-school students. Each set contains 16 stories depicting automotive situations and items such as changing oil, Grand Prix racing, auto assembly lines, bumpers, and more. Sets target progressively higher reading levels; youngsters read carefully for main idea, details, inference (conclusion), and vocabulary, then answer on-line multiple-choice questions. A built-in dictionary explains difficult words; printed worksheets supplement computer activities. The goal of these exercises is to make sure that entry-level workers know

how to read manuals, technical materials, and directions. The program builds basic reading skills, but students may find this high-priced software dry, unimaginative, and too much like a textbook.

STORYBOOK WEAVER: WORLD OF MAKE-BELIEVE

MECC
6160 Summit Drive North
Minneapolis, MN 55430-4003
(800) 685-6322 x527

- new writing tool
- 1MB Apple IIgs
- \$59

Youngsters in grades K through 6 can have fun writing and illustrating with Storybook Weaver, a simple word processor with graphics capabilities. The package ships with colorful scenery, plus more than 500 pieces of clip art. Illustrations draw on folklore from many cultures in an effort to stimulate imagination. Storybooks may include a title page with a decorative border; pages may contain pictures and text, or just text. Kids can position clip-art

PRINCE OF PERSIA

Broderbund Software
500 Redwood Boulevard
Novato, CA 94948-6121
(415) 382-4400

- animated action adventure
- Mac version requires 2MB Mac Plus or higher (4MB for color with System 7), hard-disk drive
- off-disk copy protection
- \$49.95
- Apple II version requires 64K
- joystick optional
- copy protection
- works with Apple IIe card on Mac LC
- \$39.95



Scheherzade kept the angry sultan Schariar entertained for a thousand and one Arabian nights by telling a series of stories. Prince of Persia, Broderbund's newest arcade puzzle game for the Macintosh (also available in an Apple II version), won't keep you awake that many nights — but if you have fewer than 12 hours of fun, you must have some kind of magic Mac.

There's really no magic to Prince of Persia's appeal. The story's simple enough: The evil prince has stolen the king's daughter and locked her in a tower. You, a prince from a foreign land, are locked in the dungeon. You have an hour to escape and rescue the princess.

The route to the tower calls for nothing complex: The cellars and halls of the palace are something of a labyrinth, and you must kill the guards on one floor before climbing to the next.

You're lucky — you discovered a sword on the first floor and you can use it to battle the wardens. (We're all lucky that

Jordan Mechner, creator of Prince of Persia, discovered the swashbuckling movies of Errol Flynn and watched them again and again.)

Your sword's your only weapon, and you learn how to handle it well before you reach the end of Prince of Persia. As you sharpen your fencing skills, your admiration for Mechner's skill grows. He creates a believable illusion of a sword fight by simplifying it.

A MAGIC CARPET

Mechner's genius is to combine simple movements in complex ways. You have five moves in Prince of Persia; the numeric keypad controls "left," "right," "up," "down," and "jump."

Similarly, your fencing skills in this game are limited to "hit," "defend," and "put the sword away," but you'll be amazed at how lifelike the animation of those basic steps becomes. Prince of Persia weaves five different threads into a truly magical carpet.

objects anywhere in the picture window, then move them, resize them, flip them, and delete them. An innovative Spell option lets young writers place the name of a selected art clip in the text window at the bottom of the screen so that they don't have to worry about spelling. This is a great program to get young children interested in writing.

TALKING FIRST DINOSAUR READER

Orange Cherry Software
P.O. Box 390
Pound Ridge, NY 10576
(800) 672-6002

- new reading program for beginners
- 1MB Apple IIcs
- \$59

Four interesting stories send beginning readers back to the Age of Dinosaurs. In Let's Go Back in Time, terrific animated graphics and high-quality voice narration encourage children aged 6 to 9 to brave the dangers and "survive" the hardships of prehistoric life. Youngsters learn about meat-eating and plant-eating dinosaurs as they read and answer

on-screen questions. The three remaining stories feature amusing characters such as Bertha, a triceratops "who liked to plant and grow things," Thea, a shy, winged dinosaur, and Clyde, a curious giant lizard. Illustrations are rich, but kids don't interact with the stories. This limits the overall effectiveness of the program, but its colorful graphics images make reading a pleasant experience indeed.

TIMELINER: SPACE DATA DISK

Tom Snyder Productions
90 Sherman Street
Cambridge, MA 02140
(800) 342-0236

- new space-oriented templates
- 64K Apple II
- requires TimeLiner
- \$19.95
- plus \$59.95 TimeLiner

TimeLiner lets you create and print proportional time lines. Enter the important events for any subject and the program places them in correct order. Six sample time lines are included. The Space data disk contains 16 ready-to-use time lines on a variety of space-related topics, including the shuttle (1981-1991) and Voyager

missions (1978-1991). It also covers events related to the study of Mercury, Saturn, Neptune, Pluto, and Venus, and more. You can edit any time line or merge it with another for comparison. TimeLiner and its companion Space disk provide a great way to explore the mysteries of our solar system.

TROLL SPORTS MATH

Troll Associates, Inc.
100 Corporate Drive
Mahwah, NJ 07430
(800) 526-5289, (201) 529-4000

- new math package for grades 4 to 6
- 48K Apple II
- \$39.95

Children practice solving word problems with Troll Sports Math. This program takes youngsters step by step with a well-written on-line tutorial. Exercises range from simple to difficult; youngsters may obtain varying levels of help as they do the work. An on-line calculator assists with math. Students who answer two consecutive problems correctly rack up shots to score on an animated goalie; games include hockey, soccer, and lacrosse. This package encourages kids to have fun as they improve math skills.

— **Carol S. Holzberg, Ph.D.**

The magic of Mechner's programming and production of Prince of Persia shouldn't prevent me from mentioning that as you might expect in a computer game as entertaining as a Persian tale, the evil vizier and his minions know many dark secrets. More than meets the eye stands between you and the sultan's daughter, and you'll need your wits as well as your reflexes to save her.

If you want clues, don't look here. But don't forget that Lord Byron said, "The 'leap in the dark' is the least to be feared," and that Ben Jonson long ago noted that if you "Follow a shadow, it still flies you/Seem to fly it, it will pursue." Your mom also warned you about drinking from other people's bottles, didn't she?

ALAKAZAM!

Like Schariar, you'll be enchanted, and called back again and again to "just finish one more level" or "just get rid of this one pesky guard." As noted above, you have only an hour to save the princess. But if anybody can tell this tale in 60 minutes on the first try, I want to hear from you.

You'll probably want to save a game in progress, but that won't earn you any more time. As you play and save games, be careful that you don't find yourself on the last level with only a minute to go — no magic will save you there.

CAST A SPELL

You play at the keyboard on the Macintosh. In the Apple II version, you can use either keyboard or joystick. The *inCider/A+* Game Team struggled through the Apple II edition of Prince of Persia two years ago (February 1990, p. 36). I thought I'd miss the joystick here, but I didn't. In fact, when I dragged out the Apple II version again after playing Prince of Persia for the Mac, I wanted to use the keyboard instead.

Replaying the game was as much fun as playing it the first time was — if you haven't played Prince of Persia for years, try it again. Like the best tales, it bears telling and retelling.

And if you've yet to come under the spell of Prince of Persia, it's a highly recommended enchantment.

Paul Statt

Senior Editor, *inCider/A+*

★ ★ ★ ★ ★

**SPELUNX AND THE
CAVES OF MR. SEUDO**

Broderbund Software
500 Redwood Boulevard
Novato, CA 94948-6121
(415) 382-4400

- non-competitive fantasy exploration for the young at heart
- 2MB Mac
- color Mac running System 7 requires 4MB
- System 6.0.7 or later
- requires hard-disk drive, 8MB free space
- requires HyperCard 2.1 (included)
- \$49.95

It all started with The Manhole, an adventure that carried us on the wings of HyperCard to the edge of uncharted worlds deep beneath the waves, or perched majestically on clouds high in the sky. Powered by curiosity and guided by instinct, we followed our desktop mouse through the secrets of a sunken ship and a dragon's enchanted castle.

Manhole creators Rand and Robyn Miller soon followed with Cosmic Osmo. In this equally brilliant HyperCard "tour de farce," we traveled to a hypermedia solar system on the edge of the universe. Spelunx and the Caves of Mr. Seudo, the latest hypermedia adventure from the ingenious Miller brothers, again nips the sight fantastic. There are new worlds to explore, endearing characters to meet, and interactive games to play. It's a sequel without equal, offering more click-on surprises for young and old than you could ever imagine.

A JOURNEY OF 1000 STEPS BEGINS WITH A SINGLE CLICK

Who is Spelunx? Far be it from me to reveal this remarkable character's true identity, but Professor Spelunx's selfless generosity and amazing talent for catching flying toast garner favor, resulting in a land grant near the Yoyon Mountains. There, the great Professor and his trusted companion, Mr. Seudo, construct a cave kingdom with thousands of underground rooms connected by twisting tunnels.

You get to explore three cave rooms as visitors: *Nemo*, *Tumms*, and *Arwen*. Each cave room contains several electronic toys and whimsical inventions. Your task is to

discover what they are and how they work. A handy Spelunx map shows your position in relation to the rest of the underground universe. The map keeps you from getting lost, but experienced spelunkers can disable it if they prefer.

As with The Manhole and Cosmic Osmo, you explore each screen simply by pointing and clicking on anything that looks interesting. Doors squeak open, wall switches turn lights on and off, and whimsical characters speak. Many objects reveal hidden items, activities, and games.

THE JOY OF LEARNING

Spelunx games are non-competitive. In the case of "Yodel Toasters," however, challengers will inevitably try to better their scores with each new round of play.

While the Miller brothers claim that Spelunx is not intended solely for educational purposes, several activities teach interesting facts about biology, astronomy, physics, music, and chemistry. Spelunx makes learning enjoyable. Unlike conventional drill-and-practice software, kids will discover rather than memorize answers.

For example, youngsters will develop an appreciation for the scientific method as they test the effect of food and temperature on a lizard's temperament. With *Lightning Maker*, they can determine the relationship between lightning distance and the sound of thunder.

In *Blacksmith Caverns*, they get to track the velocity of a falling stone and discover the connection among falling rocks, gravity, and the speed of sound. A special lamp on the professor's desk lets viewers experiment with the illumination properties of different gases as they pass through a hollow tube outfitted with electrodes at either end.

THE ARTIST IN EVERYONE

Other cave activities encourage creativity, letting players draw pictures, produce animated movies, or choreograph a special puppet dance. A *Polka Musician* machine lets children mix musical chords and sound effects to create their very own songs.

If the Macintosh is running under System 6.0.7 (or later) and has a built-in microphone or a

Continued on p. 52

Roger Coats

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Quickie 195⁹⁵
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WestCode

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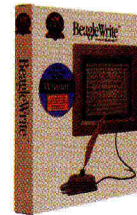
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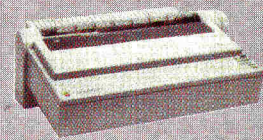
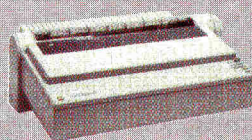


BeagleWrite

The only Apple IIe/IIc word processor with Mac-like features such as a menu bar, mouse control, and dialog boxes.48⁹⁵

Now you can get BeagleWrite Picture Manager and Desk Accessories for just \$10 each when you buy BeagleWrite!

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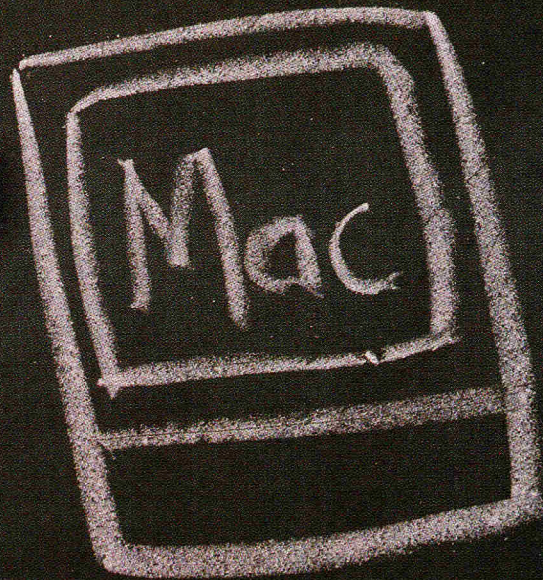
FUND SEEKING

inCider/A+ surveys a selection of sources that can lend your school or community group a helping hand.

Money talks — even in “free” public education. We all want to give our kids the best head start our tax or tuition dollars can buy. But today’s schools, both public and private, are struggling harder than ever to stay afloat, supporting teachers’ salaries, building maintenance, books, resource centers, art and music instruction, lunch programs, athletic gear, lab equipment. In these recessionary times, some of those necessities — computers and software among them — are in danger of becoming luxuries. Can parents and educators meet the challenge of finding new ways to stretch their school budgets?

Grants and special projects can help. Recession or no, a little resourcefulness goes a long way when it comes to funding technology. Just ask Phyllis Berner, media specialist at Harvey Jones Elementary School in Springdale, Arkansas. Thanks to the generosity of a local philanthropist and the initiative of Berner and PTA President Nan Hull, the school now boasts some three dozen Apple IIGs computers and scores of software lab packs from widely known publishers such as Baudville, Toucan, and Weekly Reader.

BY CYNTHIA E. FIELD, Ph.D. • CONTRIBUTING EDITOR



FUND SEEKING

READ ALL ABOUT IT

Last year the Harvey and Bernice Jones Foundation donated funds to the Jones School for more than 30 Apple IIgses and ImageWriter II printers. More recently, the school's PTA spearheaded a software fundraising drive through **Freedom Industries' Computers for Education** program. (See the accompanying sidebar, "Resources," p. 34, for names and addresses of organizations and companies profiled here.)

Unlike most fundraisers, Freedom's Computers for Education program won't drive you to distraction. Freedom Industries President Tom Crook explains that each student just fills out six slips of paper with the names and addresses of relatives and friends who, because of distance, don't usually participate in ordinary fundraising events such as candy sales. The children don't have to go door to door or collect any money. Phyllis Berner says the project takes less than a week from start to finish.

Freedom Industries mails each personalized, pre-addressed "Dear Grandma" note with a small catalogue listing some 250 magazines. "Magazines are big fundraising items," Crook points out. "Ninety percent of our sales are new subscriptions." Computers for Education's magazine rates are so competitive that renewals can be a bargain, too. When Crook, a veteran *Field and Stream* subscriber, received a renewal notice recently, he checked the Computers for Education catalogue and discovered he could save \$5 a year — 35 percent off the rate other subscribers pay. And, Crook adds, "We're not creating a mailing list." The company doesn't resell names to direct-mail companies or telemarketers.

In return, your school receives a \$6 credit the first year for each student who participates. In the second year, the credit increases to \$6.75; in the third year, it's an impressive \$7.50 per child. You earn "soft dollar" credits immediately, and most software orders are delivered within a week. In addition to purchasing software — from respected companies such as **Queue** and **Tom Snyder Productions** — you can apply the credits toward Apple-compatible Laser 128 computers. Some

4000 schools are already enjoying the benefits that the Computers for Education program provides.

HELPING HANDS

Most educators would agree that the Jones School is twice blessed. Yet grants from community, company-sponsored, or independent foundations aren't as rare as you might think.

Fact is, there are probably dozens of grantors within your state who are just waiting for you to ask for their support in funding innovative school projects. Thanks to **The Foundation Center**, contacting these local or national philanthropic groups is often as easy as calling the Center's toll-free number or spending some quality time at a public or university library.

The Center is an independent national service organization established by foundations to serve as a clearinghouse for information about the countless funding opportunities available to schools — and nonprofit organizations, as well. Chartered in 1956, The Foundation Center is a centralized resource providing information, publications, and support services for those seeking grants from private philanthropic groups and corporations.

The organization offers comprehensive reference collections in four locations nationwide: New York, San Francisco, Washington, and Cleveland. (See the "Foundation Center" box, p. 33, for complete information.)

In addition, network members, located in every state and in some foreign countries, offer a core collection of foundation-grants information. Each cooperating library in the network provides books, catalogues, and other printed resources in a "Foundation Collection," usually housed in the library's reference department.

See the accompanying sidebar, "Cooperating Collections," p. 32, for a list of network participants. Although we couldn't reprint the complete list of Cooperating Collections here, we selected one resource in each state. The Foundation Center can provide you with the complete *Free Funding Information Centers* directory, which includes new locations and current information. (Call 1-800-424-9836.)

The Foundation Center also offers *Comsearch*, a series of on-line databases for grant seekers, through **DIALOG Information Services**; you can contact the Comsearch support staff at the New York Foundation Center location.

UNCLE SAM'S CONTRIBUTION

What about public sources? The *Catalog of Federal Domestic Assistance* is the definitive guide to national government funding. This comprehensive reference includes descriptions of grants offered by agencies such as the Departments of Agriculture, Education, Energy, Justice, Labor, Transportation, and Veterans' Affairs, among others.

A typical two-page entry in the 1991 edition, for example, outlines the Christa McAuliffe Fellowships. The description includes the name of the sponsoring agency (Office of Assistant Secretary for Elementary and Secondary Education, Department of Education), the legislation authorizing the assistance (Higher Education Amendment of 1986, Title V, Part D, Subpart 2), objectives (to reward excellence in teaching), types of assistance (project grants), uses and restrictions (special innovative or staff-development programs), eligibility requirements (United States citizens who teach in K-12 public or private schools), application and award procedures (proposal and peer recommendations required), deadlines (established annually), approval/disapproval time (120 days), and renewal information (a grantee may not receive an award for two consecutive years).

But wait, there's more. (After all, this is the federal government.) In addition, each listing includes information about matching requirements, length of assistance, post-assistance requirements, financial data, regulations, contacts, examples of funded projects, and criteria for selecting proposals.

Despite its Lilliputian print, the *Catalog of Federal Domestic Assistance* is an easy-to-use guide. Its 1000 or so pages are conveniently organized in a three-ring binder. Photocopying selected pages is easy — just remember to bring a few rolls of dimes to feed the library's photocopier. For \$38 you can order your own copy from the

Superintendent of Documents. (See the accompanying sidebar, "Grant Seeker's Bibliography," p. 31, for details.)

PUT IT IN WRITING

Securing funding from a private foundation or an agency of the U.S. government usually means preparing a formal grant proposal. Public libraries and bookstores carry "how to" manuals that can help you brush up on the skills you need to locate grant sources and prepare a compelling proposal. (See "Grant Seeker's Bibliography" for a list of just a few of the dozens of such guides available.)

In general, each proposal should include a letter of transmittal, an introduction, a problem statement or needs assessment, and descriptions of program activities and strategies for meeting objectives. Proposals typically include plans for evaluating a project's progress and for continuing the project beyond the grant period. You must also submit a budget and a statement describing the capabilities of the individuals who will participate in the grant. Some grantors supply fill-in proposal forms, special cover sheets, or ready-to-use proposal outlines.

To be eligible for most grants, an enterprise must be classified as a nonprofit organization under Section 501(c)(3) of the U.S. Internal Revenue Code. Virtually all schools have this status, but your parent/teacher organization, community foundation, or youth group may not.

As luck would have it, applying for 501(c)(3) status is a lot like filling out a tax return. Among the paperwork you must file is Form 1023, "Application for Recognition of Exemption." Because each would-be nonprofit group must pay a user fee (Form 8718), which varies from \$150 to \$500, you may need to raise some necessary seed money before filing with the IRS.

Forms and supporting documents for obtaining 501(c)(3) status are included in Package 1023. You can order this "kit" as well as Publication 557 ("Tax-Exempt Status for Your Organization") by calling the IRS at 1-800-829-3676.

Moreover, each prospective nonprofit group needs to file articles of incorporation with the office of the Secretary of State in its state. You must also apply for an

employer identification number (Form SS-4) from the IRS.

Do you get the idea that the whole process can be both time-consuming and confusing? For those reasons, you may want to include an attorney and an accountant on your fledgling group's board of directors. Domingo S. Herraiz, executive staff administrator for the International Society of Crime-Prevention Practitioners, warns that the process of securing 501(c)(3) status can take as long as a year, so plan ahead.

APPLE SEEDS

Where do computer and software companies in particular fit into the grant-seeking process? To our pleasant surprise, three of the three-dozen software publishers we interviewed during preparation of this article offer special proposal-writing assistance to Apple users.

Joe Gleason, president of **Quality Computers**, told us that his staff provides free professional critiques of proposals submitted for the company's grants. Recipients share a \$2000 pool. At press time, Quality Computers was preparing a proposal-writing videotape, which should be available by late summer. You can receive a grant application and a free subscription to *Quality's Enhance* newsletter by calling the company's toll-free phone number.

K-12 MicroMedia Publishing is the only company among those we contacted that offers grant-writing software. Spokeswoman Lorie McCaughey says that registered users of the company's Fields of Learning program for Macintosh computers can join the Field Mice Club. The \$199 annual membership fee brings you free program updates, a stack exchange, and fill-in-the-blank proposal-writing templates, compatible with either ClarisWorks or Microsoft Works. In addition, K-12 MicroMedia Publishing can give you the names and addresses of companies that provide funding for curriculum-based projects.

By generously sharing resource information, Dr. David E. Persell — national products manager for **Hartley Courseware** — can help you secure funding for Hartley software. "Dr. Dave" can also help

GRANT SEEKER'S BIBLIOGRAPHY

Catalog of Federal Domestic Assistance

1991, Superintendent of Documents
Government Printing Office
Washington, DC 20402
\$38

The Foundation Center's

**User-Friendly Guide:
Grantseeker's Guide to Resources**
1990, Judith B. Margolin, ed.
The Foundation Center
New York, NY

Foundation Fundamentals

1991, Judith B. Margolin, ed.
The Foundation Center
New York, NY

Getting Funded:

A Complete Guide to Proposal Writing
1988, Mary Hall
Continuing Education Publications
Portland State University
Portland, OR

Getting a Grant in the 1990s

1990, Robert Lefferts
Prentice Hall Press
New York, NY

The Grants Register 1991-1993

1990, Lisa Williams, ed.
St. Martin's Press
New York, NY

you learn more about the National Literacy Act, Title III Higher Education/Institutional Aid, and the JOBS (Job Opportunities and Basic Skills) training program. Among the books in his collection are *The Foundation Grants Index*, *The Foundation Directory*, and the *Catalog of Federal Domestic Assistance*.

Perhaps the most daunting aspect of grant seeking is coming up with what Jane Lee of **Apple Computer** describes as a "realistic yet innovative" project. Dr. Lee, a member of the company's Advanced Products Group and a grant reader, explains that in addition she looks for proposals that are clearly tied to curriculum objectives, show appropriate personnel support ("The principal already has a job," she quips), and demonstrate your ability and commitment to the project.

Apple Computer doesn't make donations to individuals or fundraising groups. Instead the company's two "focus areas" are K-12 schools and environmental groups — including grass-roots organizations, colleges, and universities. Apple's EarthGrants program emphasizes high-end Macintosh equipment and advanced applications. Andrea Gooden, who heads Apple's **Community Affairs Department**, explains that the EarthGrants program officially closed in May, but the 1993

FUND SEEKING

school-grant cycle will commence the first week in October 1992. Call Apple's Community Affairs Department Hotline (408-974-2974) for current information.

SPECIAL REQUEST

But aren't there faster ways to enhance computer use in your school than writing competitive grant proposals or dealing with 501(c)(3) applications? You bet.

For one thing, most educational software publishers, including **Compu-Teach** and **Krell**, provide free 30-day previews. To test-drive software, submit your request

on school letterhead or a purchase order. If you don't return the software in resalable condition after 30 days, the company will bill you.

The opportunity to preview software can help you allocate your money wisely. To help you save even more, software companies usually offer value-packed school-building, network, and district-wide licenses as well as quantity discounts.

Some publishers, including **Beagle Bros**, give away free demonstration disks or donate copies of their software packages to regional resource centers. Many compa-

nies, including **Gessler Publishing**, give away software at trade shows. When you attend shows such as MacWorld Expo or educational computing conferences such as NECC (National Educational Computing Conference), try to visit as many booths as you can. That way you can get your name on each publisher's mailing list and be "in the know." You may even win a raffle prize. Marketing Director Nora Shwide told us that 1992 is Gessler's 60th-anniversary year. To celebrate, the company will be sponsoring special offers and contests at upcoming trade shows.

COOPERATING COLLECTIONS

Alabama

Birmingham Public Library
(205) 226-3600

Alaska

Juneau Public Library
(907) 586-5249

Arizona

Phoenix Public Library
(602) 262-4636

Arkansas

Central Arkansas
Library System
Little Rock
(501) 370-5950

California

California State Library
Sacramento
916-654-0261

Colorado

Denver Public Library
(303) 640-8870

Connecticut

Hartford Public Library
(203) 293-6000

Delaware

University of Delaware
Newark
(302) 451-2432

Florida

Orlando Public Library
(407) 425-4694

Georgia

Atlanta/Fulton
Public Library
(404) 730-1900

Hawaii

Hawaii Community
Foundation
Honolulu
(808) 537-6333

Idaho

Boise Public Library
(208) 384-4024

Illinois

Donors Forum of Chicago
(312) 431-0265

Indiana

Indianapolis/Marion County
Public Library
(317) 269-1733

Iowa

Public Library
of Des Moines
(515) 283-4152

Kansas

Topeka Public Library
(913) 233-2040

Kentucky

Louisville Free
Public Library
(502) 561-8617

Louisiana

East Baton Rouge
Parish Library
(504) 389-4960

Maine

University of
Southern Maine
Portland
(207) 780-4871

Maryland

Enoch Pratt Free Library
Baltimore
(301) 396-5320

Massachusetts

Boston Public Library
(617) 536-5400

Michigan

Wayne State University
Detroit
(313) 577-6424

Minnesota

Minneapolis Public Library
(612) 372-6555

Mississippi

Jackson/Hinds
Library System
(601) 968-5803

Missouri

Kansas City Public Library
(816) 221-9650

Montana

Montana State Library
Helena
(406) 444-3004

Nebraska

University of Nebraska
Lincoln
(402) 472-2848

Nevada

Las Vegas/
Clark County Library
(702) 733-7810

New Hampshire

New Hampshire
Charitable Fund
Concord
(603) 225-6641

New Jersey

New Jersey State Library
Trenton
(609) 292-6220

New Mexico

New Mexico State Library
Santa Fe
(505) 827-3824

New York

New York State Library
Albany
(518) 474-5355

North Carolina

North Carolina
State Library
Raleigh
(919) 733-3270

North Dakota

North Dakota
State University
Fargo
(701) 237-8886

Ohio

Public Library of Cincinnati
and Hamilton County
(513) 369-6940

Oklahoma

Tulsa City/
County Library System
(918) 596-7944

Oregon

Multnomah County Library
Portland
(503) 248-5123

Pennsylvania

Free Library
of Philadelphia
(215) 686-5423

Rhode Island

Providence Public Library
(401) 521-7722

South Carolina

Charleston County Library
(803) 723-1645

South Dakota

South Dakota
State Library
Pierre
(800) 592-1841 SD only
(605) 773-5070

Tennessee

Memphis & Shelby County
Public Library
(901) 725-8877

Texas

Houston Public Library
(713) 236-1313

Utah

Salt Lake City
Public Library
(801) 363-5733

Vermont

Vermont Department
of Libraries
Montpelier
(802) 828-3268

Virginia

Richmond Public Library
(804) 780-8223

Washington

Seattle Public Library
(206) 386-4620

West Virginia

Kanawha County
Public Library
Charleston
(304) 343-4646

Wisconsin

Marquette University
Memorial Library
Milwaukee
(414) 288-1515

Wyoming

Laramie County
Community College Library
Cheyenne
(307) 778-1205

Australia

ANZ Executors
& Trustees Co., Ltd.
Melbourne
03-648-5764

Canada

Canadian Centre
for Philanthropy
Toronto
(416) 515-0764

Great Britain

Charities Aid Foundation
London
71-831-7798

Japan

Foundation Library Center
of Japan
Tokyo
03-350-1857

Mexico

Bibliotheca
Benjamin Franklin
Mexico City
(905) 211-0042

Puerto Rico

University of Puerto Rico
Ponce
(809) 844-8181

But you don't have to burn shoe leather at trade exhibits to participate in contests. Each year **Compu-Teach** sponsors a mail-in story-writing competition. Classroom and individual prizes range from a \$50 software program to a \$5000 college scholarship. The company's fifth annual contest begins in October. Children may write stories using the company's Once Upon A Time series or prepare videotapes of Puppet Playhouse presentations.

Techware Corporation sponsors contests and awards grants to users of the company's popular Tutor-Tech Hypermedia Toolkit. According to company spokesman Matthew Landan, "Our publication, *The Stack Exchange*, offers a contest where anyone can send in a Tutor-Tech public-domain stack and compete for best stack of the month."

Landan says that teachers are submitting stacks "faster than we can process them." It's no wonder: Winner or not, every entry in the contest receives a \$10 gift certificate applicable toward any purchase of public-domain or commercial stacks offered by *The Stack Exchange*.

Techware's grant program is a semi-annual event, with grant requests evaluated in September/October and March/April. Winning schools receive a full Tutor-Tech site license valued at \$500. Moreover, the company works with grant recipients to help them develop stacks that simultaneously enhance the curriculum and enrich students' educational experience.

A little sweat equity may help when it comes to building your school's software library, too. Some companies are willing to donate free software to your school if you agree to provide them with constructive criticism of their products.

When individual computer users perform this service, we call it *beta testing*. The same rules apply when schools perform the service: In return for feedback, the company reciprocates by donating free copies of the finished product.

At least one company with whom we spoke — *Seven Hills Software* — limits its school beta-testing program to a local district, but other publishers may be receptive to proposals from out-of-state educators.

Next to the Computers for Education program described above, perhaps the easiest method for obtaining free software for your school is through the Del Monte Snack Cups Software Program, a joint effort by the **Computer Learning Foundation** (CLF) and Del Monte Foods. Students save proof-of-purchase symbols from packages of Del Monte Fruit, Fruit Naturals, and Pudding Snack Cups.

Schools receive credits they can apply to a wide variety of software (but limited kinds of hardware) from companies such as **Apple Computer, Broderbund Software, Compu-Teach, Davidson & Associates, Great Wave Software, Hartley Courseware, Intellimation, Logo Computer Systems, PC Globe, Scholastic, Silver Burdett & Ginn, and William K. Bradford**. As few as 90 proofs-of-purchase earn a copy of Kid Pix for the Macintosh, Kids Time for the Apple IIGs, or Reading and Me for the Apple II family.

According to CLF Executive Director Sally Bowman Alden, the program is currently limited to K-8 schools in ten states: California, Florida, Georgia, Illinois, New Jersey, Ohio, Pennsylvania, South Carolina, Texas, and Wisconsin.

At press time CLF was working to expand the label-recycling program by including additional corporate sponsors and opening the opportunity to more states. Bowman Alden says fear of commercialism has prevented a few schools from participating, but she wonders why. "We're just asking people to save their garbage," she laughs.

Computer Learning Foundation also sponsors a host of Computer Learning Month contests. Winners and their schools (or community groups) receive hardware and software prizes. Look for Computer Learning Month promotions in October.

A handful of the companies we interviewed confided that they sometimes donate software on the basis of informal, individual requests. Without exception, though, they also emphasized their inability to handle an avalanche of letters — let alone to donate software to everyone who asks for it. Suffice it to say that trying to obtain software donations this way is a shot in the dark and probably not the best way to invest your time.

FOUNDATION CENTER

8th Floor
79 Fifth Ave.
New York, NY 10003
(212) 620-4230
(800) 424-9836

Room 312
312 Sutter St.
San Francisco, CA 94108
(415) 397-0902

1001 Connecticut Ave. NW
Washington, DC 20036
(202) 331-1400

Kent H. Smith Library
1422 Euclid
Suite 1356
Cleveland, OH 44115
(216) 861-1933

Whether for altruism or public relations (or both), some companies, however, participate in a very limited way in special projects. A case in point is the "Dreams Alive" program in Atlanta, Georgia, an initiative sponsored by IBM, Wang, and **The Software Toolworks**, which has donated copies of its popular program Mavis Beacon Teaches Typing. The purpose of this unique project is to help unemployed homeless people acquire valuable skills.

THE RIGHT EQUIPMENT

It takes a lot more than software to run a school computer lab — or to manage a single classroom computer workstation, for that matter. That's why your school (or nonprofit organization) should consider membership in **NAEIR** (National Association for the Exchange of Industrial Resources).

Annual dues are \$625 — which seems pricey only until you learn about member benefits, the most enticing of which is free equipment such as modems and dot-matrix printers, plus office supplies, computer peripherals such as anti-glare screens, tractor-feed paper, 5.25- and 3.5-inch floppy disks, and even janitorial supplies. According to Jack Zavada, NAEIR's director of communications, each of the organization's 7000 or so members (40 percent are schools — the rest, nonprofit groups) receives \$7000 a year in free goods.

Besides computer-related equipment and supplies, NAEIR distributes sporting goods, craft items, lighting equipment, shelving, cookware, medical supplies, and bathroom fixtures, too. Sound too good

FUND SEEKING

to be true? Not! NAEIR solicits donations of excess inventory (all products are new) from corporations nationwide. Donors — including Brunswick Corporation, Dennison Manufacturing Company, Inmac Corporation, Microsoft Corporation, 3M, Rand McNally and Company, Tandy Corporation, and Wilson Jones — receive generous tax breaks from the federal government. NAEIR members reap the rewards.

Every ten weeks or so, the organization mails a 300-page catalogue, featuring some 5000 categories of donated items. All you have to do is submit an order listing your priorities. To ensure that each member gets a fair share, NAEIR employs a computerized allocation system.

From time to time during the year, NAEIR holds "Grab Bag" days at its Galesburg, Illinois, warehouse. A \$15 administrative fee entitles you to a two-hour shopping spree throughout the facility. Grab Bag items are free for participating NAEIR members.

YOUR SHARE

School budgets may be stretched to the limit, but that's no reason to abandon hope of acquiring additional computer hardware, software, or supplies. For one thing, now — before the school year gears up again — is the perfect time to investigate public and private funding opportunities, write a grant proposal, or begin application for 501(c)(3) status.

But if time's as scarce as money, software contests, promotions, and beta-test agreements may be the answer for your school. Membership in NAEIR can pay for itself ten times over. Perhaps your back-to-school to-do list should include plans to inaugurate a Computer Learning Foundation recycling program or a Computers for Education fundraiser. With so many options available, this school year could be the best yet for resourceful educators. □

CYNTHIA E. FIELD COVERS DESKTOP PUBLISHING IN *INCIDER/A+*'S PRESS ROOM COLUMN AND IS A FREQUENT CONTRIBUTOR TO OUR REVIEWS SECTION. WRITE TO HER AT 60 BORDER DRIVE, WAKEFIELD, RI 02879. ENCLOSE AN SASE IF YOU'D LIKE A PERSONAL REPLY.

RESOURCES

Apple Computer Community Affairs Department

20525 Mariani Ave.
MS 38J
Cupertino, CA 95014
(408) 974-2974
automated hotline

Baudville Computer Products

5380 52nd St. SE
Grand Rapids, MI 49512
(800) 728-0888
(616) 698-0888
(616) 698-0554 fax

Beagle Bros

6215 Ferris Square
Suite 100
San Diego, CA 92121
(800) 345-1750
(619) 452-5502
(619) 452-6374 fax

Broderbund Software

500 Redwood Blvd.
P.O. Box 6121
Novato, CA 94948-6121
(800) 521-6263
(415) 382-4400
(415) 382-4582 fax

Claris Corporation

5201 Patrick Henry Drive
P.O. Box 58168
Santa Clara, CA
95052-8168
(408) 727-8227

Compu-Teach

78 Olive St.
New Haven, CT 06511
(800) 44-TEACH
(203) 777-7738
(206) 338-2002
(206) 624-0900 fax

Computer Learning Foundation

P.O. Box 6007
Palo Alto, CA 94306

Davidson & Associates

19840 Pioneer Ave.
Torrance, CA 90503
(800) 556-6141
technical support
(800) 545-7677 sales
(310) 793-0600
(310) 793-0601

DIALOG Information Services

(800) 334-2564

Freedom Industries

180 Freedom Ave.
Murfreesboro, TN 37133
(800) 444-4488
(615) 896-3800

Gessler Publishing Co.

55 West 13 St.
New York, NY
10011-7958
(800) 456-5825
(212) 627-0099
(212) 627-5948 fax

Great Wave Software

5353 Scotts Valley Drive
Scotts Valley, CA 95066
(408) 438-1990
(408) 438-7171 fax

Hartley Courseware

133 Bridge St.
Dimondale, MI 48821
(800) 247-1380
(517) 646-6458
(517) 646-8451 fax

Intellimation

P.O. Box 1530
Santa Barbara, CA
93116-1530
(800) 3-INTELL
(805) 685-2100

K-12 MicroMedia Publishing

6 Arrow Road
Ramsey, NJ 07446
(800) 292-1997
(201) 825-8888
(201) 825-0582 fax
\$199/year
Field Mice Club

Krell Software

Flowerfield Bldg. #7
Suite 1D
St. James, NY
11780-1502
(516) 584-7900

Logo Computer Systems

3300 Cote Vertu Road
Suite 201
Montreal
Quebec H4R 2B7
Canada
(800) 321-LOGO
(514) 331-7090
(514) 331-1380 fax

Microsoft Corporation

1 Microsoft Way
Redmond, WA
98052-8399
(206) 882-8080

NAEIR

560 McClure St.
P.O. Box 8076
Galesburg, IL 61402
(800) 562-0955
free information packet
(309) 343-0704
(309) 343-0862 fax
\$645/year membership

PC Globe, Inc.

4440 South Rural Road
Tempe, AZ 85282
(800) 96-GLOBE orders
(602) 730-9000
(602) 968-7196 fax

Quality Computers

20200 East Nine
Mile Road
Box 665
St. Clair Shores,
MI 48080
(800) 966-1508
(800) 443-6697
(313) 774-7200

Queue, Inc.

338 Commerce Drive
Fairfield, CT 06430
(800) 232-2224
(203) 335-0906
(203) 336-2481 fax

Scholastic, Inc.

2931 East McCarty St.
P.O. Box 7502
Jefferson City, MO 65102
(800) 541-5513

Seven Hills Software Corp.

2310 Oxford Road
Tallahassee, FL
32304-3930
(904) 575-0566
(904) 576-9415
(904) 575-2015 fax

Silver Burdett & Ginn

250 James St.
Morristown, NJ
07960-1918
(201) 285-7744

The Software Toolworks

60 Leveroni Court
Novato, CA 94949
(800) 234-3088
(415) 833-3000
(415) 833-3303 fax

Techware Corp.

P.O. Box 151085
Altamonte Springs,
FL 32715-1085
(800) 34-REACH
(407) 695-9000

Tom Snyder Productions

90 Sherman St.
Cambridge, MA 02140
(800) 342-0236
(617) 876-4433
(617) 876-0033 fax

Toucan Software

338 Commerce Drive
Fairfield, CT 06430
(800) 232-2224
(203) 335-0906

Weekly Reader Software/ Optimum Resource

10 Station Place
Norfolk, CT 06058
(800) 327-1473
(203) 542-5553
(203) 542-5685 fax

William K. Bradford

310 School St.
Acton, MA 01720
(508) 263-6996



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NOTE: 'Q' suffix denotes use of **Quantum** VCA mechanisms. All other drives use high quality **Conner** mechanisms. All drives use high quality **Conner** or **Quantum** VCA mechanisms. Power Supply and all cables included with purchase of drive. All drives covered by 2 year warranty. **CALL for Macintosh internal drives!**

MEMORY & EXPANSION

APPLE IIgs EXPANSION
Applied Engineering

Æ GS-RAM III	1MB \$139	2MB \$189	4MB \$285
Æ GS-RAM Plus	1MB \$179	2MB \$229	4MB \$309
Æ GS-RAM Ultra	1MB \$120	2MB \$165	4MB \$260

Sequential Systems

RAM GS	2MB \$109	4MB \$149
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CV-Technologies

RAM GS Expander	1MB \$89	2MB \$133	3MB \$177	4MB \$219
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CV-Tech/RAM GS Bundle
5MB \$239 6MB \$269 8MB \$329 !!

The CV-Tech memory card lets you piggy-back your existing 1 or 4 megabyte RAM card onto the CV-Tech RAM card for a total expansion of up to 8 megabytes. NOTE: GS-RAM and GS-RAM Plus are NOT compatible!

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Applied Engineering

Æ RAMWorks III	256K \$129	512K \$145	1MB \$175
Æ Z-RAM Ultra III	256K \$189	512K \$205	1MB \$235
Æ RAM Express II	256K \$149	512K \$169	1MB \$199

Sequential Systems

EZ Meg IIe	1MB \$79		
RAM IIc	256K \$95	512K \$109	1MB \$119

Imagebuffer 32/64K **\$49.95** Apple IIe 80 column card **\$27.00**

Memory Expansion Kits for Apple IIgs, Apple IIe & Macintosh

1Meg 80ns for GS RAM III	\$59	1Meg 80/100ns set (8)	\$45
1Meg 80ns SIMMs	\$39		
256Kx4 100ns set (2)	\$14	256K 100ns set (8)	\$15

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RAMFast GS SCSI card w/256K w/o purchase.....	\$169	w/purchase.....	\$165
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Apple Hi-Speed DMA SCSI card w/o purchase.....	\$104	w/purchase.....	\$99

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Æ 3.5 Drive 800K - IIe/II+//Igs.....	\$196.95
Æ 1.44 Meg Mac Hi-Density.....	\$229.00
Æ 5.25" Disk Drive - Mac LC/Apple II.....	\$149.00
AMR 5.25" Daisy-Chain Drive - Mac LC/Apple II.....	\$109.00
Æ Universal Disk Controller w/3.5" drive.....	\$69.00
Æ Universal Disk Controller w/o drive.....	\$79.00

NCS Pro Removable 45..... \$469
NCS Pro Removable 88..... \$629
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Quickie Handscanner GS	\$197.00
Quickie/Inwords OCR bundle	\$269.00
Inwords OCR software	\$77.00
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Æ TRANSWARP

Transwarp GS	\$215.00
Transwarp GS w/32K cache	\$285.00
Transwarp 32K cache upgrade	\$79.00
Transwarp IIe/II+	\$89.00

ZIP TECHNOLOGIES

ZIP Model 9/32	\$239.95
ZIP Model 8/16	\$179.95
ZIP Model 7/8	\$139.95

PC-TRANSPORTER

Æ PC Transporter	\$229.00
Æ PCT-GS Kit	\$35.00
Æ PCT-IIe Kit	\$29.00
Æ Transdrive 5.25	\$189.00
Æ Dual Transdrive 3.5 & 5.25	\$289.00
Æ Transdrive 3.5 add-on	\$89.00
PCT 101 extended keyboard	\$78.95
Click-Tactile extended ADB keyboard GS	\$99.00
8087-2 Math co-processor	\$99.95

PRINTERS

Imagewriter II Color printer w/32K buffer	\$459.00
Apple Stylewriter w/accessory kit/cables	\$369.00
hp Deskjet 500	\$479.00
hp Deskwriter	\$459.00
Panasonic 1123 24-pin printer	\$239.00
Serial Printer I/F	\$49.00
Æ Parallel Pro	\$77.00
SuperCom Modem/Printer	\$79.00
Sequential Parallel II	\$59.00

Æ PC Transporter \$229.00

Æ Conserver \$69.95

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СЕРИИ СМОНАХС

СМОНАХС



AppleWorks has owned the integrated-software market for years. Now as affordable Macintoshes take their place next to Apple IIs, how does AppleWorks communicate with Claris' other best-selling integrated product — ClarisWorks?

Tack “Works” at the end of a software product name, and they will come — teachers, small-business owners, and parents in search of the software of dreams. But when you put different Works from different computers on the same field, do those dreams turn to nightmares?

AppleWorks, an eight-year veteran, remains the sole must-have product for Apple II users. **AppleWorks GS** carries almost as much weight among IIGS owners. And on the Mac side, the game's more competitive — Microsoft Works, ClarisWorks, GreatWorks, and BeagleWorks are battling it out to be the AppleWorks of the Mac market.

If its says “Works” on it, you can bet it groups several separate applications under a common interface. Schools, small businesses, and homes like the idea of a lot of software for a little bit of money. It's no surprise that you'll find a Works of some sort on most Apple IIs and Macs at home and in the classroom.

Now as more and more Macs make their appearance in homes and schools — in many cases finding themselves sharing space and information with Apple IIs — AppleWorks, AppleWorks GS, and the myriad integrated Mac offerings need to share more than a suffix. Combine the

trends of integrated software and II-to-Mac connectivity and you've got a unique opportunity to not only stick with an all-in-one piece of software, but swap files and data between Apple IIs and Macs, as well.

Let's focus here on Claris connectivity in particular. While AppleWorks and AppleWorks GS (AWGS) rule the integrated II world, it's true the Mac picture is cloudier. **ClarisWorks** doesn't have its market in a head lock the way AppleWorks does, but it does show up on best-seller lists most often; still, many of these techniques work with other integrated Mac programs, especially Symantec's GreatWorks.

The AppleWorks/ClarisWorks connection follows either of two possible paths: a frequently used two-way bridge between the Apple II and the Macintosh, or a way to take files and data with you if you switch to the Mac.

WORKS

PROGRESS

By Gregg Keizer

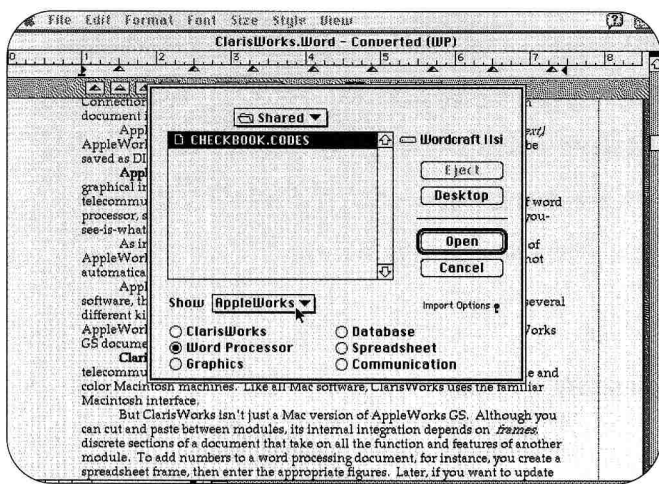


Figure 1. AppleWorks word-processor file now in ClarisWorks.

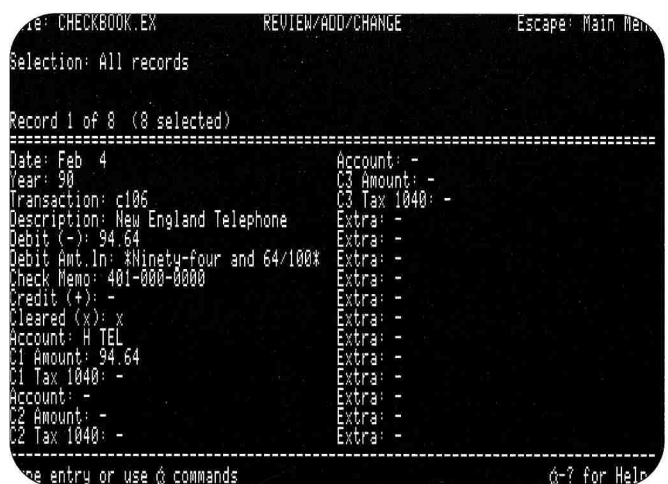


Figure 2a. A database in 8-bit AppleWorks.

The first path assumes you'll keep using your Apple II and AppleWorks (or AWGS), but simply want a way to easily share information — either as raw data or as complete files — with someone using ClarisWorks on a Macintosh.

The second path presumes that you've moved to the Mac permanently, but that you want to take your AppleWorks work with you. In either case, the procedures are nearly identical; the difference lies in the frequency with which you shift from one Works to another.

You won't get much help from the manuals when you do. ClarisWorks, for instance, rarely mentions AppleWorks, and doesn't offer any details on how to make the move from Apple II to Mac. AppleWorks' documentation is even more ignorant of the possibilities. That's okay. That's what you're here for, isn't it?

SETTING A STANDARD

AppleWorks defines the Apple II interface. With its troika of word processor, spreadsheet, and database manager, it offers the basic applications. Even so, its index-card look appears in scores of other Apple II programs. And chances are that if AppleWorks doesn't do what you need it to do, a third-party company offers a solution.

AppleWorks lets you share data among modules through its *clipboard*, a temporary holding pen that receives information cut from one application until it's pasted into another. For example, you can snip numbers from a spreadsheet worksheet and deposit them in a word-processing document.

Connections are weak, by today's standards, as you must modify the destination

document manually if you change the original later.

AppleWorks lets you save files in three forms: ASCII (text), AppleWorks, and DIF (spreadsheet worksheets and database reports only).

AppleWorks GS (AWGS), a 16-bit program that takes full advantage of the IIGs' graphics interface and bit-map presentation, adds a draw/paint program, a communications module, and a page-layout application to the Big Three of word processor, spreadsheet, and database. As in AppleWorks, you share information among AWGS' six subsections via the clipboard and its cut-and-paste mechanism. The program doesn't update your data automatically when you change the original document.

AppleWorks GS does offer more file-sharing opportunities with other software, though. It lets you import AppleWorks documents and several kinds of graphics-image formats directly. Unfortunately, AppleWorks-to-AWGS sharing works only one way: You can't save an AWGS document in AppleWorks format.

NEW KID ON THE BLOCK

ClarisWorks puts five tools — word processor, database manager, spreadsheet, communications, and an object-oriented draw program — on monochrome and color Macintosh machines.

ClarisWorks isn't just a Mac version of AppleWorks GS, however. Although you can cut and paste among modules, its internal integration depends on *frames*, discrete sections of a document that take on the function and features of another module.

To add numbers to a word-processing

document, for instance, you create a spreadsheet frame, then enter the appropriate figures. Later, if you want to update those numbers, you simply double-click on the frame and the menus switch automatically to show the spreadsheet's commands. It's as if the spreadsheet were built into the word processor.

Because you create such compound documents with frames, the program doesn't restrict you to the cut-and-paste method of data sharing. Automatic links among documents created in different modules aren't available, however, even though the Mac's System 7 offers that possibility via its publish-and-subscribe capabilities.

ClarisWorks also bests its Apple II ancestors in file sharing. Thanks to Claris' own XTND technology, ClarisWorks opens AppleWorks and AWGS word-processing documents and AppleWorks spreadsheet and database files. The program can also save its word-processing work as AppleWorks 2.0 documents. (Unfortunately, it can't save them in 3.0 format.)

To top it off, DataViz' **MacLinkPlus/PC** translators, a collection of XTND utilities, dramatically expands ClarisWorks' import and export abilities to more Mac and PC applications.

THE CLARIS TWO-STEP

Mastering the AppleWorks/AWGS-to-ClarisWorks shuffle isn't effortless. In fact, depending on how you shift files from the Apple II to the Mac, it can be an exhausting exercise that takes more steps than patience permits.

You'll have the best luck in going up the time line — that is, from Apple II to Mac. That's because ClarisWorks opens more

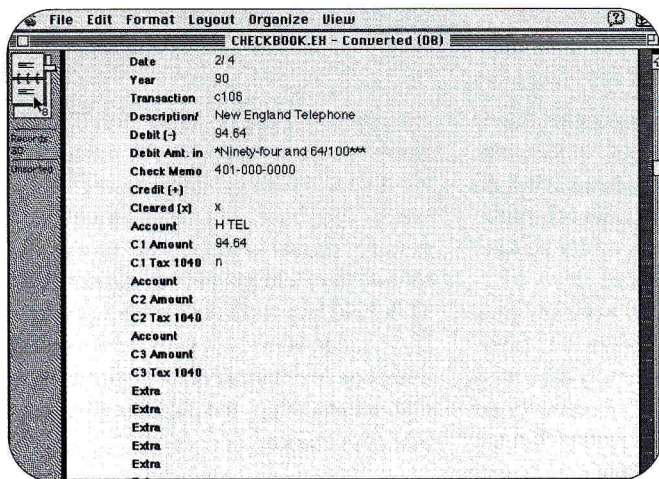


Figure 2b. AppleWorks database transported to ClarisWorks.

AppleWorks/AWGS file formats than it can save. But getting those files from the Apple IIe/c or IIGs to the Mac, then making them recognizable to ClarisWorks, is a tough job. Three major methods are currently available, with a fourth ready as a backup:

Apple File Exchange (AFE). The surest, though not simplest, transfer and translation technique is to walk ProDOS disks from Apple II to Mac, then run AFE, the transfer/translation utility included with every Mac. AFE reads ProDOS disks and turns all types of AppleWorks files into data ready for ClarisWorks. This is the procedure Claris itself recommends.

AppleTalk. Connect the machines with LocalTalk cabling and you've created the easiest-to-use file-transfer path among computers and software. Recommended for schools and small businesses, an AppleTalk network lets you copy files from an Apple II or IIGs to a Macintosh running either System 7 or AppleShare, the network's file-sharing software. AppleTalk works best transferring word-processor files, but can't turn database and spreadsheet files into immediately recognizable information.

GS/OS System 6. If you have a GS and have upgraded to System 6, you can copy files directly to a Mac-formatted disk. Again, this works fine for word-processing files, but is ineffective — without some additional fine-tuning — with database or spreadsheet files.

America Online. If you've installed modems in both your Mac and your Apple II, you can use America Online's point-and-click interface to send non-text files between machines. You'll still have to modify some files once they're on the Mac

course, is both the frequency of the moves and how arduous the return trip will be.

APPLEWORKS TO CLARISWORKS

Even though AppleWorks GS looks and works much more like ClarisWorks than it does AppleWorks, it's the latter that makes the strongest move to the Mac.

To test the transfer and translation process, and to get a quick gauge of the results, we used three files from *inCider/A+*'s **AppleWorks 3.0 Productivity Pak** — a simple word-processing document, an auto-mileage spreadsheet, and a check-book-style database.

WORD PROCESSING

Transfer: All four transfer techniques outlined above reliably moved the AW 3.0 word-processing document from II to Macintosh.

Translation: As soon as the AW 3.0 word-processing document arrived on a Mac disk or desktop, it was ready to open

before ClarisWorks can read them.

Whether you're moving constantly between Apple II and Macintosh, or simply taking all your AppleWorks work and moving it to ClarisWorks, the process and procedure of sharing information remain the same.

What changes, of

course, is both the frequency of the moves and how arduous the return trip will be.

through ClarisWorks' XTND technology. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Word Processor* button, and if necessary activate the *AppleWorks* translator (**Figure 1**).

SPREADSHEET

Transfer: All four transfer techniques moved the AW 3.0 spreadsheet file from Apple II to Macintosh.

Translation: Unfortunately, only the Apple File Exchange transfer resulted in a spreadsheet that ClarisWorks identified; all other techniques placed a file on the Mac that was effectively invisible to ClarisWorks. An additional step, detailed in the sidebar "Typecasting 101," was necessary to expose the spreadsheet to ClarisWorks. Once the file was visible, ClarisWorks opened the worksheet successfully. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Spreadsheet* button, and if necessary activate the *AppleWorks SS* translator.

Results: Cell widths and formatting, as well as formulas and functions, remained intact in the ClarisWorks spreadsheet worksheet. Specific cell protection issued in AppleWorks, however, didn't remain,

TYPECASTING 101

AppleWorks 3.0 spreadsheet and database files transported from an Apple II to a Macintosh — over AppleTalk, through GS/OS System 6's HFS FST, or via telecommunications — are like the Invisible Man to ClarisWorks.

To open ClarisWorks' eyes, you need to change the files — now on a Mac floppy or hard disk, or in a shared folder — so that their "type" matches what ClarisWorks' XTND translators expect. Apple File Exchange does this automatically during its transfer/translation process, but you can do it manually, as well, with the right software tool.

You need a Mac utility that can identify a file's creator and type designators and then modify them. Several such utilities are available, among them **1st Aid HFS**, part of the disk- and file-recovery package **911** from Microcom Software.

Select an AppleWorks spreadsheet or database file and examine its creator and type. The former will be pdos, while the latter may be unrecognizable. Change all spreadsheet files' type to 1B, and all database files' type to 19.

Now when you run ClarisWorks and use the Open command from the *File* menu, these files appear in the list after you select the AppleWorks SS or AppleWorks DB XTND translators.

— G.K.

and had to be replaced once in ClarisWorks. Text appeared in 9-point Monaco. The new spreadsheet, which calculated mileage and figured the deduction or expense-account reimbursement, worked accurately.

DATABASE

Transfer: All four transfer techniques moved the AW 3.0 database from Apple II to Macintosh.

Translation: As with the spreadsheet, only the AFE method resulted in an identifiable document. Use the extra step outlined in "Typcasting 101" to make the database visible to ClarisWorks. Once the database was "seen" by ClarisWorks, the program opened the file successfully. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Database* button, and if necessary activate the *AppleWorks DB* translator.

Results: Field labels and data remained intact in the ClarisWorks database. Items such as field length and layout, however, were either standardized or absent entirely. Reports associated with the database also weren't moved to ClarisWorks. Text appeared in 12-point Helvetica, with field labels in boldface. Specific layouts (analogous to AW 3.0's reports) had to be reconstructed, though ClarisWorks eases the process with its drag-and-drop formatting (Figures 2a and 2b).

APPLEWORKS GS TO CLARISWORKS

ClarisWorks, unfortunately, doesn't offer as complete or as convenient an upgrade for AWGS users. Word-processor files move through an XTND translator, the only GS-specific one available; databases and spreadsheets make the transition by first turning themselves into ASCII files. AWGS graphics, page layouts, and telecommunications settings are left isolated on the GS, with little hope of reaching the Mac.

To test the process, we used three AWGS files from *inCider/A+*'s **AppleWorks GS Productivity Pak** — a complex word-processing document, a budget-minded spreadsheet, and a checkbook database.

WORD PROCESSING

Transfer: All four transfer techniques moved the AWGS 1.1 word-processing file from Apple II to Macintosh.

Translation: The AWGS word-processing

document was ready to open immediately upon arrival at the Mac disk or desktop. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Word Processor* button, and if necessary activate the *AppleWorks GS* translator.

Results: Because an actual word-processing document, not an ASCII file, made the move, formatting generally remained intact. Boldface, italic, and underlined text; page margins; fonts (within limits); centered, justified, and unjustified text; and tabs all came through. Tab settings were slightly different from the original, and in one case, centered text appeared incorrectly as left justified.

SPREADSHEET

Transfer: All four transfer techniques moved the AWGS 1.1 spreadsheet from Apple II to Macintosh.

Translation: Since ClarisWorks doesn't include an XTND translator for AWGS spreadsheets, you must save them as ASCII files on the GS before transfer to the Mac. ClarisWorks can open such text files; you don't have to jump through the "Typcasting 101" hoops to make this file visible. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Spreadsheet* button, and if necessary activate the *Text* translator.

Results: Though data — both formulas and values — made the transfer successfully, some formatting, such as cell width, didn't (Figure 3). AWGS-specific features, such as red color to denote negative values, also didn't appear; all values were labeled as *General*, though most were *Fixed* in the original. Text appeared in 9-point Monaco type style. The new spreadsheet, which calculated and kept a budget, worked accurately, however.

DATABASE

Transfer: All four transfer techniques moved the AWGS 1.1 database from Apple II to Macintosh.

Translation: As with the spreadsheet, ClarisWorks lacks an AWGS database XTND translator, so we saved the file as ASCII on the GS. Once on the Mac, the database opened successfully. Choose *Open* from the *File* menu, click on the *Import Options* switch, select the *Database* button, and if necessary activate the *Text* translator.

Results: Not surprisingly, less information made it through the transfer and

translation process than during the AppleWorks-to-ClarisWorks procedure. Field data remained intact in the ClarisWorks database, but field names were generic (*Field1*, *Field2*, and so on). We found that field length was standardized, while field layout was absent. Text appeared in 12-point Helvetica, with field labels in boldface. We had to reconstruct layouts manually to return the database to its original appearance.

CLARISWORKS TO APPLEWORKS/APPLEWORKS GS

If you thought it was tough moving from the Apple II to the Mac, wait 'til you start heading the other way. A paucity of XTND translators and weak AppleWorks/AppleWorks GS import capabilities are working against you.

To test ClarisWorks' competence, we modified the AppleWorks and AWGS files previously transferred to the Mac, then sent them back to the II.

WORD PROCESSING

Transfer: All four transfer techniques moved the ClarisWorks word-processing file successfully to the GS running System 6; AW 3.0 was unable to read the Macintosh-formatted floppy inserted into the 3.5-inch drive of a IIGS running GS/OS System 6.

Translation: ClarisWorks' single Mac-to-II XTND translator is an AppleWorks 2.0 format available during a *Save As* within the program's word processor. While in ClarisWorks, choose *Save As* from the *File* menu, select the *Word Processor* button, and activate the *AppleWorks 2.0* translator. As soon as the file arrived on the Apple II disk or desktop, it was ready to open as an AppleWorks word-processing file in either AppleWorks or AppleWorks GS.

Results: Not everything made the move. Fonts were lost, as were all tabs (metamorphosed into spaces); page margins reverted to the plain-vanilla one inch at right and left. Some formatting remained, however, including underlined and boldface text, and centered and justified lines.

SPREADSHEET

Transfer: All four transfer techniques moved the ClarisWorks spreadsheet successfully from the Mac to the GS running System 6; AW 3.0 was unable to read the Macintosh-formatted floppy

A26	Budget.Ex - Converted (SS)									
A	B	C	D	E	F	G	H	I	J	K
6	1991		JANUARY			FEBRUARY				
7	Budgeted	Actual	Difference		Budgeted	Actual	Difference		Budgeted	Act
9	EXPENSE CATEGORIES									
11	Allowance	60	60	0	60	60	0	60		
12	Automobile	90	65.37	-15.37	90	87.95	-7.95	90		
13	Cable TV	12.97	12.97	0	12.97	12.97	0	12.97		
14	Charitable	30	30	0	30	30	0	30		
15	Clothing	90	22.63	-27.37	90	22.63	-27.37	90		
16	Day Care	190	190	0	190	190	0	190		
17	Electricity	95	47.34	-7.66	95	47.34	-7.66	95		
18	Entertainment	100	112.5	-12.5	100	112.5	-12.5	100		
19	Condo Fee	120	120	0	120	120	0	120		
20	Gifts	25	0	25	25	0	25	25		
21	Furnishings	30	12.97	-17.03	30	12.97	-17.03	30		
22	Groceries	300	355.37	-55.37	300	355.37	-55.37	300		
23	Hobbies	30	26	-4	30	26	-4	30		
24	Home Improvment	0	0	0	0	0	0	0		
25	Investments	90	90	0	90	90	0	90		
26	Loan Payment	215.35	215.35	0	215.35	215.35	0	215.35		
27	Medical & Dent	100	100	0	100	100	0	100		
28	Mortgage	1192.27	1192.27	0	1192.27	1192.27	0	1192.27		
29	Organization Du	10	10	0	10	10	0	10		
30	Personal Expend	35	15	-20	35	15	-20	35		
31	Real Estate Tax	165	165	0	165	165	0	165		
32	Repairs	25	0	25	25	0	25	25		
33	Savings	90	90	0	90	90	0	90		

Figure 3. AppleWorks GS spreadsheet now in ClarisWorks.

A2	ClarisWorks Spreadsheet (SS)									
A	B	C	D	E	F	G	H	I	J	K
1	1991		JANUARY			FEBRUARY				
2	Budgeted	Actual	Difference		Budgeted	Actual	Difference		Budgeted	Act
3	10000	10000	0		10000	10000	0		10000	10000
4	323	323	0		323	323	0		323	323
5	343	343	0		343	343	0		343	343
6	454	454	0		454	454	0		454	454
7	454	454	0		454	454	0		454	454
8	678	678	0		678	678	0		678	678
9	869	869	0		869	869	0		869	869
10	4345	4345	0		4345	4345	0		4345	4345
11	5445	5445	0		5445	5445	0		5445	5445
12	454	454	0		454	454	0		454	454
13	323	323	0		323	323	0		323	323
14	343	343	0		343	343	0		343	343
15	454	454	0		454	454	0		454	454
16	678	678	0		678	678	0		678	678
17	869	869	0		869	869	0		869	869
18	4345	4345	0		4345	4345	0		4345	4345
19	5445	5445	0		5445	5445	0		5445	5445
20	454	454	0		454	454	0		454	454
21	323	323	0		323	323	0		323	323
22	343	343	0		343	343	0		343	343
23	454	454	0		454	454	0		454	454
24	454	454	0		454	454	0		454	454
25	678	678	0		678	678	0		678	678
26	869	869	0		869	869	0		869	869

Figure 4. ClarisWorks spreadsheet to AppleWorks/AWGS.

inserted into the 3.5-inch drive of a IIGS running GS/OS System 6.

Translation: Without an XTND translator, you're forced to save spreadsheets as either DIF or ASCII files on the Mac under ClarisWorks, then try to salvage what you can on the Apple IIe/c or IIGS. In ClarisWorks, choose *Save As* from the *File* menu, select the *Spreadsheet* button, and activate either *DIF* or *Text* from the short list of translators (Figure 4).

Results: AppleWorks opened the DIF-formatted file successfully and displayed labels and values accurately (though column widths had changed), but since all formulas were lost, it wasn't a functional worksheet. AppleWorks GS fared similarly when it imported a text file into a new spreadsheet document.

DATABASE

Transfer: All four transfer techniques moved the ClarisWorks database successfully from the Mac to the GS running System 6; AW 3.0 was unable to read the Macintosh-formatted floppy inserted into the 3.5-inch drive of a IIGS running GS/OS System 6.

Translation: ClarisWorks doesn't offer a database XTND translator, so you're limited to saving its databases in DIF or ASCII form when you move from the Mac to the Apple II. AppleWorks 3.0 wouldn't recognize a DIF-formatted file from ClarisWorks, but did create a new database from an ASCII-formatted file. (AWGS imports only ASCII database files.) In ClarisWorks, choose *Save As* from the *File* menu, select the *Database* button, and then activate the *Text* translator.

Results: At least the data makes it there. AppleWorks created a new database accurately from ClarisWorks' ASCII file, but

field names were reduced to the generic (*Category1*, *Category2*, and so forth). Of course, all ClarisWorks formatting — whether as part of the layout or as individual field specifics — was gone for good. AWGS fared a bit better, but only because the ASCII file was imported into an existing database. Data made the move, and even dropped into the correct fields.

THE THRILL OF VICTORY?

Managing these moves from AppleWorks to ClarisWorks will leave you either breathless as you recycle familiar files or exhausted from the effort.

AppleWorks users benefit most from ClarisWorks XTND largess, though if you're using AppleTalk, System 6, or telecommunications to transfer files, there's the additional pain of changing the files' *type* designators. It's criminal that you have to jump through hoops; for all the ballyhoo, the AppleWorks/ClarisWorks connection is nowhere near transparent.

AWGS owners don't have to suffer such indignities, but the price they pay is slightly less-functional files on the Mac that require more tweaking.

Meanwhile, the ClarisWorks-to-AppleWorks/AWGS maneuver is more gimmick than anything. A word-processor document — admittedly, the most-likely file for Mac-to-II movement — comes across adequately. Database documents at least were usable, but spreadsheet files were pale twins of their originals.

If you're moving text — whether in word-processor-formatted files or as ASCII — you can justify the transfer and translation time even when the back-and-forth is constant. But it's difficult to imagine anyone struggling daily, or even weekly,

to send spreadsheet and database files from Apple II to Mac and back.

MAKE THE MOVE

Apple II users moving to ClarisWorks permanently will be the happiest with the way these Works work together. You may have spent years developing and tuning the files in your AppleWorks collection; the hours it'll take to translate and reformat that collection are only a fraction of the time it would take to re-create everything from scratch.

Is it worth it? That depends on how much you want to work with the Works. □

CONTRIBUTING EDITOR GREGG KEIZER IS THE AUTHOR OF BRIDGING THE GAP, *inCIDER/A+*'S COLUMN ON II/MAC CONNECTIVITY. WRITE TO HIM AT 4420 HILYARD STREET, EUGENE, OR 97405. ENCLOSE AN SASE IF YOU'D LIKE A PERSONAL REPLY.

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MACWORLD Expo promises you one-stop-shopping for information and ideas that are already transforming the field of education.

Twelve Conference Sessions Devoted Exclusively To Education ●

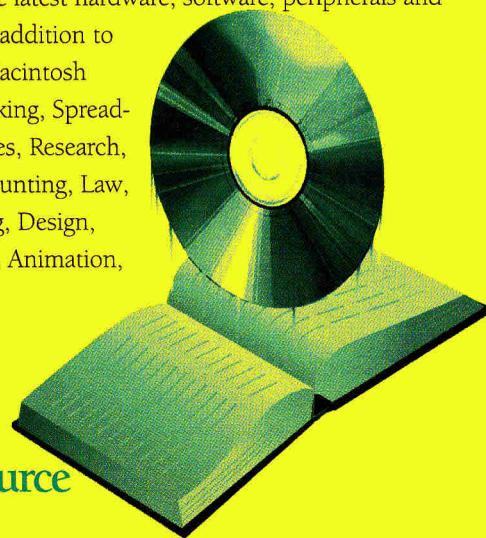
One of the features of MACWORLD Expo is its program of conference seminars that take an in-depth look at specific Macintosh topics. Guided by a distinguished faculty comprised of those who truly lead the Macintosh industry, the seminars offer insights that are simply not available anywhere else. As an expanded series within the MACWORLD Expo/Boston Conference Program, twelve seminars devoted exclusively to education offer an unprecedented opportunity for educators, administrators, and students to learn about new and classic applications of the Mac as a teaching tool. Session titles include:

- The Macintosh Student Forum
- Do-It-Yourself Multimedia
- The Mac in Math and Science
- Early Learning Tools for Preschoolers
 - HyperCard in Education
- Multimedia: What's Out There (A Guide to Macintosh Titles)
- The Integrated Classroom: Apple IIs, Macs, and IBMs
- Desktop Publishing for Educators
 - QuickTime for Teachers
 - CD-ROM for the Classroom
- Shareware and Public Domain Software
 - Computerizing Your Paperwork!

If you're not familiar with some of the above terms, don't worry; you will be after this conference. You can expect to come away from MACWORLD Expo/Boston smarter, more productive, and inspired!

The Exhibition ●

The Conference seminars are just part of the story at MACWORLD Expo/Boston. There's also an amazing exhibition covering 300,000 square feet of space at Boston's World Trade Center and the newly expanded Bayside Exposition Center. Over 400 companies will have the latest hardware, software, peripherals and services on display. In addition to education, you'll see Macintosh applications in Networking, Spreadsheet analysis, Databases, Research, Word processing, Accounting, Law, CAD/CAM, Forecasting, Design, Publishing, Illustration, Animation, Music, Programming, Entertainment and Multimedia (to name but a few.)



The MacResource Center ●

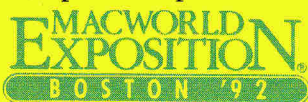
When visiting MACWORLD Expo/Boston, be sure to assign yourself to the MacResource Center. Sponsored by Apple Computer, Inc. and A+ Publishing, the Center is a place for Macintosh-using educators to take a break from the show floor, discover new software solutions and receive a complimentary copy of the Official MACWORLD Expo Guide for Educators. Visit the Center and you may be eligible to win free software, Apple gifts, or a new Macintosh Classic II and StyleWriter printer.

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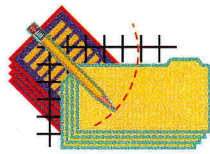
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APPLEWORKS IN ACTION

POSTER PRINT SHOP

When an important event approaches,
get the word out with pizzazz.

By RUTH K. WITKIN

IDEAS. THAT'S WHAT THIS COLUMN is all about — ideas to get your message across dramatically and economically. **Figures 1, 2, 3, 4, and 5** show a quintet of homemade posters that will catch the eye and cost next to nothing to create. They announce the following events:

- band tryouts at a high school
- a play performed by a preschool group
- a company picnic
- a safety-committee meeting
- a call for contributions to a bake sale

Getting your message across is more than merely putting text on paper. In the competition for attention, a poster needs flare

and professionalism. No matter whose eye you're trying to catch — students, employees, club members, friends, or family — with AppleWorks, imagination, and clip art from **The New Print Shop** from Broderbund Software (500 Redwood Boulevard, P.O. Box 6121, Novato, CA 94948, 800-521-6263, 415-382-4400, \$49.95 home edition, \$59.95 school edition, \$119.95 lab pack) you can turn out winning posters. Here's the sequence that works best:

1. Print the border you want to use. This will give you an idea of the size of the margins and how much text you need to fill the space within.
2. Write the text as you visualize it as a poster.
3. Print the text.

4. Check the placement of text within the border. The easiest way is to put the border and text pages together and hold them up to the light. You may want to try different borders to see which works best.
5. Redo and reprint the text as often as necessary to get the best fit. Snip a line here, add a line there, and change margins and line spacing as needed.
6. When the text is perfectly placed within the border, slip the text page into the printer and print the border.

PASS THE WORD

Here are some writing and design tips to keep you on the straight and narrow:

- **Write a headline to set the tone of the piece.** The headline doesn't necessarily have to start the piece, although that's fairly common. It can just as easily nestle within the body of text.
- **Create interesting visual effects by using keyboard characters as headline borders.** For instance, note the asterisk in **Figures 1 and 3**, less-than sign in **Figure 2**, the exclamation point in **Figure 4**, and the percent sign in **Figure 5**. Try experimenting with other characters, and placing these kinds of borders elsewhere in the text.
- **Maintain interest by varying the appearance of lines.** Use uppercase as well as lowercase, or put a space between characters, as in *CHRISTMAS SOIREE* on the cake-bake poster. Since AppleWorks and your printer don't provide a whole lot of choices in terms of font size and style, be inventive with what you have.
- **Eliminate some commas and other punctuation you might otherwise use in running text.** Remember, this is a poster.
- **Use short, punchy sentences.** Be sure you list the facts (date, time, place, and so on), as well as an explanation of the event.

CREATIVE FORMATS

Figures 1a, 2a, 3a, 4a, and 5a show the formatting that produced the posters. Blots (square characters) show where to

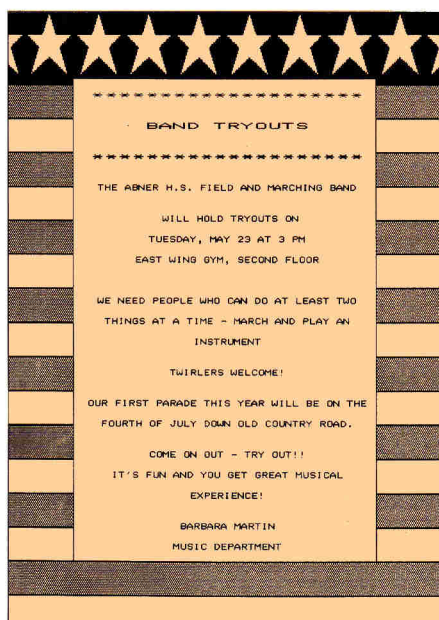


Figure 1. Poster announcing a high school's band auditions.

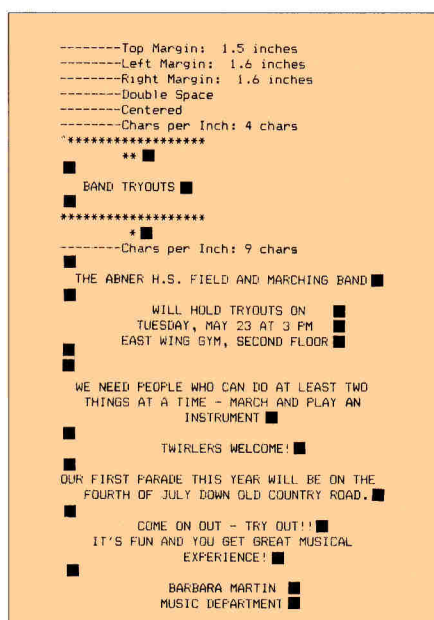


Figure 1a. Formats in auditions poster. Note asterisks around headline.

press Return. Here's a list of the print indicators you'll find in these **Figures**:

- **Top margin** tells the printer where to begin printing the text. The standard top margin of 0 inches starts the text at the very top of the page. Increasing the top margin starts the text lower, which you'll need to do to get below the top border.
- **Bottom margin** tells the printer where to stop printing the text. The standard bottom margin is 2 inches. Reducing this number allows more text on the page.
- **Left margin** and **right margin** reduce the width of the text to fit between the left and right sides of the border.
- The caret before the first text character in each poster makes all succeeding text print in **boldface**. A boldface setting makes text crisp, clear, and dark, even with a not-so-new ribbon in your printer.
- Changes in **character size** (4, 9, 10, or 12 characters to the inch) add variety to a poster and produce text and titles that really stand out.
- **Double-spacing** between lines makes the body of text easier to read.
- Standard line spacing is 6 lines to the inch. When you change it to 8 lines to the inch and use double-spacing, you actually get **one-and-one-half line spacing**, an attractive variation.
- **Centering** balances the text between the side borders.
- **Unjustification** cancels centering and restores normal left justification.
- **Indenting** pulls the text in from the normal left margin. An indentation of 0 pushes it back out again.

Now that you know the print indicators, it should be duck soup to create these posters. Go for it — then try making your own.

ROLL THE PRESSES

I used a laser printer to produce these posters' borders and my ImageWriter II for the text. With a laser printer, you're virtually assured of consistent placement. If you're using an ImageWriter for both border and text, you may need to redo your formats a bit to get the placement perfect. Don't be discouraged; the result will be worthwhile.

If you find perfect placement difficult to achieve, you can always print the border and tape the trimmed text into it. Or, conversely, snip out the middle of the

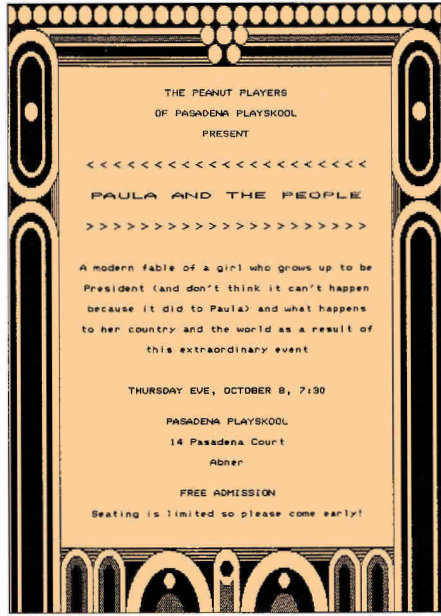


Figure 2. Poster announcing a preschool theater group's play.

border and tape it over the text. Either way works fine. Then duplicate the poster on a good copy machine. Although copying produces a one-generation degradation in quality, it's fine for posters. One final idea about printing: Use colored paper — the result can be electrifying.

In the opening paragraph, I said this is a column of ideas. The ideas presented here are meant as a jumping-off point for your imagination. I challenge you to create a poster to be proud of, then send it to me at the address below. I'll print the best of the bunch in a future column.

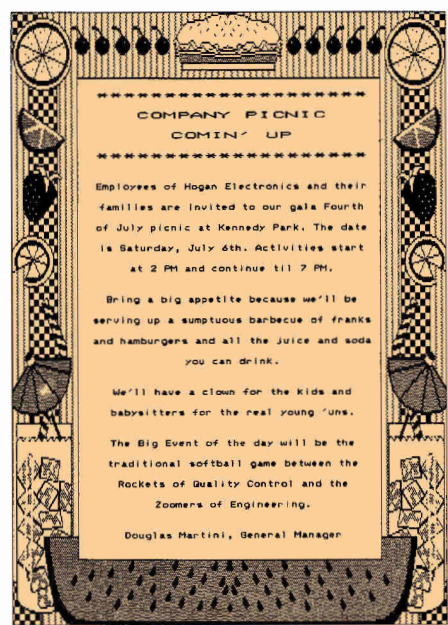


Figure 3. Poster announcing a company's annual holiday picnic.

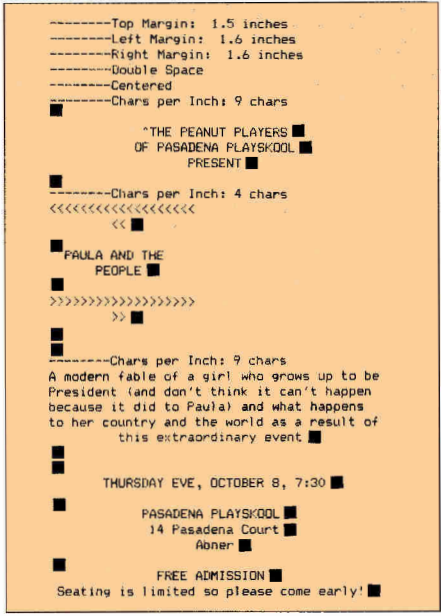


Figure 2a. Formats in play poster. Note less-than signs around headline.

(Sorry, but I can't return or acknowledge posters I receive.) Don't let me down.

One last note: I've mentioned "instant undo" before, but it's worth mentioning again, because this simple yet powerful technique is indispensable in any word-processing task, including poster design.

When you want to remove unwanted text during editing, you can use either the *Delete* command (OA-D) or the *Move* command (OA-M). Either way, the text disappears from the screen.

With OA-D, that text is gone forever — even if a moment later you decide you

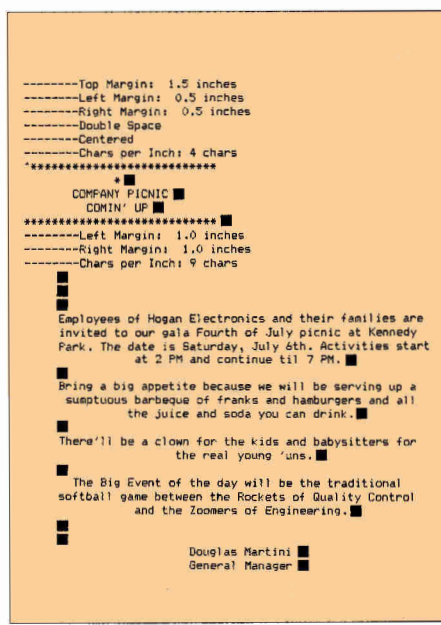
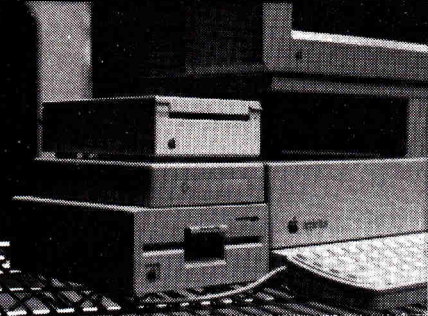


Figure 3a. Formats in picnic poster. Note asterisks in headline.

Hard Drives

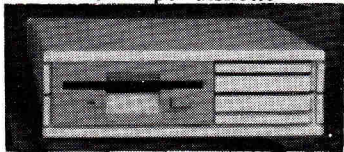
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Tape drive 155MB \$ 519

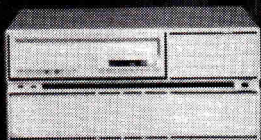
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APPLEWORKS IN ACTION

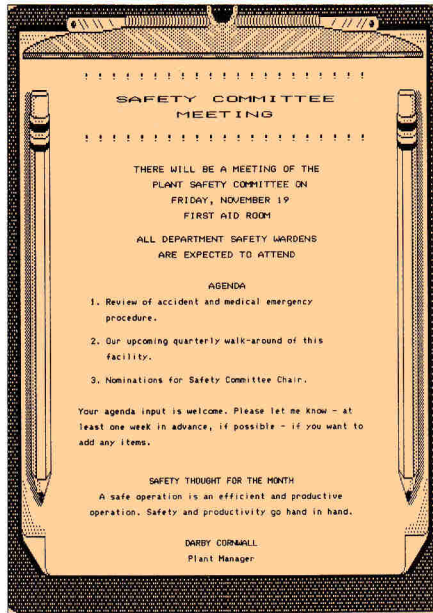


Figure 4. Poster announcing a company's safety-committee meeting.

could use it elsewhere. OA-M, on the other hand, places the deleted text on the clipboard, so you have a chance to reconsider. If you change your mind again, just move the text back from the clipboard. Bear in mind, however, that moving a second piece of text to the clipboard will shove the first into oblivion.

NEXT MONTH

In my next two columns, we'll look at an AppleWorks spreadsheet that'll



Figure 5. Poster calling for homemade goodies for charity bake sale.

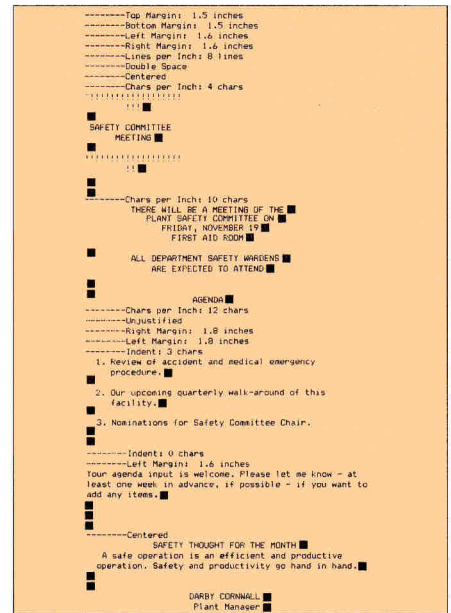


Figure 4a. Formats in meeting poster. Note exclamation points in headline.

help you explore the ins and outs of renting a home versus buying — one of the most important decisions you may ever make. Stay tuned. □

CONTRIBUTING EDITOR RUTH K. WITKIN IS THE CREATOR OF THE *SUCCESS WITH APPLEWORKS* TEMPLATE SERIES AND *RUTH WITKIN'S MONEY MANAGER* (AVAILABLE FROM A+ PUBLISHING), AS WELL AS *RUTH WITKIN'S BEST NEW APPLEWORKS TEMPLATES* (QUALITY COMPUTERS). WRITE TO HER AT 5 PATRICIA STREET, PLAINVIEW, NY 11803. ENCLOSE AN SASE IF YOU'D LIKE A REPLY.

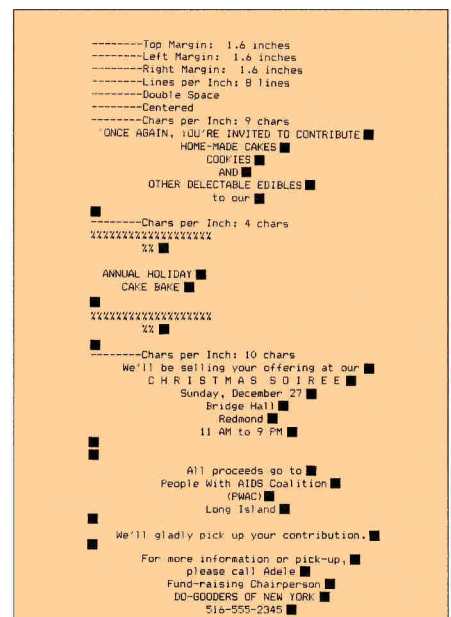
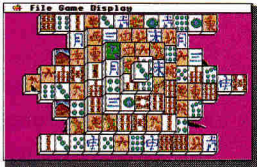


Figure 5a. Formats in bake-sale poster. Note percent signs used for headline effect.

Public Domain Software for only \$3.50

IIGS GAMES

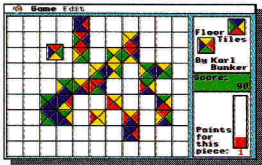
GS110 Milestones 2000: This game is based on an old French game. You have to play mileage cards to advance your own auto while stalling your opponent with flat tires and accidents. Great graphics.



GS165 Mah Jong: Chinese tile strategy game.

GS117 Star Trek Classic GS: A remake of one of the earliest computer games ever written. Fire your photon torpedoes and laser, do short range scans and use your warp drives to defeat Klingon and Romulan star ships.

GS103 & GS104 Cosmocade: On the first disk, you must Journey to Calibus in a fast-paced arcade style game. Disk two is called Naxos. A joystick is required.



GS157 Fun, Fun, Fun: A strategy game called Floortiles plus 19 other fun programs.

GS145 Sensei: A karate-style game by the FTA. Use a joystick to fight your way into a black belt.

GS119 Columns 2.0: In this game which is similar to Tetris, you arrange falling blocks so that colors line up. Includes rock music background.

GS131 State-of-the-Art Games: This disk includes PlasmaLab 2, Xpurpose, BlackJack Tutor, From Beyond, FTA Plotting, Game Maker and Explorer GS.

GS129 Games, Games, Games: Cribbage, Rubik Cube, Poker Challenge, Solitaire NDA, Golden Bug, Elevators & Word Search.

GS118 Memory Card Game: Full color GS version of Concentration plus Wisconsin Rummy and Hearts.

GS137 Dr. Mario & Others: Tetris like game plus Quinette, PuzzleGS, and Pac Man NDA.



GS153 Bouncing 'Ferno: This game will remind you of Marble Madness as you attempt to bounce your way through a maze of ramps and elevated terraces. Brand new from the FTA.

GS30 Solitaire Card Games: Five different versions of solitaire including Casino, Slot Poker, Monte Carlo & Poker Solitaire.

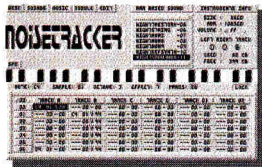
IIGS MUSIC

GS166 SoundSmith Jukebox: Plays both SoundSmith and NoiseTracker songs with an animated display.

SL01 MidiSynth™ Jukebox: This is the hottest music program available for the GS. Full orchestral sounds with unbelievable quality. You won't believe your ears.

SL02, SL03, SL04, SL05 & SL06: Six full disks of MidiSynth songs for the Jukebox program or System 6.0's synthLab disk.

GS53 SoundSmith: The best known music program for the IIGS will have you rocking.



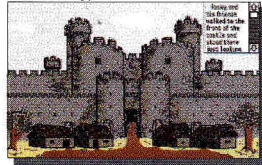
NT00 Noisetrapper Version 1.0: An exceptionally fine music program from France.

NT02 thru NT17: Sixteen disks full of songs for use with Noisetrapper.

HYPERSTUDIO

HS26 & HS27 Civil War Stack: Learn about the causes, the personalities and the history behind the U.S. Civil War. Great graphics.

HS48 Developer Pack: Write your own extensions to HyperStudio 3.0.



HS49 & HS50 Rocky Smith's Adventure - The Castle: A graphic adventure for use with 4th thru 6th grade students. In order to be successful in the adventure, the player must read, think and follow directions.

HS20 & HS21 Dinosaur Stack: Learn all about dinosaurs such as where they lived, their relative size and their diet.

HS45 Sound F/X: Digitized sound effects ready for use with HyperStudio. Beeps, drums, booms, barks, clangs and alarms.

HS18 & HS19 Washington D.C. Tour: Take your vacation in D.C. Visit the White House, the Pentagon and many other places.

HS09 Presidential Stack: Learn trivia about all the U.S. Presidents. Includes graphics.

HS08 HyperSpace: Two great stacks about the solar system and man's attempts to explore it. Sound effects and graphics.

ANIMATIONS

GS138 The Delta Demo: This program shows off the best of the IIGS.

GS135 Simple Animation Program: An animation workshop which you can use to design your own creations.

GS136 The SAP Wall: Based on Pink Floyd's "The Wall", this animation will rock you.

IIGS GRAPHICS



GS163 Political & Patriotic Print Shop GS Graphics: Eighty all-new graphics for P.S.

GS133 Religious Print Shop GS Graphics: Eighty color graphics for Print Shop.

GS07, GS08, GS29, GS35, GS77, GS78, GS100, GS106 & GS123 Graphics, Fonts and Borders for Print Shop GS: Nine completely different disks for use with Print Shop. Each disk contains at least 72 multi-color graphics and most have borders and fonts.

GS48 GIF Graphics: 75 colorful graphics in GIF format plus an all-new IIGS graphic utility program to view or convert them.

GS59, GS64, GS67, GS73, GS74, GS86, GS128 & GS132 Super Hi Res Clip Art: These 8 disks contain clip art converted from the Mac. They're great for use with AppleWorks GS or HyperStudio.



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GS159 DreamVior: View 3200-Color Pics.

GS96, GS116, GS125 & GS126 — 3200 Color Pictures: 4 disks full of the best 3200-color graphics.

IIGS UTILITIES

GS167 System 6.0 Desk Accessories: A collection of new and old DAs for System 6.0.

GS158 System 6.0 Special Effects: Spruce up your System 6.0 disks with these utilities.

GS120 Icon Mania: Everything you need to add new icons to the IIGS desktop. Two icon editors and hundreds of predrawn icons.

GS47 GS/OS Goodies: Our all-time best selling disk. This disk contains over 20 new desk accessories including ShowPic.

GS154 Gyros Desktop Utilities: Everything a power user could want. Desk Accessories galore, including a calculator, a clock, a sound player, a Chinese Checkers game, Also an animated screen blanker, a SHR screen saver, a text file reader, utilities that load fonts & NDAs "on the fly". Much more!

GS151 Way Cool Jazz: Now you can jazz up your GS just like the experts do.

GS127 GS Productivity Pack: This disk contains two complete word processors, several desk accessories and El Macro.

Ile & Iic PROGRAMS

R07 AppleWorks Patcher: Fix up your AppleWorks 3.0 with these patches.

H73 CEEMAC: Kinetic art generator.

G46 Columns Ile: A Tetris-like game in which you rotate gems to match up columns.

G38 Arcade Games: Cu'bit, Night Crawler, Car Dodger, Slots and Avalanche.

G43 Flobynoid: Clone of Arkanoid.

G22 Public Domain Defender: Fly your space craft and shoot down aliens who are trying to kidnap humans from the ground.



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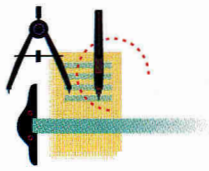
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PRESS ROOM

APPLE EARTHWATCH

Honor our planet this summer with a desktop-publishing project that's fun *and* educational.

By **CYNTHIA E. FIELD, Ph.D.**

FOR A HOST OF REASONS (WHICH we'll let the social scientists debate), the dawning of the '90s was our collective wake-up call to the excesses of the '80s — the "greed is good" decade. Perhaps nowhere is the alert more evident than in our renewed concern for the environment. Record numbers of kids and adults are sorting cans, bottles, and yesterday's newspapers from the trash. Meanwhile, countless Apple users are discovering the "three Rs" of responsible computing: *reduce, reuse, recycle.*

It's no surprise that computing enthusiasts, who are "leading edge" people anyway, are among the most devoted of this new generation of environmental activists. If you haven't already taken the plunge, you're probably at least contemplating a switch to recycled computer supplies, for instance. Take a look at "Good Earthkeeping" in *inCider/A+*'s April 1992 issue (p. 38) and particularly at the accompanying sidebar, "12 Steps to Green Computing" (p. 42 in that issue) — a checklist you can use as a springboard for personal environmental action or classroom discussion.

But first — to help you celebrate the spirit of Earth Day all summer long — let's investigate several methods for "publishing" computer-generated designs on T-shirts, table linens, handkerchiefs, and reusable grocery bags. Local department stores probably carry the inexpensive cloth items you need. For example, in a neighborhood discount store I bought a

package of three name-brand white T-shirts for \$6. Thirteen white cotton handkerchiefs cost \$9 in a men's clothing store. Specialty shops and canvas-bag boutiques often sell plain ready-made cloth bags. You can also get plain cotton canvas shopping bags (16 by 12 by 8 inches, cotton web handles, made in the United States) from **Equinox Ltd.** of Williamsport, Pennsylvania.

To save money, you can purchase material and make bags and other cloth items, such as table napkins, from scratch. (Remember, guys can do this, too.) Table napkins are a snap to sew. If you can't find a pattern for a bag, take a decorated bag apart with an inexpensive seam ripper. As long as you're careful when you "dissect" the bag, you'll be able to re sew it later on.



Figure. T-shirt created with Broderbund's Print Shop Companion IIcs and Flax Art's Second Impressions transfer kit.

Use the separated parts for your pattern, or — to borrow a desktop-publishing term — "template." Whip out a sewing machine and buzz away.

On a more serious note, prudence dictates that you supervise children who participate in this month's project: You may not be using a sewing machine, but you'll need a hot flatiron.

SPEAK YOUR MIND

If one phenomenon describes modern American culture, it's the explosion of T-shirt slogans; the First Amendment probably accounts for the fact that everybody in America has an abundance of opinions and no reticence about sharing them. Instead of buying a T-shirt touting some stock phrase, though, why not create your own design — and a unique message — with your Apple II or Macintosh? And remember: You don't have to limit freedom of expression to just T-shirts.

All you need is a graphics or painting program. If you'd like your design to include text, the program should offer a "flip horizontal" or "backwards printing" feature. Invoking either of these capabilities prints a mirror image of your message or illustration — so that after you complete the cloth-transfer process, your words of wisdom will look right.

Over the years, I've experimented with at least four cloth-printing methods. At press time I learned about a fifth technique, which uses special transfer toners in laser-printer cartridges. According to *The Flash*, a catalogue/newsletter from **BlackLightning**, the toner, which is available in a variety of colors, contains "sublimation fabric dye." In addition to selling toner cartridges, the company offers a transfer service and will even custom-design artwork for you.

Dot-matrix-printer users can purchase (from accessory suppliers such as **Computer Friends**) printer ribbons impregnated with cloth-transfer ink. In theory, this method

of transfer making couldn't be easier: Create the design, flip it appropriately, print it on paper, and iron it onto cloth. Perhaps my standard computer paper was under par or my iron setting wasn't precise enough, but I haven't had much luck with the transfer ribbons. The results look washed-out.

More recently I tested the **Print Gocco B6 Stamp Kit for Cloth**. As usual, you create and print a design on paper, but this method — a variant of screen printing — doesn't require you to print backwards. Thus you can use Publish It! 4 and other programs that can't flip objects horizontally.

Using the **Print Gocco B6 Screen Printing Kit** unit, you make a master from a photocopy of the computer printout. You may recall that I first introduced B6 in "Living Color" (August 1990, p. 48), an article describing color-printing techniques. Although B6 is unmatched for creating small paper publications such as notepaper and greeting cards, I need a lot more experience using the Stamp Kit for Cloth accessory before recommending it so enthusiastically. Despite my initial lack of success with these cloth-printing methods, I won't hesitate to try them again when I have more time to experiment with all the variables.

STUCK ON YOU

For this month's column, I've selected two cloth-transfer techniques you can enjoy right away without much practice. My most exciting "find" is the **Second Impressions** cloth-transfer kit from Flax Art & Design, a mail-order company. A Second Impressions kit costs \$11 and provides enough material to make several small transfers or at least two large ones.

Another method I like uses cloth-transfer paper called **Print 'n Wear**. Radio Shack stores sell this product as **Print 'n Press** paper. Either way, plan on spending about \$2 per sheet. Each sheet can accommodate one large transfer or a half-dozen or more small ones comfortably.

With materials at hand, start up your Apple and load your favorite graphics program. For projects like this, I always turn to **The Print Shop IIGs**. The quality of its color printing is unparalleled, so you can always count on generating great-looking documents. From the program's

main menu, select the *Sign* option. Print Shop signs fit on an 8.5-by-11-inch page, an ideal size for a transfer destined for an adult T-shirt. For a smaller area, use the program's reduction feature in the *Print Options* menu.

I selected the *Underwater* scene — a full-panel graphic — and *Eastern* font. Both come with **The Print Shop Companion IIGs**. I printed a sample in color on an ImageWriter II. If you don't have a full-color printer, create a black-and-white design. Depending on the transfer method you choose, you can color the transfer manually yourself or paint the finished cloth item with fabric pens. Most of the products mentioned in this month's Press Room include suggestions for coloring designs.

The Print Shop IIGs offers the "backwards" printing capability that's needed to make the Second Impressions cloth transfer. Coat the printed side of your design with the "stitchless" transfer medium provided in the Second Impressions kit. The smell and viscosity of this nontoxic fluid reminds me of Elmer's Glue-All.

After you cover the design more or less evenly with fluid (try an artist's brush), turn the printout over and place it carefully on the T-shirt (or cloth bag, or whatever). A wooden "burnisher," which looks like a wallpaper-seam roller, spreads the liquid uniformly and assures good contact between the paper printout and the cloth. Allow the project to dry overnight. The next day, press the transfer with an iron to set the ink.

Flood the transfer with water and peel away the original printout paper. The colored image remains on the cloth. Allow the shirt to drip dry. Brush the transfer with a finish coat of diluted (1:1) stitchless medium. Let dry. My rather impressive-looking Second Impressions T-shirt is displayed in the accompanying **Figure**. Perhaps even more impressive than the shirt is the fact that it represents my very first try with the Second Impression kit.

PAPER CHASE

You can also make cloth transfers with specially coated paper, such as Print 'n Wear transfer sheets. Prepare your printout as in the Second Impressions project, but, instead of printing on ordinary

computer paper, use Print 'n Wear or Print 'n Press paper.

Watch out for pitfalls. Even with standard computer paper, colors can bleed and printouts become misaligned, but when these mishaps occur with transfer paper, it costs you \$2 a shot. That's why I can't emphasize enough the need for good "quality control" before printing. It goes without saying that you should preview your design to make sure it looks the way you want. Check for spelling errors in your message, too. And, of course, use only a good-quality — or new — printer ribbon. For best results, print a sample on scrap paper first.

Each sheet of transfer paper should be properly oriented before printing. The Print Shop IIGs requires that paper be positioned at the top-of-page mark, for example. Because transfer paper is somewhat thicker than ordinary computer paper, you may need to lower the paper-thickness lever a notch or two. The fourth setting from the top seems to give the best results on my ImageWriter II. You know how Murphy's Law applies to computer projects? To be on the safe side, plan to purchase more transfer paper than you think you'll need.

One problem that occurs consistently when I use transfer paper in my ImageWriter II is streaking. Because I keep the printhead clean, the culprit is probably the plastic paper guide in front of the printhead. Transfer paper has a slightly tacky feel, and, although I've tried readjusting the paper guide, ink still tends to smear. The "solution" is WD-40, a penetrating oil from the hardware store. Place the transfer-paper printout — streaks and all — on a comfortable work surface. Spray a tiny amount of WD-40 into a small plastic container. (A shampoo bottle cap works well.) Gather a few Q-tips and a very fine camel's-hair artist's brush.

Lightly dip a Q-tip into the WD-40. Now gently rub (as if to lift) any smears that appear in large areas of your printout. When the Q-tip becomes soiled with ink, use a new one. To clean up detailed areas, switch to the camel's-hair brush. Don't saturate the brush, or you'll end up ruining the good parts of your transfer. The brush should be nearly dry, even after you dip its tip into the WD-40. To keep

the brush clean while you work, dab it frequently on a facial tissue or a small piece of cotton cloth. Cleaned-up transfers show marked improvement over "raw" ones.

Now preheat an iron and arrange the transfer on the T-shirt, handkerchief, or other cloth item you're decorating. Follow the instructions provided in the transfer-paper package to iron the transfer.

Both the Second Impressions kit and the Print 'n Wear package provide suggestions about laundering and caring for your creations. You can expect all laundered items to dull a bit. Ironing isn't recommended, but I've used a pressing cloth with no ill effects.

SAVE A TREE

When I helped organize the first Earth Day celebration on my college campus 25 years ago, I didn't anticipate someday writing a column that combines two long-standing interests: personal computing and the environment. I hope you enjoy this month's project as much as I did.

PRODUCT INFORMATION

BlackLighting, Inc.
Riddle Pond Road
West Topsham, VT 05086
(800) 252-2599
(802) 439-6463 fax
call for pricing for print and transfer services
\$89.99 laser transfer toner
\$79.99 empty cartridge exchange

Computer Friends, Inc.
14250 NW Science Park Drive
Portland, OR 97229
(800) 547-3303
(503) 626-2291
technical support
\$9 ImageWriter black cloth-transfer cartridge
\$15 ImageWriter four-color cloth-transfer cartridge
\$69.95 MacInker reinker plus \$9.50 driver kit

Equinox Ltd.
1307 Park Ave.
Williamsport, PA 17701
(800) 326-9241

\$4.95/cotton canvas bag
\$4.50 each 4 or more
institutional pricing available

Print Gocco B6 Screen Printing Kit, \$110
Print Gocco B6 Stamp Kit for Cloth, \$32.95
RISO Inc.
300 Rosewood Drive
Suite 210
Danvers, MA 01923-9892
(800) 866-2179
(508) 777-7377

Print 'n Press
Radio Shack
700 One Tandy Center
Fort Worth, TX 76102
\$9.99/5 sheets
catalog #26-1437

Print 'n Wear Heat Transfer Paper
Foto-Wear Inc.
P.O. Box 1040
Grand Rapids, MN 55744
(800) 950-9914
(908) 257-6549

\$19.95/10 sheets sample pack
\$9.95 4-pack
\$19.95 10-pack
\$1.09/sheet
\$109 100 sheets

The Print Shop Iles, \$59.95
The Print Shop Companion Iles, \$49.95
Broderbund Software
500 Redwood Blvd.
P.O. Box 6121
Novato, CA 94948-6121
(800) 521-6263
(415) 382-4400

Second Impressions Fabric Transfer Kit
Flax Art & Design
1699 Market Street
P.O. Box 7216
San Francisco, CA 94120-7216
(415) 468-7530
customer service \$11

Then again, how can you miss when your favorite computer is named after a tree?

WRITE TO CYNTHIA FIELD AT 60 BORDER DRIVE, WAKEFIELD, RI 02879. ENCLOSE AN SASE IF YOU'D LIKE A PERSONAL REPLY.

MS-DOS APPLEWORKS*

Breakthrough For AppleWorks Users!

*inCider/A+ Magazine August, 1991

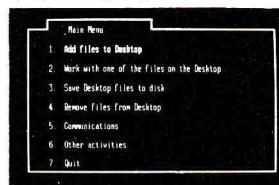
NEW VERSION 2.0

THE BEST INTEGRATED PC PACKAGE YET

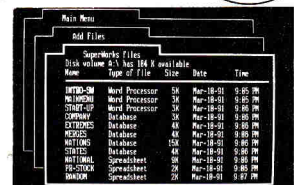
Remarkable Technologies announces a breakthrough product which delivers AppleWorks power on an IBM PC or compatible. SuperWorks allows AppleWorks users to step up to a PC along with all their AppleWorks files, utilizing an AppleWorks work-alike integrated software.

New features provide full and complete integration of all its capabilities including: spreadsheet (with graphs 3-D capability), database (the easiest to use and one of the most powerful anywhere), word processing with spell checker and display PCX files, a communications package plus new improved powerful macros keystroke capability, and programming language. Full EMS support (up to 32 Meg). It takes only 180K on diskette which makes it ideal for notebook users. SuperWorks allows you to work with your AppleWorks files, Lotus 123, dBase, and Ascii on an IBM PC.

As a special introductory offer to inCider readers, SuperWorks will be made available at the special price of \$199.00 (plus \$5.00 shipping and handling). SuperWorks has a regular retail price of \$400.00. Send check or credit card information with order form at right to Remarkable Technologies, 245 Pegasus Avenue, Dept. IC, Northvale, NJ 07647. Phone: 201-767-5522 or 800-782-1955 Fax: 201-767-7227.



MAIN MENU



FILE MENU

Year	Population	National Debt	Per Capita Debt
1980	228,810,000	\$1,020,000,000,000	\$4,457
1981	230,810,000	1,172,000,000,000	5,084
1982	234,530,000	1,377,000,000,000	5,871
1983	237,545,000	1,624,000,000,000	6,837
1984	238,845,000	1,907,000,000,000	7,987
1985	242,238,000	2,227,000,000,000	9,195
1986	245,855,000	2,585,000,000,000	10,517
1987	249,666,000	2,977,000,000,000	11,924
1988	253,666,000	3,400,000,000,000	13,400

SPREADSHEET

State	Population	Per Capita Debt
Alaska	248,000	1,000
Arizona	2,000,000	500
California	23,000,000	24.4
Colorado	2,500,000	27.9
Connecticut	3,500,000	12.7
Delaware	500,000	29.2
District of Columbia	600,000	-
Florida	15,000,000	3.013
Georgia	4,500,000	39.7
Idaho	1,000,000	2.86
Illinois	12,000,000	1.88
Indiana	6,000,000	3.8
Iowa	3,000,000	44.4
Kansas	3,000,000	29.4
Kentucky	4,000,000	26.4

DATABASE

PAYMENT MUST ACCOMPANY THIS ORDER DISK SIZE: 3 1/2" 5 1/4"

VISA MasterCard Discover

EXP. DATE _____ / _____ / _____

CARD NUMBER _____

SIGNATURE _____

NAME _____

COMPANY _____

ADDRESS _____

CITY _____

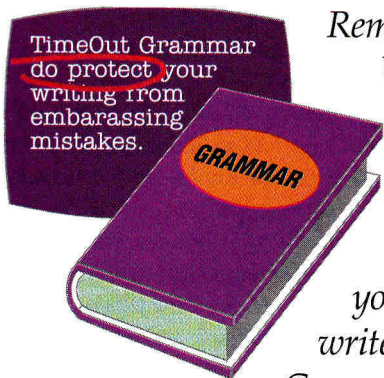
STATE _____ ZIP _____

30 DAY MONEY-BACK GUARANTEE

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INTRODUCING

TimeOut Grammar



Remember when spelling checkers were considered inconvenient? Well... they were inconvenient. But now all word processors have built-in spell checking, and everyone uses them. It's the same with grammar checkers. Until now. New TimeOut Grammar adds built-in grammar checking to your AppleWorks word processing. With TimeOut Grammar, you have the power to guard your writing against embarrassing errors. No matter what you write, from a high-school paper to an annual report, TimeOut Grammar will make it stronger, clearer and more concise.

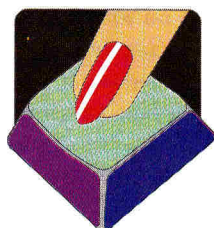
TimeOut Grammar coming July 1 \$49⁹⁵
suggested retail \$79.95

Save up to 55% on TimeOut programs! Any 3 for \$79⁹⁵ • Any 4 for \$99⁹⁵

This is a limited time offer and does not include TimeOut Grammar

TimeOut SuperFonts

Now you can print out your AppleWorks files with fancy fonts and graphics. SuperFonts works with all the same formatting commands you normally use in AppleWorks. SuperFonts even adds some new commands, like right justify and absolute tab. \$42.95



TimeOut Graph

Organize your spreadsheet figures into clear, informative graphs. Just choose the type of graph you want and it appears instantly—all ready to

print—with titles, subtitles, legends, borders, and more. \$52.95

TimeOut Thesaurus

Choose any word in the word processor and select Thesaurus from the TimeOut menu. You'll see a list of words with similar meanings—synonyms—displayed on the screen. Choose the new word you want and Thesaurus does the rest. \$32.95

TimeOut TextTools

These word processor enhancements take the drudgery out of producing complicated documents—term papers, proposals, newsletters, even your Great American Novel. \$32.95

TimeOut SideSpread

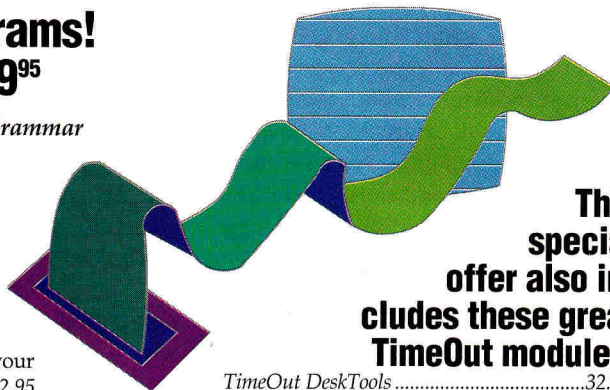
Print your spreadsheets and data base files sideways—inside AppleWorks! SideSpread can print all or part of your file in a wide variety of sizes and print qualities. \$32.95

TimeOut ReportWriter

ReportWriter's flexible report generator makes AppleWorks a powerful administrative tool. Generate report cards, attendance records, lesson plans, forms and more. \$48.95

TimeOut UltraMacros

Automate AppleWorks with this ultra-powerful program. Never retype repetitive information again. Record your keystrokes as you go, and then play them back—up to 4,000 keystrokes with one command! \$40.95



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TimeOut SpreadTools	40.95
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TimeOut MacroEase	25.95
TimeOut QuickSpell	40.95
TimeOut SuperForms	42.95
TimeOut PowerPack	32.95



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sound-input device such as Farallon's MacRecorder; you can train the program's *Pinehead Puppets* to mimic a child's actual mouth movements.

NO END IN SIGHT

Unlike the black-and-white Manhole and Comic Osmo, Spelunx uses *Cameo-Color* to brighten up the occasional screen or object. Color makes the characters more lifelike.

In addition, Spelunx includes many more toys, games, and educational activities than its predecessors. Open-endedness is another area where Spelunx differs from its noble hypertext ancestors. The program includes a *Cave Builder* module that lets youngsters customize their own Spelunx kingdom. You can construct winding tunnels, move rooms to new locations, add a pair of *Warp* chambers that transport you at lightning speed from one to the other, and padlock a tunnel to keep trespassers from entering.

Let's hope that Spelunx's modular nature indicates that we can expect new cave room add-ons from time to time. It would also be nice to see a CD-ROM version of the program. The current release requires 8 megabytes of hard-disk space just to install and 4.5 megabytes of precious real estate to run. With CD-ROM, there would be room for more color, plus several additional caves and activities without compromising valuable hard-disk property.

Spelunx and the Caves of Mr. Seudo introduces us to another marvelous universe full of delightful characters and engaging choices. This software encourages visitors to read, write, think, and play. Entertaining activities provide ample opportunity for children to develop basic skills through fun.

All games are simple enough for the very young, yet sufficiently compelling to hold the interest of sophisticated adults. You owe it to yourself and the children in your life to visit tiny Yoyon Isle and experience its night life.

Keep in mind, however, that this vacation requires HyperCard (included in the package). Yoyonites do *not* accept American Express.

Carol S. Holzberg, Ph.D.
Shutesbury, MA

SHOEBOX 1.0

Seven Hills Software
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566 orders and information
(904) 576-9415 technical support
(904) 575-2015 fax
America Online: SevenHills
GEnie: SevenHills
CompuServe: 75300,1743

- HyperCard IIGs stacks and extensions
- family organizer and financial planner
- 1.5MB Apple IIGs
- requires GS/OS 5.0.4 or later
- requires hard-disk drive
- \$49.95

Tackling life's little details just got a whole lot easier for Apple IIGs enthusiasts. ShoeBox 1.0 may sound like a cardboard box, but we'll let you in on a secret — it's a thinly disguised attempt to hide a powerful family message center, budget tracker, and household information manager. This unique Seven Hills product is a composite series of HyperCard IIGs stacks that deliver beauty and brains as well as convenience.

If you already use HyperCard IIGs, adding ShoeBox to your *Home* stack is nearly automatic: Select the pre-existing HyperCard IIGs folder on your hard drive; ShoeBox's *Installer* utility does the rest. If you don't already own HyperCard IIGs, you won't need to invest an additional \$99, since ShoeBox 1.0 comes with a licensed version of Apple Computer's software-authoring environment. (It's not complete — it lacks sample stacks and documentation, although it maintains the host program's outstanding on-line *Help* system.)

The ShoeBox *Master Menu* features seven ready-to-use modules that address just about every family information-management need you can think of. Three financial modules — *Income*, *Expenses*, and *Budget* — should appeal to recession-weary families. Selecting an income category is as

easy as clicking on the appropriate check box: *Employers*, *Social Security*, *Pensions*, *Interest*, *Worker's Comp*, *Rental Income*, *Royalties*, *Trust Funds* (I should be so lucky), *Child Support*, and *Alimony*. It's so easy, you might actually enjoy getting organized.

ShoeBox records are well thought out. For instance, each *Rentals* record includes fields that accommodate basic information such as tenant's name, address, work and home phone numbers, rental amount, frequency, and due date. In addition, a scrolling text field lets you maintain a tenant history. Entering information in ShoeBox is a lot like filling out a form. The difference is that ShoeBox forms are integrated. For example, you can "post" (transfer automatically) income and expense items to the *Budget* stack. Because ShoeBox wears its HyperCard IIGs persona so well, it's easy to browse and update records.

Other *Master Menu* stacks include *Valuables* (for consolidating information that's vital in case of theft, fire, or other casualty), *Vehicles* (for tracking car maintenance and repair records), and *Insurance* (for organizing policy information in one tidy place). A *Custom* stack lets you create additional databases as the need arises.

The expandable modularity of ShoeBox via *ExtenStacks* — special add-on stacks — is particularly enticing. For instance, ShoeBox isn't a specialized genealogical program, but Seven Hills' Earl Childers tells us a third-party developer is working on just such an application.

Here's another example: ShoeBox's *Message Center ExtenStack* is like an on-line bulletin-board system for the hectic '90s household. Ideally, says Childers, you can leave your GS turned on with ShoeBox running all day long. As parents and kids zoom in and out of the house, they can post messages for other family members.

Other ShoeBox *ExtenStacks* helps kids (or continuing-ed parents) organize research-paper bibliographies and create monthly calendars you can integrate with to-do lists and an electronic appointment book. A *Connections* address book divides contacts into three categories: *Family & Friends*, *Businesses*, and *Entertainment*. An *Emergency Numbers ExtenStack* creates a printout to keep by the phone. From the perspective of a typical family, there isn't much ShoeBox fails to do.

As a HyperCard IIGs fan, I'd like to be able to edit existing layouts, relabel fields, and generally explore each stack's HyperTalk scripts, but ShoeBox is password protected. ShoeBox's decorative background — featuring a display of colorful streamers — makes some screens seem unduly cluttered to our fortysomething eyes. It would be nice to be able to select (or import) a different background.

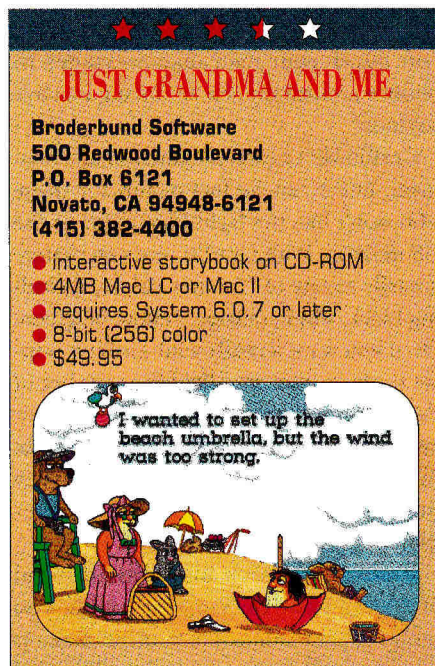
ShoeBox 1.0 is bundled with HyperCard IIGs 1.0, a perceptibly slower version than 1.1, which the GS community expected Apple to release shortly after this review went to press. Unfortunately, stacks can't work any faster than the host program does, and a few ShoeBox 1.0 features seemed to need a kick start. For instance, when you create a calendar ShoeBox takes a brief time-out to recalculate. When you pull down an *About* or *ExtenStack* menu, a two-second delay precedes its appearance.

At press time Seven Hills was planning to bundle the faster HyperCard IIGs 1.1 with ShoeBox 1.1, an update (free to registered users) that fixes bugs reported by initial purchasers. Dave Hecker, vice president for research and development, told us the company was in the process of fixing one last bug — failure of the ShoeBox icon to appear on the *Welcome* card of preinstalled versions of HyperCard IIGs 1.0. I didn't test ShoeBox 1.1, however, and the rating above reflects a half-point "penalty" for 1.0's bugs and slower speed.

Suffice it to say that neither Rockport nor Nike "databases" look as good — or do as much — as ShoeBox 1.0. Apple IIGs families would do well to test-drive this attractive, convenient home organizer — and relegate the old one to a cardboard-recycling center.

Cynthia E. Field, Ph.D.
Wakefield, RI

Editor's note: Now available, ShoeBox 1.1 lets you change the names of most field labels (just as you can in 1.0's Custom module). Also, if you have 2.25 or more megabytes of memory, you can use a new stack that lets you change the background color of ShoeBox's stacks. Finally, a new ExtenStack has been added: Media-Center lets you catalogue your entertainment media, such as videotapes, records, cassettes, and compact discs.



Just Grandma and Me is the first title in Broderbund's new *Living Books* series of interactive animated storybooks. Published on CD-ROM, this affordable product touches on an amazing variety of emotions, colors, and sounds. It's designed for children aged 3 to 8, but even teenagers and adults will find it enjoyable.

This electronic storybook is based on Mercer Mayer's endearing children's book of the same title. (The package includes a copy of the original storybook, so children can return to the beach when the computer isn't available.) Readers are invited to join Little Critter and his grandmother for a day at the beach and to accompany the characters on the bus ride to and from the seashore.

During the day kids "play" at the beach and watch the mishaps that occur when Little Critter sets up a beach umbrella, flies his kite, or discovers a seashell. Viewers will find themselves personally involved in the story. Little Critter drops his lunch in the sand; he has a run-in with an ornery crab; a huge wave washes away his magnificent sand castle. Most of us have experienced these events at one time or another.

The full text of the original story is reproduced on electronic "pages" that youngsters "turn" forward or backward by clicking the mouse, as Little Critter reads the story aloud. Program screens faithfully reproduce and enhance the book's pictures. Both electronic and print

editions encourage reading, yet the computer offers much more than a book can possibly deliver: Animated graphics, sound effects, engaging music, and delightful voices combine to provide a terrific audiovisual experience. Little Critter not only walks, talks, and dances, but also sings, hums, snores, chortles, and whines.

Readers become actively involved because the program encourages them to make choices that direct the action. Children won't need much prompting to explore it. A number of items on every screen respond to the point and click of the mouse, and the software rewards kids for being curious. The graphics-based interface makes program operation intuitive and quickly puts kids in control.

Little Critter invites youngsters to hear the story read aloud, but gives them a chance to "play" inside the story as well. If they select *Read to Me*, they can sit back and listen to the story in English, Spanish, or Japanese. Text is highlighted as it's read so that youngsters can learn to recognize words, phrases, and sentences. Even though the cursor disappears, preventing children from interacting with anything on screen, even this "passive" mode enhances the original illustrated story by adding animation and amusing dialogue sequences.

In the more-active *Let Me Play* mode, children listen to the text as it's read, but they can also click on words and hear them spoken. There are 12 storybook pages in all. Each one is a colorful scene with more than a dozen "hot" spots. The action moves quickly from animation to animation or page to page.

Kids' software doesn't get any better than this — Just Grandma and Me is just about perfect. It does lack a dictionary option, which you'll find in Discis Books' programs. And its "finite" structure means that once children complete all activities, there's nothing more to do except do it all again.

Yet there are plenty of objects for viewers to examine and at least two to three hours of exploration before you finish all the pages. Just Grandma and Me is a marvelous program for the family, the classroom, or the young at heart.

Carol S. Holzberg, Ph.D.
Shutesbury, MA



SIGNATURE GS

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20200 East Nine Mile Road
Box 665
St. Clair Shores, MI 48080
(800) 443-6697

- GS/OS desktop-environment customization programs
- 1.25MB Apple IIgs
- 1.75MB recommended
- requires System 5.0.4 or greater
- requires 2 3.5" disk drives
- hard drive recommended
- \$29.95



Tired of the same old Apple II beep? Has GS/OS-desktop baby blue got you down? If you want a way-cool GS — and what Apple IIgs owner doesn't — Signature GS can help you customize your computing environment.

While some of Signature's enhancements are strictly for fun, others are of a more practical nature. It's a collection of four desktop enhancers: *Phantasm*, *Sonics*, *Graffiti*, and *Boot Master*. Each is a Control Panel device (CDEV) you can configure, customize, and control from the Apple pull-down menu displayed in most GS/OS programs, including the Finder.

Phantasm is a group of seven screen blankers that activate automatically after a 1- to 60-minute user-defined period of keyboard inactivity. Each exhibits a mind-boggling, eye-popping animated display. *Phantasm* prevents your GS monitor from developing *phosphor burn*, a damaging condition that develops when the same screen is displayed for long periods of time. With *Phantasm* you can leave your monitor on safely without worrying about a costly repair bill.

Many of *Phantasm*'s blankers are so beautiful you may find yourself activating them just for the kinetic art show. Each offers a variety of user-defined options: Some let you change the size, frequency,

and color of the display, while others let you enter your own text messages to bounce around the screen during inactive periods.

Graffiti isn't nearly as practical as *Phantasm*, but it can be lots of fun for those who don't like the light-blue color of the GS desktop. With *Graffiti*, you can change it easily to any of 15 other colors, including black, white, orange, yellow, or green. Or, if you want a really wild-looking pop-art desktop, you can display a number of different predesigned graphics patterns, or create your own by combining different colors. With a bit of creativity, you can even produce optical illusions and three-dimensional Finder desktops.

Sonics adds speech and digitized sound effects to your desktop by letting you assign specific sounds to routine desktop operations. Using *Sonics* and the included library of digitized sounds, you can have the Big Bopper greet you with "Hello Baby" as your thermometer bar fills, make the Finder windows whoosh open and clang shut, tell your trashcan to emit burping noises, or play an evil-sounding laugh when your system crashes. Unlike the *Sound* control panel supplied with System 6, which can play back only digitized sounds in the new *rSound* format, *Sonics* can play back any digitized sound in any GS sound format, as well as let you change pitch and volume.

The workhorse of the group, *Boot Master*, affords you greater control over files in your *System* folder. With *Boot Master*, you can activate or deactivate, as needed, classic desk accessories, new desk accessories, file-system translators, permanent and temporary initialization files, and Control Panel devices. You control them from pop-up menus; *Boot Master* lets you easily toggle between active and inactive status. These types of *System* files use up a chunk of available random-access memory, and if you're not going to need them, *Boot Master* will let your applications use that valuable RAM instead.

Signature is supplied on a single non-bootable 3.5-inch disk in each of two versions — one for use with hard drives and one for booting your system from 3.5-inch floppy. The hard-drive version is pre-configured so that all components in all modules are available after using the

supplied installer, which copies files from the Signature disk to your startup disk.

The floppy-disk version is minimally configured, so that after installation, each module has only one or two enhancements. Since all of Signature's enhancement modules take up space on your system disk, and there's not a lot of free space on the GS system disk to begin with, you may have to delete certain unnecessary files, such as unused fonts, to add more blanker files or sound files.

It's for this reason that Q Labs recommends a hard-disk drive, although it isn't a requirement. It just makes it easier to use all of Signature's options; likewise, a hard drive makes everything on the GS easier and faster.

Many of the functions found in *Graffiti*, *Phantasm*, and *Boot Master* can already be achieved with shareware or freeware software, and *Sonics* seems to duplicate System 6's *Sound* control panel. So why would you want to buy Signature when shareware solutions abound? The answer, of course, is stability, quality, technical support, free or low-cost upgrades, printed manuals, and versatility.

For instance, several minor problems with Signature GS surfaced after it was released, and Q Labs mailed free updates to all registered owners. In addition, low-cost add-on modules containing more sounds for *Sonics* and more blankers for *Phantasm* are scheduled for release.

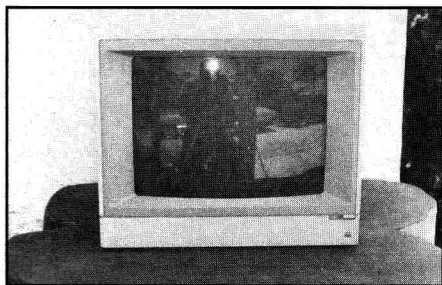
Q Labs also provides a technical-support hotline staffed by knowledgeable, informative Apple II professionals. Signature comes with a 30-day unconditional trial period.

Signature works with System 5.0.4 or later. It doesn't appear to conflict with other applications, as is sometimes the case with poorly or improperly programmed freeware and shareware. During my tests, the only surprise came when *Sonics*' Random sound function generated a loud and devilish laugh unexpectedly.

If you've always wanted to jazz up your machine, but haven't been able to shake the shareware heebie-jeebies, Signature 1.02 offers an inexpensive, enjoyable, stable way to turn your plain-vanilla GS desktop into a way-cool GS desktop. □

Joe Kohn
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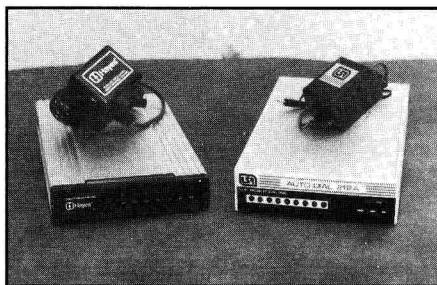


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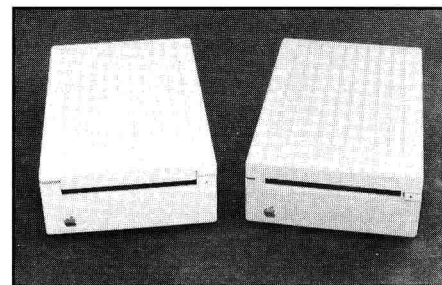
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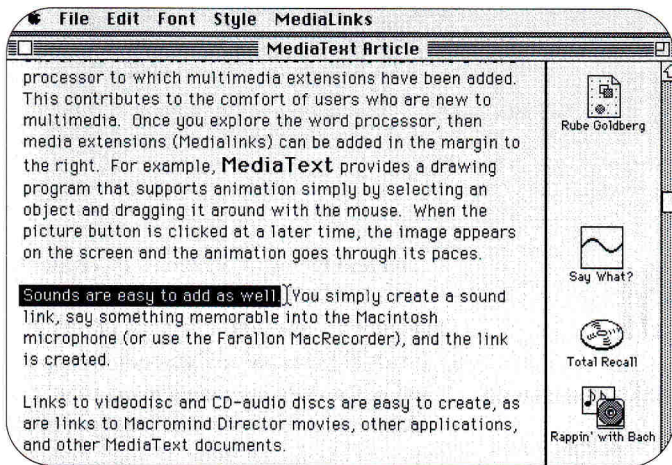


Figure 1. MediaText's "media margin" buttons connect text to sound, music, video, and animation.

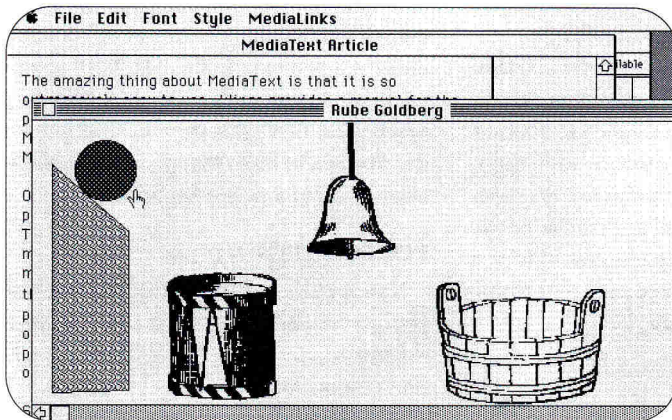


Figure 2. Even animation creation is simple with MediaText: Select the object and drag it around a path on screen.

completed multimedia applications to others.

Printed books and reports still have one major advantage: They require no extra hardware. Electronic books today share the status of printed books before the time of Aldus Manutius: Old books were quite large, and reading was a "desktop" activity. At the end of the 15th century Manutius invented a typeface to accommodate books that could be carried in a satchel. Once books became portable, literacy flourished, and the written word became an information tool for the masses.

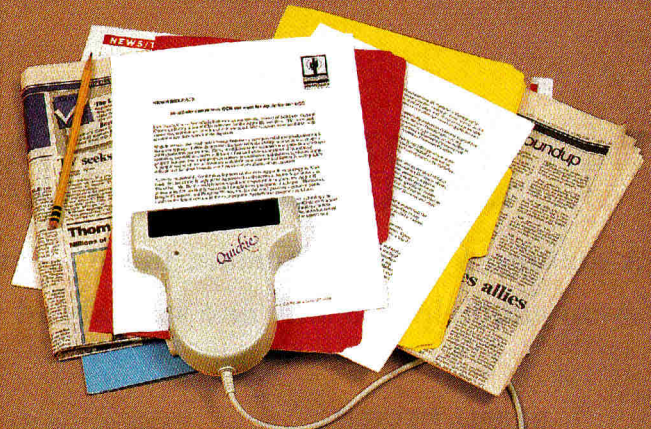
We're at the threshold of a similar paradigm shift in electronic media. As prices fall, laptop- and pocket-computer sales are outstripping those of desk-

top machines (in terms of percentage of growth). The old principle of supply and demand, spurred on by technological development, still applies: Portability means wide dissemination of information and easy access, while MediaText and similar programs to come let even computer-shy users get their messages across on disk.

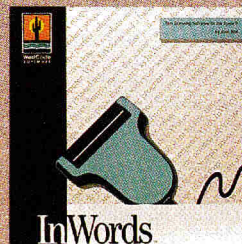
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SCREENING ROOM

A definition here, a shortcut there — our information swap can help you stay one step ahead of frustration.

By **WILL NELKEN**

"COMPUTERS DON'T DO WHAT YOU want them to do, they do what you tell them to do." For macro programmers, this truism is the source of more frustration than bad manuals and RAM shortages combined.

Often the problem is getting the macro to realize that a specific situation has occurred, so that it can react accordingly. In regular programming, you can perform all manner of tests to let your program know exactly what's happening. But, for the most part, macro programmers don't have access to specific counters and flags. All you have to work with is the display screen.

One of the more-powerful commands available in Beagle Bros' **TimeOut Ultra-Macros** is **screen**, which enables reading and storing the contents of a specific area of the current display. Contents are stashed in one of ten available memory areas identified as text-string variables (\$1, \$2, \$3 . . . \$0). You can store up to 80 characters at a time (equal to a full screen line).

The screen area is defined by three parameters: **left column** (1 to 80), **row** (1 to 24), **length of string** (1 to 80), as in **\$3 = screen 1, 24, 10**. This example would store ten characters in \$3 (string 3), beginning at column 1 in row 24. From AppleWorks' *Review/Add/Change* screen, for instance, it would store the text *Type entry*.

This function is useful for determining, from within an active macro, just "where in AppleWorks" you are — especially if your

location, or a special message on screen, will determine what action follows.

For instance, the accompanying **Trash-a-File** macro (**Figure 1**) moves to AppleWorks' main menu, selects the *Remove files from the Desktop* option, and then, depending on the screen that follows, takes the appropriate action to dispose of the file. You use the **screen** command to test the display's appearance and determine what action is necessary.

```

start
=====
<ba-T><<all><
oa-Q esc:      { get right to the Main Menu }
>4<rtn rtn:    { choose to remove the current file }
$3 = screen 15, 11, 3:
               { check for screen message }
if $3 = "You": { warning message that appears... }
               { ...if file is NEW or CHANGED }
then up rtn:   { ignore unsaved material }
endif:        { end the "if" statement }
oa-Q>!       { call the Desktop Index }
=====

```

Figure 1. Trash-a-File macro speeds up removal of documents from AppleWorks desktop.

```

start
=====
T:<awp><<      { works only in word processor }
$3 = screen 1, 1, 21: { capture filename from screen }
zoom oa-Z:     { force exposure of printer options }
oa-1 rtn up : ctrl-R: { go to top, set right justify }
print $3 : rtn: { print filename, carriage return }
date2:        { print current date }
spc spc time: { print time }
               { eliminate above line, if no clock }
rtn rtn ctrl-N: { restore justification }
first zoom>!  { hide options again }
=====

```

Figure 2. Filename Titler macro stamps word-processing document with ProDOS filename and date of last editing or printing.

As another, and different, example, let me offer my **Filename Titler** macro (**Figure 2**). Its purpose is to print an actual ProDOS filename and current date at the top of the corresponding word-processor file as a record of the date you last edited it or made a hardcopy. If your Apple II has a clock, you can also include the precise time.

To achieve this, the macro reads the filename from the screen (upper left corner) and then prints it to the file. With minor additions, you can make it a printing macro that first adds the title and date to the document and then produces a hardcopy — all at a single keypress.

POKING AROUND

Now let's look at an example of one way you power users out there can edit your macros to speed up AppleWorks operations even more.

As with nearly everything in life, there's another path to the **Trash-a-File** macro, one that's even faster (if you like to time things in tenths of a second). But, more importantly, you can accomplish the same purpose with a smaller macro, which means more macro bytes available for other uses. (If you're writing your own macros and haven't reached the 4009-byte limit, you soon will.)

How do you get this kind of efficiency from your macros? When I said macro programmers don't have access to counters and flags, I fibbed a little to get my point across. UltraMacros, unlike many other macro programs, actually contains a programming language, permitting much more than merely recording keystrokes. Two of its more-potent programming tools are its **peek** and **poke** commands: "peeking" into AppleWorks memory at a specific address to see what's there and "poking" code into a specific address to force a certain effect.

Let's look at your options in more detail. If you try to remove an edited file from

Continued on p.63

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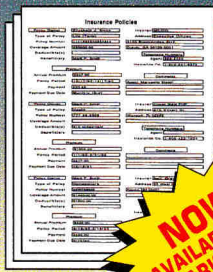
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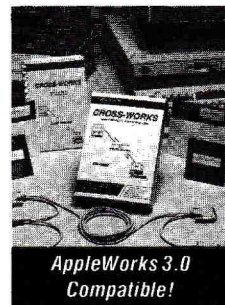
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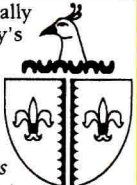
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Activity (1-5): 2
Sex (M/F): m
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Daily Calories: 2800-3100

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Stack Name: Font Viewer
Text file: Font Viewer.SCRIPT
Monday, October 22, 1991
**** SCRIPT ****

Script #1:
on openStack
global go,pl
global rep,sk
set userLevel

Type the full

put '96,49,
& ",117,105
& ",39,122,

put '96,193
& ",168,160
& ",198,291
into objView

Background #1: Name: Viewer (has script #8)
Card buttons
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Font: Chicago
Size: 12
Style: plain
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X: 100
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```
start
=====
<ba-T>:<call><      { works in all modules }
poke $0c6c,0:      { poke in the desired value }
                  { forcing the file }
                  { to appear "Unchanged" }

sa-esc:           { get to the Main Menu }
>4<rtn rtn:      { remove the current file }
oa-Q>!          { call the Desktop Index }
=====
```

Figure 3. Tricking AppleWorks into thinking a file is unchanged lets Trash-a-File skip the warning screen when you use the macro to remove documents from your desktop.

the desktop, for example, AppleWorks informs you that you made changes and gives you an opportunity to decide how you want to deal with the file before removing it.

How does AppleWorks "know" you made changes? One specific byte of AppleWorks memory is dedicated to holding that information. The address of that byte is **\$0c6c** in hexadecimal notation (**3180** in decimal).

Some of the more-common addresses are represented in UltraMacros version 3.x by *labels* — descriptive titles. The label **#filestatus**, for instance, represents the address **\$0c6c (3180)**; you can use the label in place of the numeric address.

If you examine that address, **p = peek \$0c6c** or **p = peek #filestatus**, the variable *p* will return a single-digit code that represents the file's current status: 0 = *unchanged*, 1 or 3 = *new*, 2 or 6 = *changed*, 4 = *saved*.

Since reading that byte is the only way AppleWorks "knows" the file's status, you can "trick" AppleWorks by poking a new value into that memory byte, and that speeds up the **Trash-a-File** macro. Instead of having it examine the screen for the telltale warning message, just "poke" the value equivalent of *unchanged* into the appropriate byte of memory, and the warning screen will never even appear. Now that's what I call getting maximum speed from your macros. □

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DISKTOP REVOLUTION

Is today's multimedia technology
the soul of a new generation?

If you're thirtysomething (or older), you probably remember turning in lots of those dreaded handwritten assignments to your teachers. Throughout my entire school career, I recall, almost every single report, theme, or research project was submitted on paper. Today many students are handing in reports written with word processors, complete with graphics created free-hand on the computer, chosen from a clip-art library, or input with a hand-held scanner. Is that such a technological leap, though?



By DAVID D. THORNBURG, Ph.D.

Chances are the student prints the report and turns it in, just like the handwritten reports we wrote 30 years ago.

We've grown comfortable with this use of technology — we don't even think about it anymore. But what we're really doing is using advanced technology to do the same things we did with old technology — without considering whether today's paper report has any relevance in the new world of electronic information access. We could save a lot of time and paper by submitting reports on disk: One 3.5-inch high-density (1.44-mega-byte) floppy can hold the equivalent of a 400-page book.

There's another advantage, as well: Disk-based information delivery lets us move beyond the left/right, top-down world of Gutenberg. Written reports and books are intrinsically linear media — but computer-based materials don't have to be. For instance, take documents created in **MediaText** — a multimedia authoring environment for the Mac designed by Professor Elliot Soloway and his colleagues at the Highly Interactive Computer Environments group at the University of Michigan (distributed by Wings for Learning, P.O.

Box 660002, 1600 Green Hills Road, Scotts Valley, CA 95067-0002, 408-438-5502, 800-321-7511, \$89). This authoring tool looks a lot like a word processor — a comfortable transition for those who are easing their way into electronic information distribution. Unlike documents destined for print, though, MediaText documents can include sound files, animations, and other goodies you can't put on a sheet of paper.

When you boot up MediaText, you'll think you're using a simple Mac word processor with all the usual controls over fonts, sizes, styles, and so on. But the right side of the screen is where all the action takes place. This "media margin" (**Figure 1**) is home to user-created buttons that bring up animated images, frames or sequences from a videodisc, sound files or passages from audio CDs, other MediaText documents, or other applications. An upcoming update will also be able to play Apple's QuickTime videos.

According to HICE, MediaText is the Kodak Brownie camera of multimedia: "You push the button, we do the rest." Designing those icon-based connections is almost as easy as using them: Pull down a menu, select a media link (videodisc, CD, and so on) and the particular sound or image you want, and move the button to the margin. Just as the Brownie was designed more for snapshots than fine-art photographs, MediaText brings multimedia authoring to average users. Not everyone wants (or needs) to make the investment required to become a HyperCard expert.

For example, to design an animated sequence, just use the built-in object-based graphics program to create a scene, choose the object you want to animate, and drag it around the desired pathway with your mouse (**Figure 2**). The software records the movement, and the next time you open the picture, any objects you've animated move through the paths you defined.

The beauty of this approach is its intuitiveness: MediaText destroys the remaining barriers to multimedia creation. In addition, Wings lets schools send working copies of the software home, and Soloway has also developed a royalty-free run-time version for those who want to send

Continued on p.57

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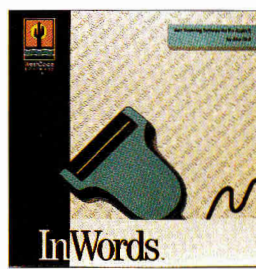
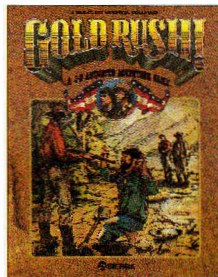
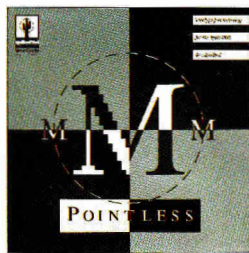
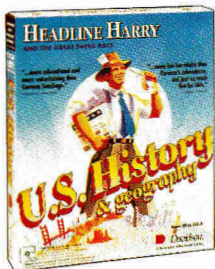
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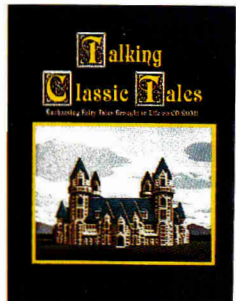
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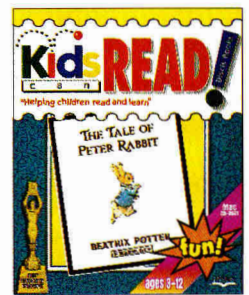
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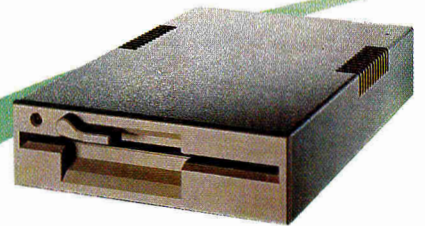
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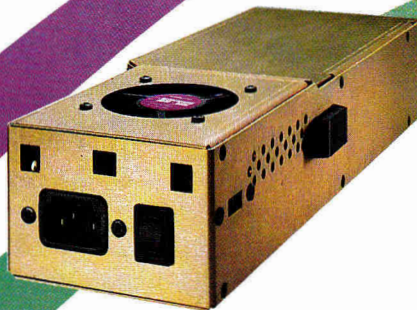
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