



May
June
1993

Volume 4
Number 5

The First Apple IIGS[®] Magazine + Disk Publication!

The Return
of
Cool Cursor!



Features

Using Your IIGS With CD-ROMs From Other Computers
Apple EXPO West Report

Reviews

Apple Desktop Bus Mouse II
Key Fonts Pro CD-ROM • TypeWest Volume 1
Twilight II
Shangai II: The Dragon's Eye
MAZER II • Pick 'n' Pile • Solarian GS
Baccarat

Writer's Block

By Steven W. Disbrow

If you haven't heard by now, the July 1993 issue of *A+inCider* magazine will be the last. Some of you may not believe this, but I'm very sad to see it go. I've followed *A+inCider* off and on since its first issue (we TRS-80 owners were interested in anything that Wayne Green did back in those days), and it's kind of like losing my last link with my early days of computing (although I think I still have the TRS-80 in a closet somewhere). I'd just like to take this time to thank all of our friends at *A+inCider* for hanging in there as long as they did, and to wish them success with their new Macintosh magazine. (Of course, not everyone from *A+inCider* will be going to the new magazine. Be sure to check out "What's New" for more information on a new publication that's "spinning off" from *A+inCider*.)

Anyway, you may be wondering what this has to do with *GS+* Magazine. Well, if you take a look through this issue, you may notice that we have a wider selection of advertisers than usual. In fact, you'll probably see some folks that you *never* expected to see advertise in *GS+* Magazine. Why is this? Well, with the demise of *A+inCider*, a lot of IIGS companies have been left with no forum to vend their merchandise in—so they came to us. (What about *Il Alive* you ask? That's a darn good question. The last I heard, they had not finalized their advertising policies.)

This change may bother some of you—after all, *GS+* Magazine started out with *no* advertising, and I only added it (reluctantly) after I found that I simply couldn't stay in business on subscriptions alone. But, aside from the fact that we have to have advertising to stay in business, I think (after three years of thinking about it) that us being more open to advertising is good for our subscribers and the IIGS market in general. It's good for you in that you get to find out about the latest products through the advertising, and it's good for the IIGS market in that merchants have an inexpensive way to tell a die-hard group of IIGS users about their products. Without such an outlet, a lot of small companies (and some of the bigger ones too) might have to abandon the IIGS market altogether.

However, our more open advertising policies do *not* mean that we have thrown you to the wolves. We will still maintain our standard of warning you about bad

products, regardless of what our relationship is with a publisher. And we will do our best to help you if you have a problem with an advertiser here in *GS+* Magazine. As always, if we get enough complaints about an advertiser, they are outta here.

On Track?

If things go according to schedule, this issue of *GS+* Magazine should be going to the printer about a week and a half early. It was supposed to go out three weeks early, but I got called up for jury duty for the first time in my life, and that cost me two weeks. Hopefully, we'll be able to make up another week for next issue, which would put us back on our "normal" schedule of publishing in the middle of the months on the cover. But, with KansasFest coming up right about then, I'm not sure that we'll be able to meet that particular deadline.

Speaking Of KansasFest

I'm going to be organizing another celebrity roast for this year's KansasFest. Now, last year, I was taken to task for revealing who we would be roasting here in the magazine. I was surprised by this, because no one ever told me it was supposed to be a secret! So, this year, I'm going to beat the rush (and hopefully encourage a few more of you to attend), by telling you straight out who we plan to roast. Our victim this year, will be none other than Uncle DOS himself, Tom Weishaar! Yes, finally, Tom and I will have a public forum to criticise each others haircuts. Actually, I haven't been in the Apple II business as long as Tom, so I really don't know that many good stories about him But hey, maybe you have a good story about Tom that I could use! If you do, either mail or e-mail it to me (no phone calls please!), and I'll try to use it at the roast. Not to worry, I'll be sure to tell Tom who the stories came from. Won't that be *great*?

HyperReprints

In our rush to get the magazine back on schedule, one of the things that had to be put on hold are our HyperStudio-based reprints of our sold-out issues. However, I still plan on doing these, so don't give up on them just yet!

Surprise Package

Another thing that's cost us some time is our work on our first stand-alone product (which I mentioned last issue). However, we are currently in the (hopefully) last beta test cycle and this product *should* be

shipping by the time you read this. (In fact, I'll be signing the contracts after we send this magazine to the printer.) I may even be able to sneak something about it into the *a.Read.Me* file on the disk, so be sure to check there.

Other Than That . . .

Nothing much is really happening around here right now. Well, there *are* a few things going on, but I've been sworn to silence on most of them, so, you'll just have to read about them in "Rumors, Wishes and Blatant Lies." (Just kidding, Tim!)

I know! I can tell you about all the stuff that we didn't have time or room to fit in this issue! First of all, *Hardpressed* is finally out. We should have a review of that in the next issue. (Don't ask me if it's better than *AutoArk*, we just got it yesterday!)

Bill Moore is working on a "Scavenger" article for us that will focus on how to use sound files from other computers. That should be in the next issue.

I'm going to be working on a big comparison between the various backup programs that are out there (*Salvation: Backup*, *ProSel*, *UniverseMaster* and *Archiver*). Look for that in the next issue or two.

As for new programs, we are currently rethinking the kinds of programs that we do here at *GS+* Magazine. Since the beginning, we've focused on small, utility programs. This was mainly because that was all we really had time to write. (It's tough coming up with new stuff every two months!) However, looking at what is currently available for the IIGS, I realized that this is the kind of program that *everybody* seems to be doing. So, what we *hope* to do is to create more stand-alone applications. This will take more time, and it will lead to lots of issues with only one or two programs on the disk (just like this issue), but it should be worth it. After all, the Macintosh isn't known for the Desk Accessories that it can run, it's known for applications like *PageMaker* and *Word*. (Not that we'll be doing anything *that* intense!) If we can make this work, hopefully other IIGS programmers will follow our lead and we'll see some great new application software in the IIGS market.

Diz

GS+

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GS+

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On The Cover
Joe is *the* cool cursor!
Michelle is just plain confused!
Photo by Bob

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Letters

Dear GS+

Is there any way to run the routine pointed to by a "ProcPtr" variable using ORCA/Pascal? If not, this would be a good routine to incorporate into the Miscellaneous Library—one that takes a pointer to a subroutine as input and executes it.

Matt Jensen
Plymouth, MN

To put it bluntly . . . no. If you said ORCAIC or ORCAIM, the answer is a resounding yes, but with Pascal, you're treading in some yucky water. What you probably want to do is call a C or assembly subroutine that you write yourself to do the work. The reason a routine to do this won't go in the Miscellaneous Library has to do with passing parameters. If the routine you want to call takes any parameters as input, how will you give them? With C or assembly, you can write a routine that properly pushes any needed parameters on the stack and then calls the subroutine.

Joe

Dear Diz:

I've been subscribing to GS+ Magazine now since V4.N1 (and I intend to keep on subscribing), and to say that I'm overwhelmed would be an understatement. It's brilliant!

But among new programs you've written, lots of reviews and features, I feel that there's one thing . . . missing, *music!* I don't know what there's been in volumes 1, 2 and 3, but so far in volume 4, there has been nothing. Maybe Joe or yourself could write a tutorial on MIDI interfaces, or more music reviews, think of what musically-inclined IIGS owners are missing out on. Music plays a big part, after all, what did Apple put the "S" in "GS" for?

Sam Wadham
Palmerston North, New Zealand

Well, I have a few theories as to what the "S" stood for, but none are really printable. At any rate, you are right, I don't think we've ever done anything with sound or music (although MacZombies by Bill Heineman [GS+ V2.N6] had some interesting sounds in it). The main reason is that we just haven't ever had any really good ideas for sound or music projects. Your MIDI tutorial sounds like it might be a good starting point, and I

would love to hear any ideas for sound or music projects that anyone else out there has!

Diz

Dear Sirs:

Enclosed is my subscription renewal. I have been somewhat hesitant to renew, because I have debated whether the purchase of a particular program or other computer item would be a better use of the money. It's not that I believe that the programs you provide on the disk are inconsequential, (some I have found to be quite useful), but many I have no use for. My primary reason for subscribing to your publication is not so much to obtain programs or utilities, etc., but to obtain information that will help me learn how to better use my GS. As I look back at the issues over the past year, I note that there are some articles that are educational to novices like myself and add to my understanding of the capabilities of the GS, but primarily the magazine concentrates on the particular programs contained on the disk. I would much prefer less space dedicated to discussion of the contents of the disk, and more "help" articles in the same vein as "The World at Your Fingertips" (included in GS+ V4.N3) that assist readers in making informed choices. I'm presently considering buying a modem and that article came out just in time. (Hopefully you will in the very near future have a similar discussion of hard drives.)

Those types of articles, and others that discuss the basics of computing in laymen's terms would be of greater benefit to me in trying to "learn" my computer than the articles explaining particular programs contained on the disk. Perhaps you should consider including the information about the disks on the disks, so as to leave more space for other subjects in the magazine.

I hope you don't take this as criticism of your efforts to provide GS owners with the support that is all too scarce these days. I guess all that I am trying to say is that perhaps if you paint with a slightly broader brush, you will enhance the non-technical users' usage and enjoyment of the IIGS, and thereby provide a reason for continuing to subscribe to your publication. Anyway, I look forward to another year of GS+ and wish you continued success.

Roy Mongrue
Baton Rouge, LA

First of all, thanks for renewing. It's folks like you (i.e. folks that put their money where their mouth is) that will keep the IIGS market alive.

Second, thanks for writing such a thoughtful letter and telling me what was on your mind. Without feedback like this, GS+ Magazine can't improve. (And, as I have noted in the past, I lost my mind-reading powers long ago.)

Third, I hope that this issue, and the past few issues, are more like what you are looking for. As I've said before, we've slowly but surely been shifting the technical content out of the magazine and onto the disk. This has left room for more tutorials and reviews, and we've been trying to print as many as we can.

That said, I'm afraid we come to a bit of an impasse. You see, when we present a new program in GS+ Magazine, we like to put the documentation in the magazine. There are lots of reasons for this, but the main one is that it's much easier for novices to read the documentation in the magazine than it is to read it off the disk. (Besides, most folks, myself included, prefer printed documentation to disk-based documentation.) Of course, when we update a program, we only print the information relevant to the update, and put the rest of the documentation on the disk. The reason for this is that I simply can't afford to reprint something like the EGOed documentation in every issue—so it has to go on the disk. I think that this is a pretty good balance, but, as always, I'd like to hear opinions from the rest of you.

Diz

Dear Diz:

I have an idea for an accessory for Pointless.

My list of Pointless TrueType fonts is much too long, and I have neither the photographic memory that recalls the appearance of each, nor the desire to page through a thick sample book. So, what I would prefer is to have available at any one time is a short selected list of fonts.

Since Pointless keeps a configuration file called TrueType.List in the System:Fonts folder, it should be possible to keep several configuration files to shuffle in and out of the System:Fonts folder. Each configuration file could have a name, like sans-serif, display, modern, gothic, every-font-I-have, etc. Which font

that I would use would depend on the task at hand.

What is needed is a clever way to do the shuffling. This would include how to store the files under descriptive names, and how to [switch between them]. Sort of like Battery Brain [GS+ V4.N3]. Through a control panel or NDA would be best . . .

Gary Todd
Columbus, OH

Hmmm, that does sound like a killer product! I think it could be done, but it would probably take a couple months to pull it off. If only I could tell you more . . .
Diz

Dear GS+:

I have EGOed v1.9 (GS+ V4.N3) . . . each time I try to open an AppleWorks GS file by double-clicking on it in the Finder, the file is opened by EGOed v1.9 instead. I don't want this to happen, and I won't use EGOed v1.9 until you fix it.

Several People
From Around the World

In the EGOed.Docs file (which is on the GS+ V4.N3 disk), in the "Preferences" section, you will find that a preference exists (the "Applications Get Files First" preference) that will fix this very situation. If this preference is turned on, EGOed v1.9 will let the AppleWorks GS application open these files first. Further, you can temporarily reverse the current setting of this preference simply by putting the Caps Lock key down. (Several issues ago, I wrote an editorial about how about 90% of software "problems" could be cleared up simply by reading the documentation that comes with the software you use. This is a perfect example of just such a "problem" that could have been solved simply by reading the documentation.)
Diz

Dear Diz,

It appears I have found [what was causing my] "second page problem" [when printing with EGOed] . . . You were 100% right—the problem did not lie with EGOed . . . I tried [printing with] both Teach [and] GraphicWriter III as you suggested, and the results were the same as when using EGOed—the second page was all goofed up!

I have a HP [DeskJet] 500C printer. Harmonie has both a 500 and 500C driver. [I was using the driver for the 500 because . . .] The 500 driver has a nifty

"Save Ink" feature that allows you to print in 300 D.P.I. resolution, but just a little lighter than normal. It's great for working on proof copies. The 500C driver does not have that function. When I explained the problem to the folks at Vitesse they knew immediately what the problem was. It is caused by the "Save Ink" feature and does not occur when this is [turned off], and does not occur with the 500C driver.

Thanks again for your help. I learned a lot from this experience and wrote an article for the GSAUG newsletter about not jumping to conclusions. Maybe it will help someone else. Keep up the good work.

Vince Drexelius
via America Online

Thanks for the letter Vince! I'm sorry I had to edit it so much, but I had to make sure that our readers knew what you were talking about without printing all of the other messages we exchanged about this problem!
Diz

Dear GS+:

Thanks for reviewing DreamGrafix and DuelTris. However, after looking at the screen shots for both DreamGrafix and DuelTris, I realized that the pictures don't do either program justice.

Now for the good part. You can improve the 320-mode black-and-white printouts very easily. There is an external command for DreamGrafix called Color to Greyscale. It will take any 16/256/3200 color picture and convert it to the appropriate greyscale rendition in either 320 or 640 mode. The 640-mode greyscale conversion could be better, but nobody has given me feedback about it. At any rate, load the picture you want to print, click on the Color to Greyscale button and save or print that picture from DreamGrafix. I've done this many times when generating PostScript files, so it should work with your setup. I've also found that sometimes the palette needs to be lightened, which can be done very easily from DreamGrafix. This depends on the picture though.

Try it out, I'd love to see the side-by-side comparison in a future GS+ Magazine.

If you need the Color to Greyscale external command, it's available on America Online in the DreamWorld Company Support Area accessible through keywords: AGS, APR, AGM, and GEnie, do a file search by uploader "s.chiang4".

Steve Chiang
DreamWorld Software
Iowa City, IA

Thanks for the tip Steve! I tried it out and you were right! The results are much better looking! We don't have room to run "before" and "after" pictures, but I'm going to use this method (i.e. load a screen shot into DreamGrafix, convert it to greyscale, print it to a PostScript file, and then print that PostScript file with our LASERbeam program [from GS+ V4.N4]), for all of our screen shots in this issue, so everyone should be able to see the improvement over previous issues.
Diz

Diz,

Is it possible to write a little utility for the IIGS that launches System 6 from a 3.5-inch disk but loads all the fonts, DAs, INITs, and Finder from a separate device (i.e. a hard drive)? I have my hard disk formatted for HFS, but you cannot boot [from an HFS partition.] This little utility would allow you to boot to a ProDOS 3.5-inch disk and then run everything else off of the HFS device.

If it is possible . . . would you or Joe think about implementing it for a future issue of GS+ Magazine?

Brian Winn
via America Online

Well, there isn't a single program [that we know of] that can do that, but you can piece together a system like that by using several different programs.

First of all, you can use the Set Start control panel (which comes with System 6), or our own Autopilot (GS+ V4.N1) to boot your system into a program on your hard disk. If you are booting into the Finder, you can keep your FinderExtras folder in the same place as the Finder application. However, any Finder extensions that have to go in the System.Setup folder will still have to be kept on your boot disk.

As long as you keep the Control Panel New Desk Accessory (NDA) on your boot disk, you can use the Finder to open control panels from other disks simply by double-clicking on them in the Finder. However, any control panels that need to do something during system startup (like Cool Cursor) won't work this way, so you'll have to keep them on your startup disk as well. Beyond that, you can use Matt Deatherage's IR utility (discussed in last issue's "Casual 6" article) to launch NDAs, CDAs, etc from your hard disk, as you need them.

As for fonts, you can use our Font Memories control panel (GS+ V4.N4) to keep your bit-mapped fonts on any disk you want. Or, if you prefer TrueType fonts, you can use Pointless (which can keep track of TrueType fonts on any disk).

However, if you already have a hard disk, I'm really not sure why you would want to do this. Booting from a floppy disk is gruelingly slow! A better solution would be to create a small (5 or 10MB) ProDOS partition on your hard disk to boot from, and make the rest of the hard disk HFS. Just remember that you can't run ProDOS 8 applications (like AppleWorks Classic) from an HFS partition, so be sure to leave plenty of room for your ProDOS 8 applications as well as your System Software.
Diz

Dear GS+,

Walking back from my mailbox, I quickly thumbed through [GS+ V4.N3] and was elated to finally see a review of ProSel-16 in your publication. Expecting to "extract" a few overlooked "tips" or helpful tidbits of useful information concerning one of my favorite programs, my mood at this point could only be described as jubilant!

Unfortunately, as I began to devour the information in the article, my mood quickly changed to one of disbelief and finally, frustration, as the reviewer, Mr. Mark Raney, continually omitted important points of operation, made inaccurate comparisons between ProSel-16's capabilities with other, far less featured utility programs, and finally his editorial conclusions that ProSel-16's user interface is somehow flawed because it does not conform to the GS/OS desktop "standard".

In an attempt to temper my criticism, let me first point out (as mentioned by Mr. Raney) that due to space limitations, a comprehensive review of such a full featured program such as ProSel-16 would be impossible in any single article. I would personally like to see several ongoing articles reflecting not just an overview of ProSel-16 but a detailed explanation of the operation of specific features . . . something comparable to the many useful articles and tips you have published over the years concerning the operational aspects of the IIGS "Finder."

With that being said (and to keep this rebuttal as brief as possible), I'd like to point out just a couple of examples of inaccurate statements, conclusions, and omissions that I found plagued this review.

First off, Mr. Raney's complete omission of any description (other than a picture of the first page) of any of the powerful features found within ProSel-16's utilities menu and his conclusion that "selecting volumes and files is cumbersome because of ProSel-16's text-based environment." Glen Bredon, author of ProSel-16, skillfully designed this module to make it easy for users to navigate within it. One need only to select the desired utility by hitting return or a click of the mouse, then press open-apple -"?" to get a complete listing of online volume names for the specific utility to operate on. Selecting a volume by hitting the return key at this point (or mouse click,) brings up a "Copy II+" style of directory listing where the user can again navigate via arrow key or mouse to locate the desired directory or file to perform the specific task on. Not really complicated at all! Needless to say I was shocked that this simple approach was not mentioned in the article, leaving the reader with the impression that these utilities were somehow overly complicated or that memorization of pathnames is required.

Another example: Mr. Raney's description (i.e. "strange sort of way,") that ProSel-16 allows for the use of desk accessories. The reviewer should have pointed out (in my opinion), that the addition of this useful feature to ProSel-16 is an example of the excellent support that the author, Glen Bredon, has provided ProSel-16 owners over the years. This feature, (and many others) were added to ProSel-16 by user request! Contrary to the conclusions drawn by Mr. Raney, I appreciate this feature of ProSel-16, in that I can quickly access my most often used desk accessories (Showme, Calculator, file finder, etc.) without having to sit around and wait for Finder to laboriously bring up all my volumes on the desktop, just to use a specific NDA! He points out that he most often uses these NDAs while inside desktop applications . . . somehow I missed a connection here as I don't see how ProSel-16 limits this ability!

In conclusion, I feel that the emphasis and general commentary of Mr. Raney's review was for the most part, misplaced and that much of his specific criticisms concerning various aspects of ProSel-16 unwarranted, displaying the reviewer's lack of knowledge of the program rather than actual shortcomings within the program itself. While Mr. Raney is certainly entitled to his opinions, I found his mostly negative comparisons between ProSel-16 and other GS/OS desktop utility programs superficial and lacking substance. I would have rather seen the focus of the review placed on what ProSel-

16 does better (in my humble opinion) on an overall basis, than any other IIGS launcher/utility program. Namely, its versatility, functionality, speed of operation, reliability, and, lastly, its accuracy in performing the myriad of complex operations that Mr. Bredon has so successfully incorporated into this extraordinary program for the Apple IIGS.

Ron Hochevar
Bloomington, CA

Mark Raney replies . . .

First off, let me say that in my review, I stated that ProSel-16 includes more features than any other comprehensive utility package on the market. I believe I also pointed out that Glen Bredon continues to provide outstanding customer support and has enhanced the ProSel-16 package over the several years I've owned the product.

With that said, I've got to stand by my main criticism of ProSel-16; its user interface. The IIGS's greatest asset (and what really sets it apart from 8-bit Apples) is the desktop-based user interface. ProSel-16 simply does not follow Apple's human interface guidelines (which are followed in almost all other IIGS-specific titles), which makes it very difficult to master. I can't think of any other currently supported commercial IIGS program that is text-based. I wonder how many Macintosh users would buy and be satisfied with a text-based utility package. Why should IIGS users settle for less? When (and if) ProSel-16 is updated to meet the current industry interface standards, I'll be first in line to pay for an upgrade!

When I write reviews, my target audience is those who don't already own the package I'm reviewing. My comments and opinions are directed at those who may be considering purchasing the program. Ultimately, a review, by its very nature, requires the author to either recommend the program for purchase or not. Given it's non-standard interface, I just don't feel that anyone buying ProSel-16 would be as pleased with it as they would one of the other desktop-based utility packages that are available for the IIGS.

If you have a question, comment, or criticism about GS+ Magazine, we want to hear it! If you want a personal reply, please include a daytime phone number, or enclose a SASE with your letter. Please address all letters to:

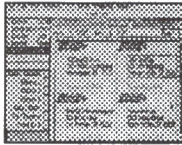
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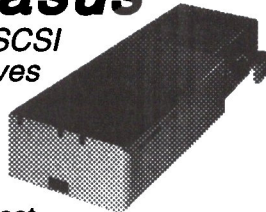


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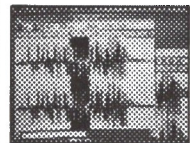
Pegasus 0i	\$179.00
Pegasus 0i w/Fan	\$199.00
Pegasus 42i (42 mb)	\$419.00
Pegasus 85i (85 mb)	\$479.00
Pegasus 127i (127 mb)	\$559.00
Pegasus 170i (170 mb)	\$599.00
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The Scavenger

By Steven W. Disbrow

Over the last few years, GS/OS (the IIGS disk operating system) has slowly (and, very, very quietly) become one of the most flexible disk operating systems around. With the use of File System Translators (FSTs), GS/OS can read and write disks in several formats. For the knowledgeable, this capability has made IIGS computing a thousand times better. For most folks though, it's just been a confusing mess.

Even before GS/OS came on the scene, the IIGS had the capability of using limited types of hardware (keyboards and mice mostly) intended for the Macintosh. All this was thanks to the Apple Desktop Bus (ADB) interface, that Apple has made a standard for all of its input devices. (As an example, see the review of the Apple Desktop Bus Mouse II in this issue. And the next time you want to tick off a Macintosh expert, ask him what the first Apple computer to use the Apple Desktop Bus was. "Bzzzt! Wrong! It was the Apple IIGS.")

The IIGS is also very good (with the addition of the appropriate controller card and device drivers) at using SCSI (Small Computer System Interface) hard drives, and other SCSI devices.

Combine these capabilities with the fact that Apple has been quietly killing the IIGS almost since the day it was introduced, and you end up with a group of users that are feverishly searching for new hardware and software, and not always here in *GS+ Magazine*.

With that in mind, this series of articles will focus on how you, the IIGS owner, can "scavenge" new hardware and software from other computers for use with your IIGS. For this, our first installment, we'll focus on a topic that's generated considerable mail over the last few years:

"Diz:

I was reading the 'Drivers, Drivers, Drivers' story under the 'What's New' column in the January-February 1993 magazine. I was telling [my wife] about the mass storage devices that are now accessible with the drivers developed by Tulin Technology. She wanted to know if that meant we could have one of the CD-ROM encyclopedias that you see advertised. I had viewed this as a hardware incompatibility problem, but I am curious, is the NEC CD-ROM drive intended as an IBM or Mac device? Does the driver interpret the operating system

that the drive was intended for or is it in conjunction with an FST? If we had an FST for MS-DOS could you use something 'read only' like the IBM CD-ROM encyclopedia on the IIGS? Or can we use the HFS translator for the Mac in this way? . . .

*Joe Williams
Bremerton, WA"*

Thanks for the letter Joe! This letter is fairly typical, and raises some very good questions. First of all, the answer to your question about the NEC CD-ROM drive being a Mac or PC device is that it is neither. It's simply a CD-ROM drive, and it doesn't care what kind of computer you use it with.

Answering your wife's question however, is a bit more complicated. The short answer is "No." These new drivers will *not* let IIGS owners use a Macintosh (or IBM) CD-ROM Encyclopedia product. Which brings up the question, "Why not?" To answer that, we have to back up a bit and talk about FSTs, device drivers, and what they actually do.

File System Translators (FSTs)

GS/OS uses FSTs to read data from, or write data to, a disk with a particular format. A *disk format* is simply the way the data is written on the disk. A very loose analogy would be to think of this the same way you might think of Arabic versus English books. In an English book, the words are written from left to right on the page. In Arabic, the words travel from right to left on the page. If you try to read an "Arabic formatted" book in any other fashion, it won't make much sense. English is the same: if you read it in any fashion other than left to right, you will get mightily confused. Further, you *always* have to read the language the same way, no matter what kind of media it is presented to you on. For example, you read a newspaper the same way you read a book, which is the same way you read text on the computer screen, or on a movie screen, or on that tattoo just above your . . . cheek.

The job of an FST then, is to tell GS/OS how to look at the raw data (words) from disks with different formats (how the words are arranged on the page). The FST doesn't give a hoot about what kind of media the data is stored on (floppy disk, hard disk, CD-ROM, RAM disk) all it does is tell GS/OS how to properly look at the data that comes off of the media.

Unfortunately, the FST also knows *absolutely nothing* about the data itself. (After all, just because you know that Arabic travels from right to left on the page, it doesn't mean that you automatically know how to read the Arabic language!) This means that, although you have an FST for a particular disk format, you might not be able to do much with those disks other than see what's on them. Actually *using* the data you find on these disks is up to the application programs that you use.

Device Drivers

Now, we have to back up again, and talk about drivers. As I said, FSTs don't care *what* the data you want to use is stored on. Their job is simply to tell GS/OS *how* it is arranged on whatever it is stored on. And GS/OS doesn't care, all it knows is that you (via some application) have asked it to read or write some data. (GS/OS doesn't really even know the difference between the screen and a 3.5-inch drive.) So, who *does* care? *Device drivers* care.

To expand on our (fairly weak) book analogy, lets consider a library. A library is a place with *lots* and *lots* of data for you to read. However, you can't get into the library without a library card. (We have strict libraries around here.) So, you can think of your library card as your device driver for the library. It's what gets you access to all of the data that you are going to read. Once you get in the library, you grab the books (data) you want and take them home to read. (Our libraries close early too.)

So, for GS/OS to visit a library (CD-ROM, RAM disk, etc.) it has to have a library card (device driver) that will let it get in (access the device) to grab some data. Note that this is *raw* data—a simple stream of binary digits that have absolutely no meaning to the device driver (or to your library card for that matter). The device driver's job is simply to give you access to the raw data that is on a particular type of device. It's then up to an FST to figure out how the data was formatted on the device.

A Visit To The Library

Now, lets wrap all this up into a single example.

Say you buy a NEC CD-ROM drive, and a copy of the Encyclopedia Galactica for Macintosh on CD-ROM. If you have an Apple High-Speed SCSI card, you will

also need to buy the NEC CD-ROM device drivers from Tulin. If you are using a RamFAST card, you don't need these drivers, because the RamFAST is able to access most SCSI devices (including almost all brands of CD-ROM drives) automatically.

First, you connect the CD-ROM drive to your SCSI card (either a RamFAST or Apple High-Speed SCSI card). Next, you install the HFS (Hierarchical File System—this is the file system used by the Macintosh) FST using the System 6 Installer. If you are using a RamFAST, that's all you need to do. If you are using the Apple card, you will need to install the Tulin drivers, by using the Installer program that Tulin provides.

Once all of this is installed and connected, we're ready to try reading the CD-ROM. So, we boot into the Finder and put the disk in the CD-ROM drive. After a few seconds, the disk will appear on the desktop. When you open the disk, you'll notice that most of the icons are generic document icons. When you get info on these icons, the IIGS will probably tell you that they are of type "Unknown." (To go back to our library analogy, this is sort of like going to the library, checking out a book, returning home with it, and finding out it's written in Arabic, with an English table of contents.)

At this point, panic has probably set in. The CD-ROM drive was over \$200, the SCSI card was at least \$100, and the drivers were \$50. Add in the cost of the CD-ROM and you've probably spent about \$500 (or more) just to look at some CD that you can't use.

Before you start screaming, stop and think a moment. Was this disk intended for the IIGS? No, it was a created for the Macintosh. So, why did you expect to be able to run the program that was on it?

Remember: a Macintosh program is *not* a IIGS program, *regardless* of the kind of disk that it is stored on and regardless of whether or not you can see the contents of that disk. Just because you have an FST that lets you see the contents of a Macintosh disk, you can't run Macintosh programs (but you *can* run IIGS programs that are on the disk), and you shouldn't automatically expect to be able to use any of the other contents of the disk.

So, Why Bother?

Because you *can* do some things with some types of Macintosh files!

Typically, the files you can scavenge off of Macintosh (and PC) disks will be

simple data files. Specifically, you can usually work with text files, sound files, and graphics files fairly easily. However, these will usually require the proper IIGS applications to convert these files into formats that the IIGS will be able to work with.

Another problem is that in a great many cases, it's very difficult to tell exactly *what* is in a file. Is it a text file? Is it a graphic? All the Finder will usually tell you is that it is of type "Unknown," you have to figure the actual answer out for yourself.

Even worse, a great many data files will store their data in proprietary formats that *no* IIGS program will be able to interpret correctly. A data file for an encyclopedia program, for example, is probably going to be more than just a collection of simple text and graphic information. As such, no Apple IIGS program currently exists that can interpret the contents of such files, so, you can't really use them on your IIGS.

"Before you start screaming, stop and think a moment. Was this disk intended for the IIGS? No, it was a created for the Macintosh. So, why did you expect to be able to run the program that was on it?"

Good News

Having said all of that, the good news is that with a little practice, and a lot of patience, recovering good, usable data from "foreign" disks is not that hard to do. However, since this article is only intended as an introduction, I'm just going to hit the highlights to give you an idea of what you can do, and the software you need to do it.

Text Files

Scavenging text files is one of the easiest things to do. If the file is a Macintosh TeachText file, it will actually show up as a plain ASCII Text file in the Finder and you should be able to use any IIGS text editor to read it. For example, with our own EGOed installed, you can double-click on these files and EGOed will automatically open them for you to read.

If the disk you are working with is an MS-DOS disk (it's no secret that System 6.0.1 will *probably* come with a read-only FST for MS-DOS is it?), you can easily identify most Text files by looking at their file names. They will usually end with a ".TXT", or they will be called

"READ.ME" or something equivalent. You should also be able to read files that end with the extension ".BAT", but since these are usually MS-DOS Batch files, their contents probably won't be of much use to you.

If the disk is a High Sierra (ISO 9660) CD-ROM, you can usually make the same assumptions as you can with an MS-DOS disk. However, you may have to actually change the file types of the files you suspect of being Text files before you can read them. To do this, copy the suspect files to another disk (a RAM disk is great for this), and use a file utility like our own NoDOS to change the file types to "TXT". (If the utility you are using won't let you type in "TXT" for a file type, use the value "4", it means the same thing.) You should then be able to load the file into your text editor.

Graphics

For a long time now, IIGS users have had a couple of utilities for converting graphics from other computers. The only real problem has been getting the graphics onto a disk the IIGS would recognize. Now that we have all these neat FSTs, however; that's no longer a real problem. With System 6, the HFS FST, and SuperConvert or The Graphic Exchange, you have access to a whole load of Macintosh CD-ROMs, jam-packed with GIF and MacPaint pictures.

However, there is still one problem with scavenging graphics, namely, you can't always tell when a file is a graphic. If you buy a disk that's specifically full of graphics, you probably won't have any problems... but what about "multi-media" disks that have all sorts of files on them? Since the files on the disks probably weren't intended to be used separately, the author probably didn't go to a lot of trouble to identify individual files by their types. If the name of the file doesn't give you a really obvious clue, then about the only way around this problem is to experiment. Just crank up your graphics conversion program and start trying different conversions.

Sounds

Here again, the main problem is simply identifying *which* files are sound files. Once you do that, actually converting these sounds for use on the IIGS is actually a bit more complicated than most folks will like, but it can be done. We plan on having a full article on this process in an upcoming issue, but for those of you that want to get started right away, I'll just say that one of the best tools for this task is the shareware program AudioZap, by Ian Schmidt.

With it, you can open raw sound files from other computers, fiddle with them until they sound right, and save them out in several IIGS formats. Once you have the sound in AudioZap, the main trick is simply getting it to sound right. If you don't have an idea of what the sound *should* sound like, you might not *ever* get it in a form that you can recognize.

Other Types of Files

If you want to use a file that is something other than one of these basic types, *you will need a IIGS application specifically intended to read the type of file you want to work with.* We've already discussed the use of two such programs: SuperConvert and The Graphic Exchange. These are very focused programs that allow you to convert many types of graphics files for use on your IIGS. Fortunately, there are programs that let you work with more than just graphics.

For example, the Teach application that comes with System 6 can also convert MacWrite v5.0 documents into IIGS Teach documents, complete with all font, size, and style information intact! From inside the Teach application, simply select the Import file menu item and select the MacWrite v5.0 file you want to convert. You can then save the file as a Teach file for use with your other IIGS editors. (Note: While it's very nice to be able to import MacWrite v5.0 files, almost *nobody* in the Macintosh world saves files in this format, so you probably won't see many on the Macintosh disks you try to scavenge. However, it is a great format for your Macintosh-owning friends to use when they want to share files with you.)

Another type of file that you can translate for use on your IIGS is a Macintosh HyperCard stack. Using Apple's HyperMover program, IIGS owners can move complete Macintosh HyperCard stacks over to the IIGS for use with HyperCard IIGS. Once the stack is in HyperCard IIGS format, you can easily rip it apart and extract most of the text, graphics, and sounds in the stack. The only drawbacks to this process are that you have to have a Macintosh (HyperMover is a two part program, one half runs on the Mac, the other runs on your IIGS), and the conversions aren't always complete. If the Mac HyperCard stack uses lots of XCMDs (eXternal CoMmanDs), chances are that it won't work completely on the IIGS—but you should be able to scavenge most of the text, graphics, and sounds from the stack.

Finally, there is one type of file that is *amazingly* simple to scavenge from Macintosh disks and CD-ROMs:

TrueType fonts. Using System 6, the HFS FST and Pointless from WestCode Software, you can easily use collections of Macintosh TrueType fonts with absolutely *no* work! System 6 and the HFS FST give Pointless transparent access to these files and it treats them just like it does the TrueType fonts that come in the Pointless package.

For example, I recently bought a NEC CD-ROM drive. While browsing through our local Electronics Boutique, I found a package called Key Fonts Pro CD-ROM (see review in this issue). This CD-ROM contains 303 TrueType fonts for use with both Macintosh and Windows. I bought the disk (for a measly \$29), brought it home, dropped it in the CD-ROM drive, added the fonts on the disk to Pointless, and began using Pointless and our Font Reporter program (from *GS+* V4.N2) to see which fonts I wanted to actually keep. After I had gone through all of the fonts, I removed the CD-ROM fonts from the Pointless list, copied the ones I wanted to the place where I keep my TrueType fonts, and added them back into the Pointless list of fonts. Then I took the CD-ROM and put it up on the shelf. If I need any new fonts, I'll just get the CD-ROM down and start looking through it again.

In fact, this experience is a perfect example of everything we discussed at the start of this article. The NEC CD-ROM drive is a standard SCSI drive that I was able to use simply by hooking it up to my RamFAST SCSI card (it also works great with my Apple High-Speed SCSI card and the Tulin drivers for the NEC CD-ROM). The Key Fonts Pro CD-ROM is a Macintosh product that I wanted to get some files off of. I bought the disk, brought it home, and put it in the CD-ROM drive. The RamFAST accessed the drive and read the raw data off of the disk (just as the Tulin driver would do with the Apple High-Speed SCSI card). This raw data was passed to the HFS FST, which gave it to *GS/OS* in a format it could understand. *GS/OS* then gave the information to Pointless. This information told Pointless that the files were TrueType fonts, which Pointless then displayed on my screen.

Coming Soon . . .

So, there you have it: an overview of how your IIGS uses device drivers and FSTs to let you peruse the contents of disks from other computers. If you want even more information, you might want to look at an article that Joe wrote back in *GS+* V3.N6, "Understanding FSTs." In coming issues of *GS+* Magazine, we'll look in-depth at how to scavenge particular kinds of files for you to use

with your IIGS. Until then, I hope this article and the examples in it have helped to clear up all the confusion that's out there about FSTs and drivers. Remember, FSTs aren't magic. Just because you have an FST for a particular file system, it doesn't mean that you can actually use anything on the disks the FST lets you read. That takes work, along with an appropriate IIGS application and lots of patience. **GS+**

Product Information

AudioZap

Shareware fee: \$20
Ian Schmidt
Knapp 9224 Vance
Ames, IA 50013

The Graphic Exchange

Retail/mail-order price: \$49/\$35
Roger Wagner Publishing
1050 Pioneer Way, Suite P
El Cajon, CA 92020
(619) 442-0522

HyperMover

Retail price: \$15
Resource Central
P. O. Box 11250
Overland Park, KS 66207
(913) 469-6502

Key Fonts Pro CD-ROM

Typical mail-order price: \$30
Softkey Software Products of Florida, Inc.
4800 North Federal Highway
3rd Floor, Building D
Boca Raton, FL 33431
(407) 367-0005

Pointless

Retail/mail-order price: \$69/49
WestCode Software
15050 Avenue of Science, Suite 112
San Diego, CA 92128-9720
(619) 487-9200

SuperConvert

Retail/mail-order price: \$40/\$29
Seven Hills Software
2310 Oxford Rd.
Tallahassee, FL 32304-3930
(904) 575-2015

Teach

Teach is included with System Software v6.0. See "How To Get System 6" elsewhere in this magazine for information on obtaining System 6.

Tulin NEC CD-ROM Drivers

Retail price: \$49.95
Tulin Technology
2156H O'Toole Ave.
San Jose, CA 95131
(408) 432-9057

"Why Do I Need Twilight II?"

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Sam King
Aurora, Ontario, CANADA

"MiniFireworks is really elegant, and Fireworks glorious ... The documentation and flexibility of the program is impressive!"

Kirk Hollingsworth
New York, NY

"Works like a charm."

Donald McIntosh
Lexington, MA

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Evan Trent
Norwich, VT

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Requirements: Apple IIGS with two 3.5" drives or one 3.5" drive and a hard drive with System 6. 100k free RAM minimum is required. (1.5mb is suggested, but 1.125mb will work on a stripped down system.) Twilight II is a *complete* rewrite of Twilight I! **List price: \$39.95.** Also available from *Big Red Computer Club* (402.379.4680) & *Resource Central* (913.469.6502). School purchase orders are accepted, and low cost site licenses are also available. We welcome dealer and user group inquiries. Overseas orders please add \$5 for air mail shipping.

Competitive Upgrades: (only available direct)

- From Twilight I, with copy of Twilight I shareware payment check: \$22 (\$20 + \$2 S&H)
- From Q Labs' Signature GS or Simplicity's Desktop Enhancer, with original manual cover: \$26 (\$24 + \$2 S&H)

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Innovations

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Phone 203.375.0837

We're a small group of die hard Apple II enthusiasts who love expanding the "limits" of the GS. We strive to create high quality products at modest prices. You will find that we are truly committed to supporting and updating our products in the long run. Twilight II v1.1 is our latest example of this, and it certainly won't be our last! Many more treats are in store (such as even more effects!) for the next version of Twilight II! We're not content to sit back and watch our product sell, issuing only bug fix updates or additional effect packages. We listen to user's suggestions, feedback, and requests for features, and incorporate a great deal of these into future versions. You're buying a product with a future—a future that you can have some say in. We're committed to you!

Apple EXPO West

By Mark Raney

It was with great excitement that I arrived in San Francisco on Friday, April 23, with a MacColleague to attend the first annual Apple EXPO West. We waited at the bottom of the entrance runway with about forty other anxious computer-philes and then rushed to the farthest aisle to start a systematic sojourn through the vendor area.

Apple EXPO West was billed as "The Event of the Year; Featuring the entire Apple and Macintosh family of products and services." My first impression of the exhibition area was the abundance of Apple II vendors. It was wonderful seeing many IIGSs demonstrating a wide variety of recently released products. The sheer number of vendors seems to dispel the rumors of the Apple II's death. Unfortunately, big-hitters like Apple, Inc., and Claris were nowhere to be seen. Also missing was *A+InCider*, although free for the taking was their new sister publication, *MacComputing*.

For me, the greatest joy of the EXPO was meeting many of the Apple IIGS supporters I've known only through e-mail and online posts. I shook hands with many of the people whose products I've reviewed here in *GS+* Magazine.

Upon returning home and checking my e-mail, Diz requested that I put together some comments of my day's experiences. While I took no notes, what follows is my recollections (in no particular order) of the highlights of the exhibition. My apologies to any IIGS exhibitors I failed to remember.

One of the most humorous moments for me happened almost immediately as I entered the exhibition area. From many booths away I recognized a face I've seen numerous times in the lobby of each issue of *Script-Central*, Resource Central's HyperCard IIGS hypermedia publication. Uncle DOS (a.k.a. Tom Weishaar) was inviting me to "fish" for prizes in his tiny plastic pond. After several minutes (it wasn't as easy as it looked . . .) I won a Level 3 prize, a bottle of bubbles! Resource Central was featuring their new publication, *Fishead's Children*, at their booth as well as providing information on all of their Apple II publications.

Dave Hecker was on hand demonstrating Spectrum, Seven Hills Software's forthcoming telecommunications program, for the first time publicly. In addition to Spectrum, The Manager, their new IIGS

multi-Finder application was highly visible, not only in the Seven Hills booth, but in several of the other vendor's spread of wares.

I also had the opportunity to meet James Smith, who wrote several of the blanking modules for Twilight II, v1.1, which was released just in time for the EXPO. East coasters got the first shot at Twilight II, v1.0 when it was first released for the Apple EXPO East, but version 1.1 sports an improved user interface and many more blanking modules. (See review elsewhere in this issue.)

Karen and D. Proni, of Econ Technologies, were demonstrating SoundMeister, a new IIGS stereo amplifier and digitizing board. It looks to be the sound board of choice for IIGS users. Mr. Proni also fielded questions about DigitalSession, their upcoming sound capturing and editing software package, as well as UniverseMaster and AutoArk.

The Dreamworld software booth was showing their high-powered 3200-color paint program, DreamGraphix, as well as their new shareware game, DuelTris. (See reviews in *GS+* V4.N4.) DuelTris is a Tetris-like game that features beautiful graphics and allows head-to-head play. The highlight of my day was when my MacColleague exclaimed, while watching the DuelTris demo, that the IIGS really does have high quality graphic resolution!

As expected at any Apple II trade show, the Roger Wagner Publishing booth was jumping, but it attracted as many Macintosh users as it did Apple IIGS users. Roger's newest product, HyperStudio for the Macintosh, was attracting lots of attention. Word has it that the Macintosh version of HyperStudio will run IIGS HyperStudio stacks!

In the "Still Not Quite Ready Yet" department is TurboRez video enhancement board for the IIGS. The board's designer, Bill St. Pierre, had several IIGSs running with amazing graphic demonstrations, but the literature that Bill was handing out stated that TurboRez GS is still five to six months away from release.

One crowded booth included the folks from Simplexity Software, demonstrating Contacts GS and Desktop Enhancer (see reviews in *GS+* V4.N1 and V4.N2

respectively), as well as Vitesse, with their line of products. Also stuffed into this same small booth were the folks from Bits & Bits with their TrueType Font Collection for use with Pointless. This booth was so amazingly busy every time I drifted by, that I didn't get a chance to stop and chat with these folks.

Finally, there were a multitude of software and hardware resellers on hand. It was nice to see so many IIGS titles available for sale at the show.

All in all, the first annual Apple EXPO West seemed to be a success from the viewpoint of both exhibitors and attendees. I didn't attend any of the conference sessions, but they were led by industry greats like Tom Weishaar, who spoke about Apple II users in transition and Roger Wagner spreading the gospel about multimedia. I plan on attending again next year! GS+

Counter Point

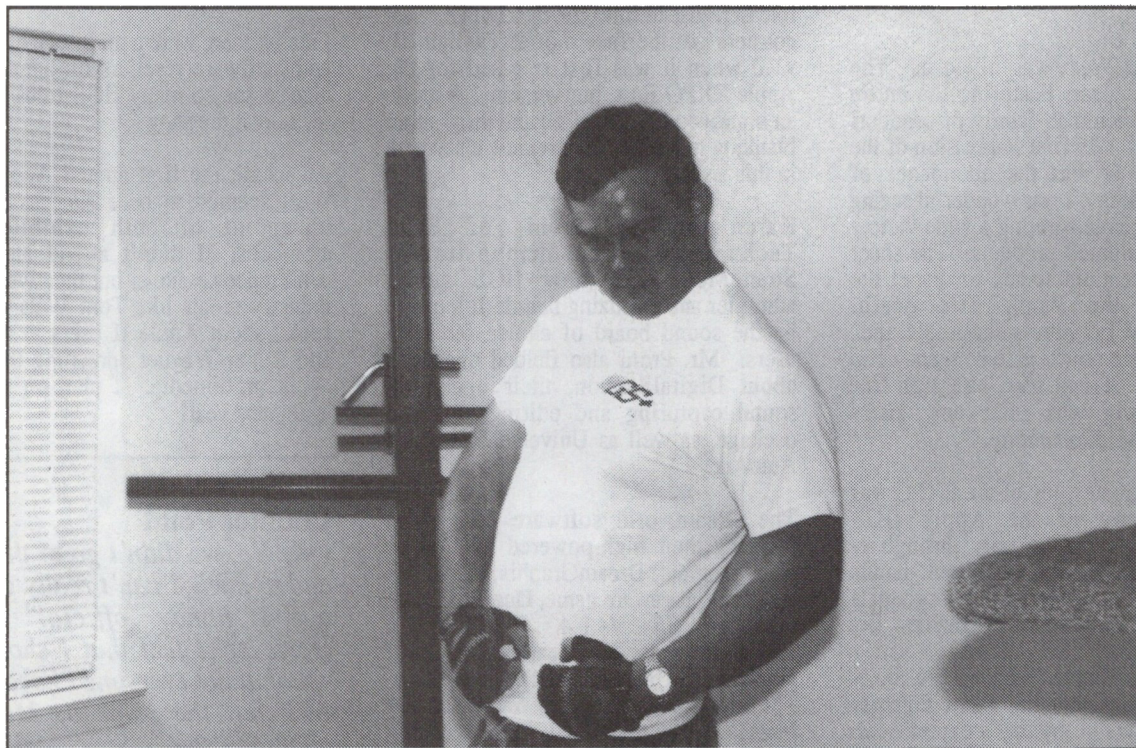
OK. So, we didn't go to the show, and as such, I can't really give you a first hand, "official" report. However, I feel that I should tell you that not everyone I have spoken with felt the same as Mark did about the show. Specifically, some of the vendors that did go to the show were very disappointed with the turn out. Event Specialists estimated that there would be more than 10,000 attendees. However, the word from the floor of the show is that only about 5,000 people actually showed up. (According to Event Specialists, the official number of attendees for the three-day event was 5,318.) Some blamed the poor attendance on a lack of advertising, and at least one vendor partially blamed a parade that was held during the show for shutting off access to the convention hall. Whatever the reason, it's certainly a shame that there wasn't a bigger crowd to support the Apple II vendors that showed up.

Diz

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Feedback Results

By Robert A. Ribaric

For the past three years we've been asking subscribers to fill out and return questionnaires concerning our publication. For three years, they've been rolling in. Don't get me wrong—we've read every single one of them and have made changes to the magazine to reflect your concerns. (In fact, Diz tells me that several articles and programs have come directly from feedback forms that we have received.) However, I thought it was about time to compile the numbers on all of these forms and let you know my findings.

I've personally reviewed over a hundred feedback forms. I noticed several similarities among them, which I gave special attention to. It took a while for me to read, organize, and document readers' opinions so I could report them to both you and the publisher. Many were very specific about what they wanted!

How it Was Done

After reading everything, I separated the mail into four categories. First, was "Dealt With." Into this category went the stuff that we had already heard and/or addressed. The next two categories were "Important-New" and "Important-Old." These are things we need to consider right now, and things we should have considered a long time ago! The last category I created deals with extraordinary feedback that I felt deserved special attention. No name was given to this—I simply forwarded it directly to the top.

Our feedback form asks questions about several different topics. I made a chart showing the responses covering the different areas. These areas were: user experience, user's system setup, rating given to magazine, opinion on shareware reviews, view on technical content, types of articles you want to see, general comments, and whether the you will renew your subscriptions. This was further broken down between old feedback forms and new feedback forms. This way, we could see if we've improved any. I assigned numbers to the possible responses for experience, magazine rating, and technical content. I used this numerical rating system to average and compare the responses.

What You Thought

• Subscriber experience on a scale of 1 to 7 ranged from "babe in the woods" to "digital deity" (a response of 5 indicates you consider yourself to be "experienced"). My numerical rating system yielded an average of 5.07 for

newer feedback and 4.91 for older feedback. (Hopefully, this means that everyone is learning something from reading *GS+* Magazine!)

• Most of your Apple IIGS systems contained many peripherals. Just about everyone had printers and hard drives. Most of you had accelerators and modems, too. This finding is one reason we have started requiring System 6 for all of our programs. (The moral here is that if you *don't* have the hardware to run System 6, you need to let us know!)

• Almost everyone that responded belongs to a user group. (Which is odd, because the user group newsletters we get indicate that almost no one actually participates in user group activities.)

• Opinions on our technical content were quite diverse. New respondents had an average of 2.47 on a scale of 1 to 3. "1" indicates a belief that our content is "child's play," while "3" means that the reader is "drowning in jargon." The older average was 2.42. This must be directly related to experience, because as experience rose, understanding of technical content also improved. However, the vast majority of responses leaned toward "drowning in jargon"—not a good sign. The "Glossary" department that was added in 1991 seemed to help the new feedback respondents, but only a little.

• On a scale of 1 to 5, with 5 being the best, you gave *GS+* Magazine an average of 4.80. We must be doing something right! Those disgusted with our publication probably wouldn't have taken the time to respond, though. *Everyone* that did respond said that they would renew for sure.

• The shareware review question found that most of you want to see long articles covering this kind of software. You also want to see more reviews of games and hardware. Many of you want to see articles about networking and telecommunications software. We plan to take all of this advice. And since so many of you are interested in game reviews, we are also thinking about publishing another game in the magazine. Let us know what you think . . .

• Speaking of software, most of you seem to like and use a lot of the programs we publish. EGOed, Replicator, and Autopilot are some of your favorites. Many subscribers also wrote that they

appreciate the frequent updates to our software.

Extraordinary Feedback

For me, this was the best part. We allowed for any comments you wanted to add to the feedback form. Believe me, you had things to say! These comments ranged from complimentary to humorous to suggestive. First and foremost was the overwhelming concern that *GS+* Magazine would stick around for a while. Some of you also had strong opinions about certain mail-order companies. Several comment sections were filled with praise for TMS Peripherals while some very uncomplimentary things were said about Zip Technology. Many people wrote specific responses to the content question, wishing we'd tone down the technical jargon a little—which is just what we've been trying to do in the past several issues.

Conclusions?

Not to sound pompous, but the first conclusion that I drew was that you love *GS+* Magazine and you want to keep us around. That's always good to hear. Your praise definitely helps to keep us going, and we do plan to continue supporting the Apple IIGS. The next major concern was how even experienced users would like us to write more in layman's terms. With a technical publication like this, that is sometimes hard to do. However, this has always been a bit of a problem and we hope to cater a little more to beginners and intermediate users from now on.

Now, let me talk a little about what we plan to do in the future. We are currently downloading many shareware games from various online services. In time, we will review several of them for future issues (The beginnings of this new focus on shareware is shown in my review of Solarian GS, and "Bob's Download Dogs," both of which are in this issue.) We are also hoping to get the magazine back on schedule again, so you can expect the next few issues to come a bit earlier than usual.

Finally, we do want this to be a magazine for everyone. Like I said earlier, you can expect to see us catering to all levels of experience in the future. Unfortunately, only disk subscribers receive feedback forms, so there might be more of you out there with things on your mind. If you are one of these people, *please write!* I guarantee that all mail is read by both Diz and me, and that we value all of your comments and suggestions. **GS+**

Cool Cursor v2.0

By Josef W. Wankerl

GS+ Magazine proudly presents . . . *Cool Cursor v2.0!* I've always secretly hated the watch cursor that appears whenever a lengthy operation is taking place . . . and I finally got around to doing something about it! Cool Cursor is a control panel which lets you change the wait cursor from the drab static watch into an exciting animation of your choice. Version 2.0 is almost a complete overhaul, bringing Cool Cursor into the realm of System 6—complete with smooth cursor animations, random cursor selection, speedier control panel opening, and much, much more!

Installation

To install Cool Cursor, use the Installer program on your GS+ Disk. If you need help using the Installer, see "How to Use Your GS+ Disk" in this issue. After you install Cool Cursor, you must reboot for it to be available. Cool Cursor v2.0 requires System 6 or later. There are several Cool Cursor installation configurations. Each configuration installs the Cool Cursor control panel. The only difference between the configurations is the number of cursors that are installed. The "Cool Cursor Complete" installation will install Cool Cursor and the entire set of animated cursors. Since there are over 150K worth of cursors, you should probably use this installation only if you have a hard drive. The "Cool Cursor Only" installation will install the Cool Cursor control panel only. The "Cool Cursor Small" installation will install Cool Cursor and some of our favorite cursors. The "Cool Cursor Small" installation is the installation you should use if you (for some strange reason) want to install Cool

Cursor on a System 6 floppy-disk-based system.

Some other related installation scripts you can choose all start with the "Cursors:" prefix. The "Cursors: GS+" script will install the entire set of cursors that I developed. The "Cursors: Andreas" script will install the entire set of cursors that Andreas Wennborg developed. The "Cursors: Lunatic" script will install the entire set of cursors that Lunatic E'Sex developed. The "Cursors: John Doe" script will install the entire set of cursors that John Doe developed. (For more information on all of these cursors, see the "Cool Cursor Contest" article elsewhere in this issue.) Note that you can use the Installer's Remove button to remove any of the items that have already been installed. So, in case you don't like a particular set of cursors (perhaps they take up too much room on your hard drive), you can easily remove the cursors simply by using the Installer on your GS+ Disk.

The Control Panel

After you have used the Installer on your GS+ Disk to install the Cool Cursor Control Panel (affectionately known as C.C.C.P.—perhaps this is an outdated term now that the Soviet Union has been discontinued . . . perhaps I should change the name so it fits the O.P.E.C. or N.A.T.O. abbreviations), you can select Cool Cursor from the list of control panels in the Control Panels NDA. The most prominent thing you will see is a list of all the various cursors that will animate when your computer is busy. Simply select a cursor from the list and then click on the Wait Cursor button to see what the cursor looks like. If the

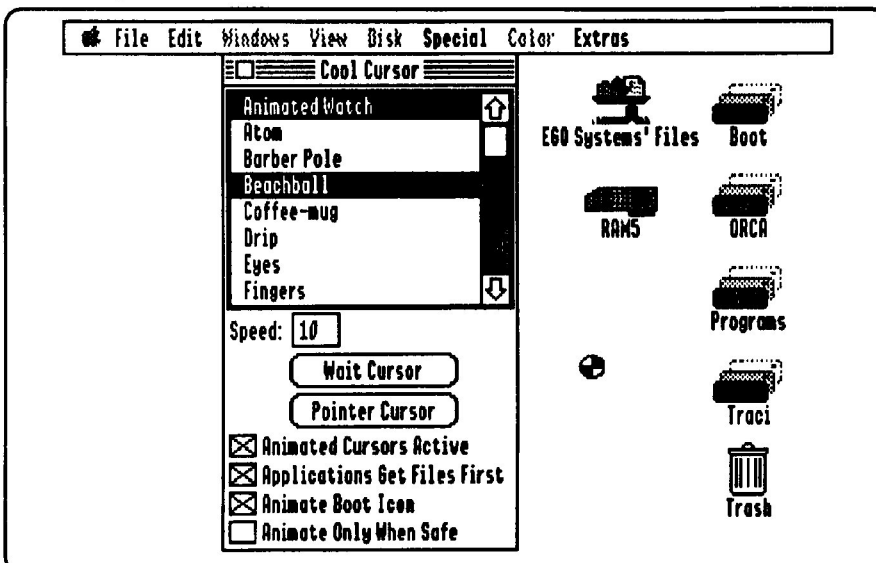
animation you see is too fast or too slow for your liking, you can choose a new speed by simply typing it into the LineEdit speed field. The speed is based on 1/60 of a second, so if you wanted the cursor to change every second, you'd use 60 as a speed—if you wanted the cursor to change twice every second, you'd use 30 as a speed. If you get tired of watching the cursor, you can click on the Pointer Cursor button to return the cursor to its natural arrow cursor state.

You can select multiple cursors from the cursor list by shift-clicking (to select ranges) or Command-clicking (to select items outside of a range) on cursors. If you've selected multiple cursors, a different wait cursor animation will be chosen randomly from your selection every time you start a new application. If an application switches graphics modes, you'll also get a different cursor animation every time the graphic mode is switched.

There are four check box controls that allow you to customize exactly how Cool Cursor works. If (for some silly reason) you don't want an animated cursor, you can uncheck the Animated Cursors Active check box. No cursor animations will ever take place with this box unchecked.

The next check box control in the Cool Cursor control panel window is the Applications Get Files First check box. This check box controls what happens when Cool Cursor document files are opened from the Finder. When the Applications Get Files First check box is not checked and you open a Cool Cursor document from the Finder, Cool Cursor will load in the cursor animation and display it until the mouse is clicked or a key is pressed. When the Applications Get Files First check box is checked and you open a Cool Cursor document from the Finder, Cool Cursor will let an application (like the Anna Matrix application, which is described elsewhere in this issue) open the file instead. If no application can open the file, Cool Cursor will load in the cursor animation and display it. Cool Cursor cannot display the animation, however, if the Animated Cursors Active check box is unchecked. Also, the animation will not take place if the Animate Only When Safe check box is checked. For the reason why, see the description of the "Animate Only When Safe" option, below.

The next check box control in the Cool Cursor control panel window is the



Animate Boot Icon check box. The Animate Boot Icon check box controls what happens with the Cool Cursor icon when you boot your computer. With the Animate Boot Icon check box checked, the Cool Cursor icon will animate briefly during the boot process. With the Animate Boot Icon check box unchecked, the Cool Cursor icon will be displayed during the boot process, but no animation will take place.

Cool Cursor attempts to animate a wait cursor as often as possible, but when the system is busy (like inside of a New Desk Accessory) then it is simply not "safe" to change the cursor to a new animation frame. Version 1.0 always animated the cursor only when the system was safe. With version 2.0, you now have the option to animate only when the system is safe, and also to animate when the system is busy, but only under certain circumstances. Whenever the cursor is changed into a wait cursor, the system busy level is noted, and when the system busy level is at the same level that the wait cursor change took place then it is assumed that the system is free to change to the next frame, even though the system is indeed busy. This sounds a bit complicated, and it is, but suffice it to say, that version 2.0 can animate the cursor at times that version 1.0 couldn't, making more consistent animations. Sometimes, however, the system really won't be free for a cursor change, and Cool Cursor will change the frame anyway. When this happens, you will see some "cursor droppings" left on the

screen. The final check box control in the Cool Cursor control panel window is the Animate Only When Safe check box. With the Animate Only When Safe check box checked, Cool Cursor will change cursor frames only when the system is completely free. With the Animate Only When Safe check box unchecked, Cool Cursor will attempt to change cursor frames even when the system is busy.

Cool Cursor ships with the Animate Only When Safe option turned on by default. I encourage you to turn the check box off since I have found that it is very rare for Cool Cursor to mess up, and even if "cursor droppings" are left on the screen, it's fairly easy to get rid of them—just move a window on top of the cluttered area and when that portion of the screen is redrawn, it will be drawn correctly and the droppings will disappear. (Once, and only once [I can't reproduce it], I was shrinking a bunch of files with GS-ShrinkIt and I started getting cursor droppings. I made the best of the situation, though, and started playing games with the cursor trying to mess up as much of the screen as possible, and to see if I could draw pretty pictures, too.) We have tested Cool Cursor extensively with the Animate Only When Safe option turned off and have not run into any problems more serious than cursor droppings being left on the screen. In fact, all the beta versions of Cool Cursor did not have the Animate Only When Safe option at all—it was always turned off. But, in the interest of being careful, I put the option in there for the final version

"just in case." It's better to be safe than get complaints from unhappy people, eh?

Another thing to note is that you *must* have the Animate Only When Safe check box unchecked in order for Cool Cursor to animate a cursor when you open it from the Finder. This is because the Finder tells Cool Cursor to animate the cursor with a Toolbox call, and once the Toolbox is entered, the system becomes busy. You will, however, get to see the first frame of the animation.

The Cursors

One of the neatest things about Cool Cursor is its ability to use new cursor animations. (In other words, you can make and use *your own* cool cursors!) Previously, you had to design your new cursors by hand using a resource editor like Genesys, or you had to tediously generate some Rez code to make your cursors. I really don't know how I (or anyone else for that matter) managed to come up with the outstanding quality cursors for the first version of Cool Cursor. Now you can use the Anna Matrix program to effortlessly design new animated cursors. For more information on Anna Matrix, see the "Anna Matrix" article elsewhere in this issue.

Need I Say More?

That's basically all there is to using Cool Cursor. Simple, yet elegant. If you find a problem with Cool Cursor, please fill out the problem report form on your GS+ Disk and send it in. **GS+**

Cool Cursor Contest

By Steven W. Disbrow

It's been a while since we've had a contest—the main reason being that the last contest we ran never had a winner. When Joe wrote Cool Cursor, this really great contest was staring us right in the face, but it was only designed for the elite few who had access to a resource editor (Genesys), resource compiler (REZ) or other resource creation utility (Design Master). As a result, only *three* people submitted cursors for the contest! But now that we have Anna Matrix, anyone can design their own Cool Cursors!

But that still leaves us with three people that *did* enter the last contest. How do we reward them and still have another (and hopefully more popular) contest? Well, the three people who already submitted cursors will automatically get a one-issue extension on their subscription to GS+ Magazine and their cursors will be entered into the continuing contest to win the rest

of the fabulous prizes. The three people who submitted cursors are Lunatic E'Sex of Palo Alto, California, Andreas Wennborg of Göteborg, Sweden, and . . . another fellow whose name became lost when we moved to our current location. (For now, we'll call you "John Doe." If you know who you are, let us know and we'll print your name in the next issue.) Their cursors are on the GS+ Disk so you can see the competition you're up against.

So, here's the deal: take a look at the cursors we've given you on disk, and then come up with your own Cool Cursor. Draw it, test it, and then send it in to us. If your cursor is the *coolest* we'll publish it in a future issue of GS+ Magazine, extend your subscription for three issues and give you a free GS+ T-Shirt! If your cursor is second coolest, we'll extend your subscription two issues and give you a GS+ T-Shirt. If your cursor is third

coolest, we'll extend your subscription for one issue and give you a GS+ T-Shirt. Of course, there are a few rules:

- 1) You *must* include both 640-mode and 320-mode versions of your cursor.
- 2) Include your T-Shirt size, and a phone number or e-mail address that we can contact you at.
- 3) All entries become the property of EGO Systems (however, we will give you credit whenever we use your cursor.)
- 4) Pack your entry with GS-ShrinkIt and send it to one of the electronic mailboxes shown on the magazine's title page or send your entries on 3.5-inch disk to:

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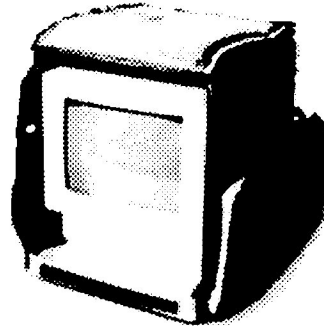
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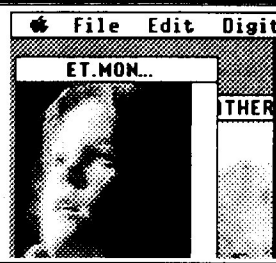
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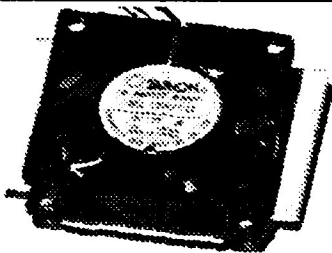
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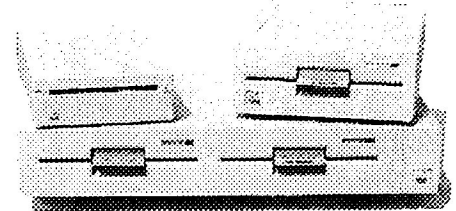
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Anna Matrix

By Josef W. Wankerl

The original Cool Cursor, while a greatly-loved product, suffered because you had to be a resource wizard if you wanted to create your own custom cursor animations for Cool Cursor. Anna Matrix is an application that allows you to create your own wait cursor animations for Cool Cursor and save them as Cool Cursor documents without any resource hassle. You can use Anna Matrix to create your animations for both the 640 and 320 graphic modes.

Installing Anna Matrix

To use Anna Matrix, use the Installer on your backup GS+ Disk to install it on one of your own disks. If you need more help, refer to "How to Use Your GS+ Disk" elsewhere in this issue. (You can also run Anna Matrix directly from your backup GS+ Disk if you want.) After you have Anna Matrix installed, simply double-click on the AnnaMatrix icon to launch it. Anna Matrix requires System 6.

Using Anna Matrix

If you've ever used an icon editor (or Genesys' cursor editor) then you'll find Anna Matrix pretty easy to learn. Be absolutely certain to read the "DON'T SKIP THIS SECTION!" section for some differences between cursors and icons that can easily confuse you. So, without further adieu, let's dive right into creating a new custom wait cursor animation for Cool Cursor!

The first thing you want to do is to select the New menu item from the File menu to create a new animation editor window. Figure 1 shows what an animation editor window looks like. The animation list will originally be empty, so you'll want to add a new cursor frame to the list. To add a new frame, click on the Add button. The Add button adds a new cursor frame to the list *after* the currently selected frame. (If there is no selected frame because the list is empty, the cursor is added as the first item in the animation list.) You can also use the Delete button to permanently remove the selected cursor from the animation list. The remaining two buttons, Up and Down, let you change the order of the frames in the animation list. The Up button moves the selected cursor up one position in the animation list while the Down button moves the selected cursor down one position in the animation list.

The Add button, by default, adds a standard "watch" cursor. Since it's boring

to look at a watch cursor, you'll want to change it into the next masterpiece of the universe. To do this, you can click on the Edit button, or you can double-click on the cursor in the list, to bring up a cursor frame editing window. Figure 2 shows what a cursor frame editing window looks like.

A cursor frame editing window has eight sections: the cursor save button, the current color indicator, the color selector, the cursor image fat bits editor, the cursor mask fat bits editor, the cursor resize control, the cursor size indicator, and the cursor samples display.

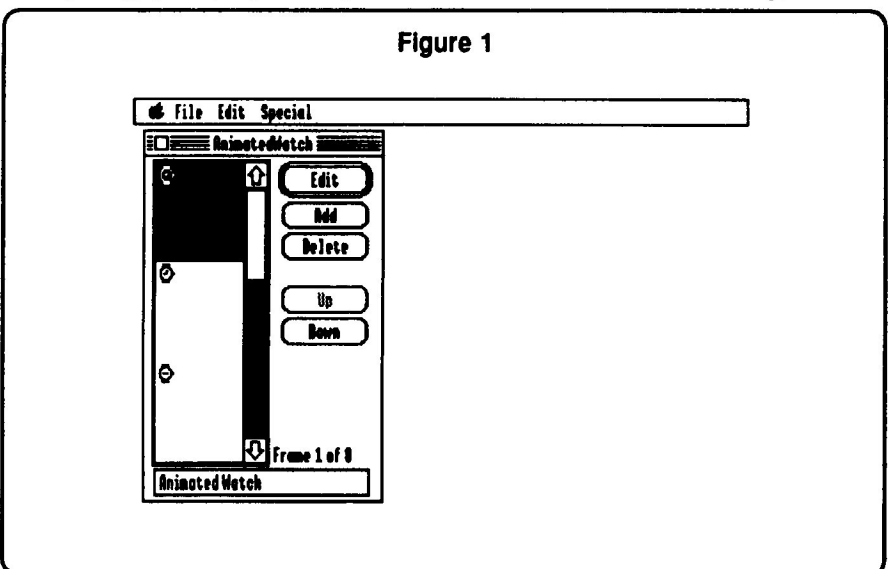
Now, before you get too confused about the fat bits display, let's go into some detail about how a cursor is actually drawn on the screen

DON'T SKIP THIS SECTION!

A cursor is defined by its image and mask data. It is the combination of these two data structures that give a cursor its appearance on the screen. If you've used an icon editor in the past, the relationship between the data and the mask were fairly logical—every place there was a black mask bit, the corresponding data bit shown through, and every place there was a white mask bit, the desktop background shown through. Cursors, however, are done a bit differently. The mask for a cursor doesn't specify what shows through and what doesn't; instead, the mask gives a base for color to be applied. Imagine that the mask is a coat of primer paint and then the image is the final coat of paint. If you don't apply the primer first, then the final color you get will not be the color you apply. So, if you always want

a pixel in your cursor to be black no matter what, you apply the primer (a white mask pixel) and then you apply the paint (a white image pixel). This combination will *always* produce a black resultant pixel. This is because whatever you put on a primer pixel turns into its *opposite* color (it's magic paint, ok?) Taking this into consideration, if you wanted a green pixel, you'd put the opposite of green on the white mask pixel. Sounds a bit strange, doesn't it? If you like, you can leave off the primer to create some special effects (but they usually only look good on completely black or white backgrounds—this is why primer is so important).

Going back to the differences between icons and cursors for a more technical in-depth discussion, icon masks specify which colors show through the icon. This is because the mask was ANDed with the image (i.e. everywhere there was a black mask bit, the image bit was let through, and everywhere there was a white mask bit, no image bit was let through), and the result was then displayed on the screen. (Actually it's a little bit more complicated than that, but you get the general picture.) When a cursor is displayed on the screen, two operations take place: first the mask (primer) is ORed with the screen (i.e. everywhere there is a white mask bit, the screen turned white, and everywhere there was a black mask bit, the screen was left alone) and then the image data (magic paint) is XORed (exclusively ORed) with the screen. The exclusive OR operation is a bit difficult to describe to a non-programmer person, but here goes my best interpretation for those of you who really don't care to know: Basically, the XOR



operation toggles the state of the pixel on the screen—if it was previously off, it will turn on and vice versa. So, everywhere there is a white pixel on the screen and a white image bit, the screen turns black. Everywhere there is a black pixel on the screen and a white image bit, the screen turns white. Otherwise, things are pretty much left alone. To get a handle for what the exclusive OR operation does, generate an all black mask and then start drawing in the image. When colors are applied to the cursor, things get a little bit more tricky, so you'll most likely want to use a mask. If you wanted your cursor to be a green box, you'd generate a mask which turned the screen white for where you want the box, and then you'd generate an image which turned the white screen pixels green. For this reason, when you draw with a green color (or a black or white color for that matter—the exclusive OR operation is the one that does all the magic because it "flips" the state of the resulting pixel) it will not show up as green if you have a white mask, but it will instead show up as its "opposite" color. You have to use green's opposite color (which is purple for 640 mode) to generate the green box. Once you understand what's going on to draw a cursor (which takes a bit of playing around) then you can draw cursors fairly easily without getting too confused.

Editing Cursors

Before you start editing your cursor, you'll want to select the color to draw with. To select a color, simply click in the color selector area. You'll see the current color indicator change to display the new color that you have chosen. When you begin editing your cursor, the color shown by the current color indicator will be the color that you will draw with. To draw, move the cursor over the image fat bits editor area (you will see the cursor

change into a pencil, which means Anna Matrix is ready to draw) and then press the mouse button. The fat pixel that your pencil cursor is over will then change to the color shown in the current color indicator. You can now drag the mouse over any adjacent pixels and they will also change to the current color. When you are drawing in the mask fat bits area, the current color indicator has no meaning since the mask is only allowed to be black or white. When you press the mouse button in the mask fat bits area, the pixel color that your pencil cursor is over, will change to its opposite color. You can then drag the mouse over the adjacent pixels and they will change to the color that you first started drawing in.

You'll probably want to resize the cursor frame to a new size as well. To do this, you drag the cursor resize control which is at the lower right hand corner of the image fat bits editor. When you drag, you'll see an outline of the new fat bits editor rectangle size. Simply drag the rectangle to a new size and then release the mouse button. The fat bits editor will not always resize when you do this, however. This is due to the fact that you can only resize cursors in certain increments (every four pixels in 320 mode, every eight pixels in 640 mode).

When you finally have your cursor the way you want it, you can click on the Save button to apply the changes you've made to the cursor in the cursor frame editing window.

Editing Tools

In addition to the pencil drawing tool, you also have a few other tools at your disposal. Figure 3 shows what each of the other tools look like.

When you are over the image or mask fat bits editor, you can hold down the shift key and your cursor will turn into a hand. The hand cursor lets you reposition the cursor image within the fat bits editor. So, for example, if you wanted to move the cursor image down and to the right one pixel within the editor, you'd move over a fat bits editor, hold down the shift key to get the hand cursor, then drag the cursor image down and to the right one pixel, and finally release the mouse button.

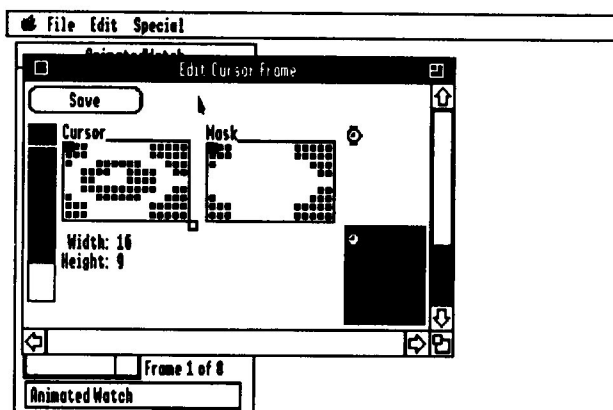
Two additional tools are available, but only when over the image fat bits editor. You can hold down the Command key and your cursor will turn into a bow-tie. The bow-tie cursor lets you change all the pixels of one color into the current color. So, for example, if you wanted to change all the green pixels into purple pixels, change the current color to purple, move over the image fat bits editor, hold down the Command key to get the bow-tie cursor, then click on a green pixel. (The bow-tie cursor is also used in Dave Lyon's DlcEd icon editor program just so you don't get the idea that I thought that a bow-tie naturally leads to color changing . . .)

You can hold down the option key while your cursor is over the image fat bits editor and your cursor will turn into a dropper. The dropper cursor lets you select the current color from the fat bits editor. So, for example, if your current color is green and you would like to change it to purple you can move over the image fat bits editor, hold down the option key to get the dropper cursor, then click on a purple pixel. (The dropper cursor is used in many IIGS and Macintosh applications, and I believe the idea is that you use the dropper to "suck up" the color of the underlying pixel.)

Different Modes

A handy tip to know is that the first thing you should do when creating a new animation is to work in 320 mode. The reason for this is simple: it's easier to translate a 320-mode cursor to a 640-mode cursor than to translate a 640-mode cursor to 320 mode. (To translate a cursor to a new graphic mode, simply copy the cursor, switch to the new graphic mode, then *hold down the option key* and select the Paste menu item.) A 320-mode cursor uses 4 bits per pixel while a 640-mode cursor only uses 2. When you go from 320 to 640, one pixel simply turns into two. If you go from 640 to 320 mode, one pixel turns into . . . well . . . one half—more like two pixels merge into one. This usually generates some very ugly results.

Figure 2



The Menu Bar

So now that you have an idea of how to use the program, you'll probably want a reference section for all of the menu items. The Anna Matrix menu bar is a fairly typical menu bar, so let's go over each menu, one at a time.

The Apple Menu

The first item in the Apple menu is the About Anna Matrix item. Selecting this item presents you with a window telling you the version of Anna Matrix, as well as some information about how much memory you have available. To get rid of this window, click the mouse in its close box or select the Close item from the File menu.

Below the About Anna Matrix item will be a list of your installed new desk accessories. To use one, simply pick it from the menu and then use it as you normally would.

The File Menu

The first item in the File menu is the New menu item. Choosing this item will create a new empty animation editor window. You can then name the animation, add the first frame, and then start editing your new animation.

The second item in the File menu is the Open menu item. Choosing this item will present you with a Standard File dialog that will allow you to select a Cool Cursor document to open. The document will open into an animation editor window. You can then start editing the animation.

The third item in the File menu is the Close item. It allows you to close the topmost window. If the window is a cursor frame editing window that has not yet been saved, you will be asked if you want to save the cursor frame before closing the edit window. If you answer "Save," the cursor frame will be updated in its corresponding animation editor window and the cursor frame editing window will close. If you answer "Don't Save," the cursor frame editing window will be closed and any changes will be lost. If you answer "Cancel," the operation will be cancelled and the cursor frame editing window will not be closed.

If the window is an animation editor window, all cursor frame editing windows associated with the animation editor window are closed first. Then, if the cursor animation has changed and not yet been saved, you will be asked if you want to save the animation before closing the animation editor window. If you answer "Save," the animation will be saved as a

Cool Cursor document. If you created the animation with the New menu item and have not saved the animation, you will be presented with a Standard File dialog box that will allow you to save the document with a new name (as described under the Save As item below). If you answer "Don't Save," the animation editor window will be closed and any changes will be lost. If you answer "Cancel," the operation will be cancelled and the animation editor window will not be closed.

The fourth item, the Save item, allows you to save the contents of the current animation editor window. If the animation has not already been saved, you will be presented with a Standard File dialog box that will allow you to save the animation under a new name, just as if you had selected the Save As item (described below). If the animation has already been saved, it will be saved to the same file name as before.

The fifth item in the File menu, the Save As item, allows you to save the contents of the current animation editor window to a new file name. When you pick this item, you will be presented with a Standard File dialog box that will allow you to specify a new file name to save the animation in. The animation will then be saved as a Cool Cursor document file.

The last item in the File menu, the Quit item, lets you quit from Anna Matrix and return to the previous application. If you have any open edit windows that have not been saved, you will be asked if you want to save them.

The Edit Menu

The first item in the Edit menu, the Undo item, lets you undo the last change that you made to an edit window. Each edit

window maintains its own undo information. Once you have undone a change, you can redo the change by simply selecting the Undo menu item again. If you decide that your change was better done than undone, you can hit Undo again and the change will go back.

The remaining items in the Edit menu only work for animation editor windows (not cursor frame editing windows). Note that all the items in the Edit menu are also available for use with New Desk Accessories.

The second item in the Edit menu, the Cut item, takes the currently selected cursor frame and places it in the clipboard. The cursor frame is then removed from the animation list.

The third item in the Edit menu, the Copy item, takes the currently selected cursor frame and places it in the clipboard. The cursor frame remains in the animation list.

The fourth item in the Edit menu, the Paste item, takes the cursor from the clipboard and inserts it into the animation list after the currently selected cursor frame. If you have cut or copied a cursor to the clipboard and the Paste item is not available then it means that the graphic mode the cursor was made for is not the mode you are currently in. If you wish to paste the cursor to the current mode, hold down the option key and then select the Paste item from the Edit menu. The cursor's hot spot and mode will be changed to the current graphic mode.

The fifth item in the Edit menu, the Clear item, deletes the currently selected cursor frame from the animation list. The Clear menu item works identically to the Delete button in an animation editor window.

Figure 3



Pencil

The Pencil cursor is used to draw in the cursor image and cursor mask editing areas. The Pencil cursor is the default cursor when the mouse is positioned over an editing area. To draw, position the cursor over an editing area and either click or drag the mouse.



Hand

The Hand cursor is used to move the cursor and mask images around in the editing areas. To get the Hand cursor, hold down the shift key and position the mouse over an editing area. To shift the cursor images, drag the mouse.



Bow-Tie

The Bow-Tie cursor is used to change all the cursor image pixels of one color to the current drawing color. To get the Bow-Tie cursor, hold down the Command key and position the mouse over the cursor image editing area. To change pixel colors, position the cursor over a pixel of the color you want to change and click the mouse.



Dropper

The Dropper cursor is used to change the current drawing color to the color of a pixel in the cursor image editing area. To get the Dropper cursor, hold down the option key and position the mouse over the cursor image editing area. To change the current drawing color, position the cursor over a pixel of the color you want to draw with and click the mouse.

The Special Menu

The first item in the Special menu, the Test Animated Cursor item, causes the current cursor animation to be displayed. The animation continues until a key is pressed or the mouse is clicked.

The second item in the Special menu, the Frame Is Smooth item, shows the state of the smooth animation flag for the selected cursor frame. If the Frame Is Smooth item is checked, then the selected cursor is animated by simply drawing it on top of the old cursor frame. In order for this to work properly, the size, hot spot, and mask data for the selected cursor must be the same as the previous cursor. Remember that the previous cursor for the first cursor in an animation is the last cursor in the animation. (And in a one frame animation, the first cursor is its own previous cursor so the Frame Is Smooth item can *always* be checked, although it doesn't have to be.) If the Frame Is Smooth item is not checked, then the selected cursor is animated by first erasing the old cursor and then drawing the new cursor.

The third item in the Special menu, the Calculate Smooth item, goes through the entire animation list and calculates the Frame Is Smooth setting for each cursor frame. If the size, hot spot, and mask data of a cursor is the same as its previous

cursor then the Frame Is Smooth flag is set, otherwise it is cleared. Note, though, that sometimes this does not always give you the results you want, due to the mask data. For example, consider a cursor animation which has an all-black mask for every frame. In this case, the Calculate Smooth menu item will set the Frame Is Smooth flag for every frame, even though the animation should *not* be smooth at all. The reason for this is that no "primer" color is being applied for the next frame of the animation, so one frame will be drawn on top of the other.

The fourth item in the Special menu, the Set Hot Spot item, changes the current cursor to a "cross" cursor. You can then position it over either the cursor image, or the cursor mask and click the mouse to set a new hot spot for the cursor frame. The hot spot aligns a pixel in the cursor image with the mouse location.

The fifth item in the Special menu, the Copy Image To Mask item, copies the cursor image to the cursor mask. Every black pixel in the cursor image is set to a black pixel in the mask, and all non-black pixels in the cursor image are set to a white pixel in the mask.

The sixth item in the Special menu, the Fill Mask item, sets every pixel in the mask to black.

The seventh item in the Special menu, the Clear Mask item, sets every pixel in the mask to white.

The eighth item in the Special menu, the Flip Horizontally item, flips the cursor image and mask horizontally. This means that the pixels that were on the right side of the cursor appear on the left and vice versa.

The ninth item in the Special menu, the Flip Vertically item, flips the cursor image and mask vertically. This means that the pixels that were on the top of the cursor appear on the bottom and vice versa.

The last item in the Special menu, the Switch Display Modes item, switches the display mode that Anna Matrix uses to edit cursors. Before the graphic mode is switched, all New Desk Accessories and cursor editing windows are closed.

Anna Matrix was a fairly large undertaking for me for such a short schedule, but I'm fairly confident that it's bug-free (or at least free of the monster ones). If you have any problems with Anna Matrix, please be sure to fill out and send in a Problem Form so that I can fix them. **GS+**

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Sep-Oct 1989 (V1.N1)

- System Software 5.0 Compatibility Chart
- NoDOS - A file utility New Desk Accessory (ORCA/C)
- Graphics Galore - Drawing "how-to" with pictures on disk
- Reviews: Arkanoid II (new custom levels on disk), Crystal Quest, ORCA/C, Rocket Ranger, Silphed, Test Drive II, TransWarp GS, Turbo Mouse ADB

May-Jun 1990 (V1.N5)

- AppleFest Report
- Beginner's Guide to System Disks - Part 2
- GS/OS prefixes - Prefixer CDev (ORCA/Pascal)
- Brush with Greatness - How your IIGS makes colors
- Reviews: CMS 45MB Removable Hard Drive, S&S-RAMCard, DataLink Express modem, Visionary GS digitizer, GraphicWriter III, ZapLink, McGee, Math Blaster Plus IIGS, The New Talking Stickybear Alphabet, ZipGS

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- Brush With Greatness - Making the most of your digitizer
- Interview with Brian Greenstone (programmer of Xenocide)
- PING - Video table tennis program (Merlin assembly)
- Shuffle - An INIT that shuffles desktop windows (ORCA/M)
- Battery Brain - A CDev that saves BRAM parms (ORCA/C)
- Reviews: GS Sauce memory card, Salvation—Wings, World GeoGraph, Orange Cherry Talking Schoolhouse series, QIX, Solitaire Royale, InnerExpress

Jan-Feb 1991 (V2.N3)

- AppleFest/Long Beach '90 & Apple II Achievement Awards
- Interview with Jim Carson of Vitesse, Inc.
- Introduction to System Software v5.0.4
- RAM Namer - A CDev that allows you to rename RAM disks (ORCA/C)
- GS+ program updates: Battery Brain v1.1, EGOed v1.32c (written in ORCA/C), Teach Translator for GraphicWriter III v1.1
- Reviews: ZipGSX, LightningScan, Design Your Own Home, Print Shop Companion IIGS, Your IIGS Guide, Dragon Wars, 2088: The Cryllan Mission - Second Scenario, Space Ace, Sinbad & the Throne of the Falcon

Sep-Oct 1991 (V3.N1)

- Protecting Your Investment - A Guide to Surge Protection
- A Conversation with Roger Wagner - Part 2
- Working with the Toolbox - Part 4: QuickDraw II
- FGS - A desktop program that generates Fractals (ORCA/C)
- GS+ program updates: EGOed v1.36, Autopilot v1.1, NoDOS v1.6
- Reviews: two 100MB hard drives, Nite Owl Slide-On Battery, ORCA/Integer BASIC, ORCA Talking Tools, Storybook Weaver: World of Adventure, HyperBole, HoverBlade, Shareware: DeskTop Painter, SoundSmith, IIGS Classic: The Bard's Tale IIGS

Jan-Feb 1992 (V3.N3)

- How Printing Works - An article by Matt Deatherage
- Working with the Toolbox - Part 6: The Resource Manager
- Buying & Using Mac Hard Disks
- Cool Cursor - A Control Panel that replaces the old watch cursor with an animation (ORCA/M, ORCA/C)
- Replicator - A desktop-based disk duplication program that works with any GS/OS device and file system (ORCA/Pascal, ORCA/C, ORCA/M)
- GS+ program update: EGOed v1.4
- Reviews: MacLand 105MB Hard Drive, Tulin 120MD Hard Drive, SuperConvert, Signature GS, Learn to Program in C, 4 shareware reviews

Jul-Aug 1992 (V3.N6)

- KansasFest 1992
- Introduction to 3-D Graphics - Part 3: Speeding Things Up (demo program written in ORCA/C)
- Working with the Toolbox - Part 8: The Control Manager
- Understanding FSTs
- Using rBundles in Your Programs
- Quick Folder - A Finder Extension that allows you to open folders from the Finder's Extras menu (ORCA/C). **Requires System 6.**
- Extra Bits - A Control Panel that lets you change the new Battery RAM parameters that System 6 didn't provide a Control Panel for (ORCA/C). **Requires System 6.**
- GS+ program updates: EGOed v1.7 (**requires System 6**), Quick DA v2.0 (**requires System 6**), Replicator v1.3
- Reviews: ZipGS (10MHz CPU/64K Cache), Gate, Space Fox, Utility Launch & Utility Works

Sep-Oct 1992 (V4.N1)

- Apple EXPO East
- Open From Desktop - A Finder Extension that allows you to open any item on your desktop from the Finder's Extras menu (ORCA/C). **Requires System 6.**
- II Notes - A 20-page NDA notepad (ORCA/M). **Requires System 6.**
- Miscellaneous Library - A collection of useful routines to use from any programming language that supports linking to standard libraries (ORCA/M)
- GS+ program updates (**all require System 6**): Autopilot v2.0, Quick DA v2.1, EGOed v1.7.1
- Reviews: ContactsGS, GSymbolix, Kangaroo, ORCA/Debugger, UltraCat, Storybook Weaver: World of Make-Believe

Nov-Dec 1992 (V4.N2)

- Understanding Accelerators
- The Basic IIGS
- Working with the Toolbox - Part 9: The Menu Manager
- Font Reporter - A program that lets you display and print out any font in your system (ORCA/C). **Requires System 6.**
- Miscellaneous Library (updated)
- GS+ program updates: EGOed v1.8 (**requires System 6**), Replicator v1.3.1
- Reviews: AutoArk, 1990 GEM Apple II CD-ROM, IIGS System Transport Case, Out of This World, TrueType Font Collection, Universe Master
- Review updates: Desktop Enhancer v2.0, Pointless v2.0

Jan-Feb 1993 (V4.N3)

- The World at Your Fingertips
- Understanding the Desktop
- Batt Reporter - A program that generates plain English reports from battery RAM configuration files (ORCA/Pascal, ORCA/C). **Requires System 6.**
- Rainbow - A Finder extension that lets you change the colors of your device icons (ORCA/C). **Requires System 6.**
- Miscellaneous Library (updated)
- GS+ program updates (**all require System 6**): Battery Brain v2.0, Open From Desktop v1.0.1, Rebuild Desktop v1.1, EGOed v1.9
- Reviews: CV-Ram Memory Card, StyleWriter printer, ProSel-16, TransProg III v1.1, Ant Wars, Floor Tiles, Quest for the Hoard

Mar-Apr 1993 (V4.N4)

- Beginner's Guide to Finder v6.0
- Working with the Toolbox - Part 10: LineEdit
- LASERbeam - A program that lets you download PostScript files to a PostScript printer (ORCA/Pascal, ORCA/M). **Requires System 6.**
- Font Memories - A control panel that lets you keep your bit-mapped fonts on a disk other than your startup disk (ORCA/C, ORCA/M). **Requires System 6.**
- EGOed lite - a smaller, faster version of the EGOed New Desk Accessory (ORCA/C). **Requires System 6.**
- Miscellaneous Library (updated)
- GS+ program updates (**both require System 6**): Rainbow v1.0.1, NoDOS v1.8
- Reviews: Salvation—Deliverance, DreamGraphix, The Manager, The Passport House Letter, The Lost Tribe, DuelTris

Issues not listed are sold out. Prices for back issues are: magazine only - \$4.50, disk only - \$6.50, magazine + disk - \$9.50. All prices include postage and handling (orders will be sent First-Class to the U.S., Air Mail to Canada and Mexico, and surface to all other countries. For Air Mail to all other countries, add an additional \$3.50 per issue). Tennessee residents add 7.75% sales tax. Mail back issue requests to: GS+ Back Issues, c/o EGO Systems, PO Box 15366, Chattanooga, TN, 37415-0366; or call 1-800-662-3634, Monday through Friday between 9 a.m. and 6 p.m. Eastern Time, to order or verify availability. Please include your phone number on all orders placed by mail (in case we are sold out of an issue)! For MasterCard or VISA orders placed by mail, also include your card number, expiration date, and signature.

Rumors, Wishes & Blatant Lies

By Prof. G. S. Gumby

Back To Boston

"Cheers" may have called it quits, but Event Specialists has announced that they will be holding the second annual Apple EXPO East in Boston this October 1-3. Once again, they are projecting very large crowds, and we hope they are right! We'll be there again this year, trying to get rid of the T-Shirts that we couldn't get rid of last year. At this point, no information is available about preferred hotels or airlines, but you can always contact Event Specialists for up to the minute information:

Event Specialists
17 Lilac Road
Sharon, MA 02067
(617) 784-4531

Nah, They Wouldn't Do That!

So, Apple has discontinued the IIGS. I think we all know that by now. But did you also know that there is concern in the Macintosh community that Apple might be replacing the current breed of 680x0-based Macintoshes with their new "Power PC?" Of course, the Power PC will be able to run old Macintosh software, but Apple will be encouraging developers to create software that will take full advantage of the Power PC, which older Macintoshes probably won't be able to run. Sound familiar? It should. This is pretty much what happened to IIe owners when the IIGS came out.

Oh, No! Not Again!

Of course, the big news this issue is that *A+inCider* is ceasing publication. This makes me very sad, because they never really gave us a decent plug. Oh well. Anyway, *next* issue's big news will be that (by the time you read this) yet another long-lived Apple II publication will be gone. Sorry, but I can't tell you which one until next issue.

SSII

Speaking of *inCider*, their old "Shareware Solutions" columnist and long-time Apple II enthusiast, Joe Kohn is set to start his own publication, *Shareware Solutions II*. *Shareware Solutions II* will focus on, you guessed it, shareware for the Apple II. For more complete information, see "What's New" elsewhere in this issue.

Postponed

As I reported last issue, there won't be an Apple Central EXPO in Kansas City to go along with this year's KansasFest. However, I have learned that there are plans to have an EXPO *next* year. This is

ironic, because there might not be a KansasFest next year to go along with it!

New Apple Stuff

As usual, Apple has released a whole new slew of products, some of which we might be able to use with the IIGS. (Which is why we are telling you about them here and not in "What's New," we aren't sure if they can be used with the IIGS, and they were released so recently that we didn't have time to find out.) Among the usual boring stuff (a couple of new PowerBooks, *yawn*), Apple also released several new printers. The most interesting of which are the LaserWriter Pro 800 and 810. While these babies can print up to 20 pages per minute, the real story is that they do it with a resolution of 800 dots per inch! (Compare that to the 300 dots per inch that this page was printed at.) You can bet your bottom dollar that if this puppy will work with the IIGS, we'll be trying to get one soon!

The Middle-Manager

One of our more reliable finks tells us that Seven Hills recently shelved an idea for a demo of The Manager (see review in *GS+V4.N4*). The reason? Well, this demo, called "The Middle-Manager," was just a bit too much like its namesake. You see, after you installed it, it would pick the applications you would work with! The only way to get rid of it was to either "Promote" it (i.e. buy a real copy of The Manager), or "Retire" it (i.e. put a bullet through your hard drive). Thank goodness this little monster never escaped the labs!

To Boldly Go, etc., etc.

Remember the rumor we published a while back about a company that was planning to convert its collection of Star Trek sounds to the IIGS? Well, the project is still alive and might even be completed and shipping within the next couple of months. Keep your ears peeled for more information as it becomes available!

Bad News

I hate to be the one to break this news, but the Avatar project (the project to build a IIGS clone) is on hold indefinitely. The reason? Sources tell us that it's because the Avatar's one and only financial backer withdrew his support to pursue other more, how shall I put this... *lively* projects. And, to make matters worse, if another backer doesn't come forward, the project probably won't be restarted for quite some time.

However, at least *one* aspect of the Avatar may survive. Another source tells us that before the project was put on hold, the Avatar team completed their own version of the Apple IIGS tools. All they need now is a piece of 65816-based hardware to run them on.

Comdex '93

Late in May, a group of us made the trek down to Atlanta Georgia to attend this year's Comdex computer show. We arrived expecting to see row after row of IBM PC stuff, so you can imagine our surprise when we saw that almost every booth was full of Apple II hardware and software! We were so excited that we checked into a hotel and spent the entire week at the show. Bill Gates even gave a speech on Microsoft's next IIGS operating system, ProSel NT, that blew everyone away! (It should be much nicer than GS/OS/2.) Boy! We sure had some fun down there!

Ask Mr. 8-Ball

It's that time again! My deadline looms close, so I have to turn to my *most* reliable source, Mr. 8-Ball!

Gumby: Believe it or not Mr. 8-Ball, Joe Kohn (mentioned above), was *disappointed* that he was not "libeled or slandered" by you in our last issue! Is this a sign of the dreaded "Dammit, I used to work for *A+inCider!*" syndrome?

8-Ball: Yes. Definitely.

Gumby: The legendary TurboRez video board was on display again at the Apple EXPO West. I've also heard that another company is working on a graphics card for the IIGS. Among other things, this card would give us access to VGA monitors, and, most importantly, *square pixels!* Any truth to this rumor?

8-Ball: Outlook good.

Gumby: You used to be a famous sports personality. Isn't your first name "Magic?"

8-Ball: It is decidedly so.

Got a rumor, wish or blatant lie about the IIGS? Got any about Joe Kohn? Send them to:

GS+ Rumors
P. O. Box 15366
Chattanooga, TN 37415-0366 GS+

How to Use Your GS+ Disk

The first thing you need to do is **make a backup copy of your GS+ Disk with the Finder!!!** Do *not* make your backup on your hard disk! Instead, copy the GS+ Disk to another 3.5-inch disk (this is *very* important). Next, put the original in a safe place. If you are having a problem making a backup copy, give us a call at (615) 843-3988. If your disk is damaged, let us know, and we'll get a new one to you as soon as possible.

Installing The Software

To install the software on this issue's GS+ Disk, start up your computer using System Software v6.0 or later. (Note that all of the programs on this issue's disk require System 6!) Next, place your backup copy of the GS+ Disk in a drive. (You *did* make a backup didn't you?) Now run the Installer program that is on your backup GS+ Disk. (From the Finder, just double-click on the Installer icon.) *It is extremely important that you use the Installer that is on your backup GS+ Disk! Do not use any other copy of the Installer!*

When the Installer window appears, select the item you want to install from the list on the left-hand side of the window, and the disk you want to install it on from the list on the right-hand side of the window. Then click on the Install button. For more information on using the Installer, refer to your IIGS owner's manual.

Before you attempt to use your backup GS+ Disk, please take a few minutes to read the **a.Read.Me** file for any last minute corrections or information. If you do not already have our EGOed (or EGOed lite) text editor installed in your system, you can use the Teach application supplied with System Software v6.0 to read this file.

Installing Cool Cursor

The following is a detailed example of how to install the Cool Cursor control panel. The only other program on this issue's disk, Anna Matrix, can be run directly from your backup GS+ Disk.

- Start up your IIGS with System Software v6.0 or later—the version of Cool Cursor that is on this GS+ Disk requires System 6! (Your GS+ Disk is *not* a startup disk, so don't try starting your computer with it.)
- Insert your backup copy of the GS+ Disk into a drive and run the Installer program that is on your backup GS+

Disk. It is *very, very* important that you run the Installer that is on your backup GS+ Disk and *not* some other copy of the Installer.

- When the Installer finishes loading, click on the Disk button on the right-hand side of the Installer window until your startup disk appears. (If you only have one 3.5-inch disk drive, you will have to remove the backup GS+ Disk from the drive and replace it with your startup disk. You should also refer to the "Making Room" section below for hints on how to free up room on your boot disk.)

Please Remember . . .

The contents of the GS+ Disk are not public domain or shareware! We depend on your honesty to stay in business. Please do not give away copies of the GS+ Disk or any of the programs on it. If you do, we will not be able to stay in business. It really is that simple!

- On the left-hand side of the Installer window, you will see a list of the items on the backup GS+ Disk. One of the items in this list should be "Cool Cursor Small." (If Cool Cursor Small is *not* in this list, quit the Installer and begin again. Be sure that you are running the copy of the Installer that is on your backup GS+ Disk!) Once you see the Cool Cursor Small item, click the mouse on it so that it is highlighted.
- Click the mouse on the Install button in the middle of the Installer window. The Installer will then install a minimal Cool Cursor system on your startup disk. If you only have one 3.5-inch disk drive, you may have to switch disks several times. Just insert each disk as the Installer asks for it.
- When the Installer finishes, click on the Quit button in the middle of the Installer window. This will restart your IIGS.
- When your IIGS finishes restarting, pull down the Apple menu and select Control Panels. Now scroll through the list of control panels and double-click on the Cool Cursor icon to open Cool Cursor.

(Note that you have to be in a desktop program like the Finder to have access to the Apple menu.)

- When Cool Cursor finishes loading, notice the list of cursors in the Cool Cursor window. Select a cursor from the list to make it your new wait cursor. To see this new cursor in action, click on the Wait Cursor button in the Cool Cursor window. For complete information on using Cool Cursor, see the "Cool Cursor v2.0" article.

Making Room

If you do not have a hard drive, you will have to remove some files from your startup disk to make room for the new desk accessories, control panels, and other system files that come on the GS+ Disk.

Towards that end, we have prepared the following list of "expendable" files that you can "safely" remove from your System Software v6.0 startup disk to free up some space. (We've put quotes around "expendable" and "safely" because almost all of the files in the IIGS System Software have some sort of use! The files listed here are the ones that are the "least" useful for a specified hardware setup.)

Be sure that you *never* delete *any* files from your original System Software boot disk! Always work on a backup copy!

System Software v6.0

If you use the System 6 :Install disk to create a minimal, 800K, System 6 boot disk, that disk will have 26K free when the installation is finished.

It must be noted that *all* of the files on this disk are *very* important and the files that you can *safely* remove depend, for the most part, on your hardware setup. So, please read these instructions carefully before removing *any* files.

The first two files you can delete depend on what you will be doing with your IIGS. If you won't be running AppleSoft BASIC programs, you can remove the file BASIC.System (11K) from the root directory of the disk. If you won't be running ProDOS 8 software, you can remove *:System:P8 (18K).

If you do not care what time it is, you can delete the following file:

*:System:CDevs:Time (11K)

After that, the files that you can safely remove depend on your *hardware setup*.

If you have a ROM 01 IIGS, you may delete the file:

*:System:System.Setup:TS3 (41K)

If you have a ROM 03 IIGS, you may delete the following file:

*:System:System.Setup:TS2 (37K)

If you do *not* have a 5.25-inch drive, you may delete the following 8K file:

*:System:Drivers:AppleDisk5.25

If you do *not* have a printer, you may delete the following file:

*:System:CDevs:Printer (5K)

Finally, if you have deleted all control panels, and you won't be installing any control panels from the GS+ Disk, you can also delete the 19K file:

*:System:Desk.Accs:ControlPanel

Removing some or all of these files should give you ample room (up to 139K on a ROM 01 IIGS and up to 135K on a ROM 03 IIGS) on your startup disk to install Cool Cursor or any of the other system utilities from your backup GS+ Disk.

Having Problems?

If you are having a problem with one of the programs on your GS+ Disk, we want to help! But we can't help if we don't know about it!

If your GS+ Disk is defective, let us know and we will send you a replacement. You can call us at (615) 843-3988 (Monday through Friday between 9 a.m. and 6 p.m. Eastern Time), to request a replacement disk.

If you are having a problem using one of our programs, please fill out the problem form that is on your GS+ Disk and send it to "GS+ Problems" at the address shown below.

If you want to save even *more* space, you might want to consider using Autopilot (from GS+ V4.N1) as a replacement program launcher. With Autopilot installed on the minimal System 6 boot disk, initial free space goes up from 26K to 163K! You can then use Autopilot to autolaunch the Finder from a second 3.5-inch disk drive and still have plenty of room on your boot disk for lots of system extensions. For more information on Autopilot, refer to the "Autopilot v2.0" article in GS+ V4.N1 or give us a call here at GS+ Magazine.

Self-Extracting Archive

We use GS-ShrinkIt v1.1 to compress the source code and related files on the GS+ Disk into a *self-extracting archive*. To extract the files from the archive, simply double-click on the GSP.V4.N5.SEA program on your backup GS+ Disk. **You do not need to have a copy GS-ShrinkIt in order to use any of the programs or other materials on this GS+ Disk!** However, you will gain better control over the files you wish to extract if you have GS-ShrinkIt v1.1. If you do not have GS-ShrinkIt v1.1 and you would like a

IMPORTANT!

**Use scissors or a knife to open disk bag!
Do not attempt to pull bag away from magazine!**

copy, check with your local user group or give us a call here at *GS+* Magazine and we will try and help you locate a copy.

What's On The Disk

The programs on this disk *require* System Software v6.0. There are six items in the root directory of this issue's disk. They are:

a. Read.Me

A lot can happen from the time we send this magazine to the printer and the time we get ready to mail them out. If anything does happen, we will put everything we can find in this file. Please try to read this file before using the *GS+* Disk. This is a plain text file.

GSP.V4.N5.SEA

This is a self-extracting archive (SEA) containing the source code and related files for all the programs contained on this *GS+* Disk. The archive also contains the Miscellaneous Library. Technical information, such as the Miscellaneous Library documentation and technical notes are supplied in the archive as well. The past installments of the "Glossary" department are also contained in the archive as well as the *Talk.To.GSPlus* folder, which is usually not compressed. The *Talk.To.GSPlus* folder contains the *GS+* Magazine feedback form, problem form, and writer's guide.

The feedback form is a plain ASCII text file. Fill it out, and send it to us to let us know what you thought of this issue of *GS+* Magazine and what you want to see in future issues of *GS+* Magazine.

If you have a problem with one of our programs, *please* fill out the problem form and send it to us! This a Teach file, you may use the System 6 Teach application to view it.

The writer's guide is a Teach file that explains what you need to know to write for *GS+* Magazine—you may use the System 6 Teach application to view this file.

To extract the files from the archive, simply double-click on this file from the Finder. Note that if you try to extract *all* of the files from this archive at one time, they will *not* fit on an 800K disk!

Icons

This folder contains the various Finder icons used by the programs on the *GS+* Disk.

Installer

This is the Apple IIGS Installer. Run it to install the other programs on this issue's disk. For more information on using the Installer, refer to your IIGS owner's manual.

Programs

This folder contains the *Anna Matrix* and *Cool Cursor* programs as well as the cursors for *Cool Cursor*. Use the Installer provided on your backup *GS+* Disk to automate the installation of these programs. (Note that there are additional cursors in the self-extracting archive which you can install by hand by dragging them to your **:System:CDevs:Cursors* folder after you have installed *Cool Cursor*.)

Scripts

This folder contains all of the scripts that are used by the Installer to install the files from this *GS+* Disk.

Please Remember . . .

The contents of the *GS+* Disk are *not* public domain or shareware! We depend on *your* honesty to stay in business. Please do not give away copies of the *GS+* Disk or any of the programs on it. If you do, we will not be able to stay in business. It really is that simple! *GS+*

How to Get System 6

Everyone should have a copy of System 6. Fortunately, we have a license to distribute it to our magazine-and-disk subscribers as a part of their subscription. Unfortunately, we can't afford to mail all five of the disks that System 6 takes up to every magazine-and-disk subscriber. However, we still want to make it easy for you to get System 6. So, if you are a subscriber to *GS+* Magazine with the companion *GS+* Disk (sorry, but we can *not* distribute System 6 to our magazine-only subscribers), send us the following items and we will send you System 6:

1) Five (5) *blank and formatted*, 3.5-inch diskettes to our P. O. Box address (which is shown on the back of your magazine). We are asking for "blank and formatted" disks because formatting takes time that we don't have, and it's a great way to tell if a disk is good before you send it to us. *If you send us a bad disk, we aren't going to replace it.*

2) A *self-addressed* return disk mailer with enough postage on it to mail the five disks back to you. (Foreign

subscribers without access to United States postage may include International Postal Coupons instead. See your local post office to obtain these.) *If you don't provide a postage-paid, self-addressed return mailer, your disks will be considered "gifts" and will be used for backups.*

3) That's all. Don't send any money. We don't want any money for this.

How Else Can You Get System 6?

If you are a magazine-only subscriber, here are some other ways to get System 6.

Your Apple dealer. Bug them until they get it in for you. The retail price is \$39, but that includes manuals. The part number is #A0077LL/A. For the name of your local Apple dealer, call (800) 538-9696.

Your user group. Bug them until they get it in. Take your own disks and they should only charge you a small copying fee. Some user groups may have it already copied for you and available for a

nominal charge. (Note that some user groups make these services available only to their members. Of course, you do plan on joining, don't you?) If you need to know where your local user group is, call the Apple User Group Connection at (800) 538-9696 extension 500.

Resource Central. You won't have to bug them, they have it in stock, and in no less than three different "flavors." For just the disks (item number DA-006), the price is \$24. For the complete end-user package, including manuals, the price is \$39 (item number DA-0013). Finally, if you want the *ultimate* System 6 bundle, you can get the official System 6 Golden Master CD-ROM for only \$99 (item number DA-0029). Take your pick, and then give Resource Central a call at (913) 469-6502.

And, of course, if you have a modem, you can download it from your favorite online service. The total download time is about 5 hours. *GS+*

Reviews

Apple Desktop Bus Mouse II

Retail price: \$79

Typical street price: \$75

The Apple Catalog
One Apple Plaza
P. O. Box 9001
Clearwater, FL 34618-9001
(800) 795-1000

If you've had your IIGS for a while, you've probably had trouble with your mouse. This is especially true if you play lots of games that use and abuse the mouse, or if you bought a used IIGS with a cruddy mouse. These problems usually start out small, the occasional click that turns into a double- or triple-click, or maybe your mouse ball is so dirty that it just won't roll properly. (At this point I should note that I will refrain from making jokes about "mouse balls" during this review. I should also like to note that a supposedly official IBM memo about replacing the balls on IBM mice [which you may have seen transcribed online, or passed around at a user group meeting], is a complete fake. I'm pointing this out because it's annoying to see this memo reprinted in countless user group newsletters.) Cleaning a dirty mouse ball is no problem—some toothpicks, alcohol, and cotton balls or

cotton swabs are all you need to do that. A busted mouse button, on the other hand, is a bit more difficult to deal with

In the process of reviewing Pick 'n' Pile and MAZER II for this issue, Michelle and Bob pretty much incapacitated the mouse on our game machine, so I decided to purchase one of those new Apple mice we told you about in the "What's New" column in *GS+* V4.N3. Since some of you are probably in a similar situation, I thought you might like to see a review of the newest rat on the block—the Apple Desktop Bus Mouse II (the ADB Mouse II for short).

Squeak I Tell You! Squeak!

While there are a few differences between this mouse and the standard IIGS mouse, this is still a standard Apple-style mouse. There's only one button, and since it's a standard Apple Desktop Bus device, it plugs into your IIGS just like your current mouse does. (Score another one for the IIGS's ability to scavenge stuff from the Macintosh world!)

The biggest difference between this mouse and the standard IIGS mouse is the way it looks. Instead of looking like a badly-cut wedge of cheese, the ADB Mouse II looks

sort of like a tear-drop. And instead of having a big square button near the top, the entire forward section of the mouse is the button, which makes it pretty hard to miss when clicking.

Another difference in this new design is that the mouse ball is further forward in the "belly" of the mouse. According to Apple, this gives you greater precision positioning the mouse on-screen. Not having a 19-inch, zillion-pixel screen, I can't verify this on my IIGS (in fact, I'm not even sure *how* I would verify this if I could).

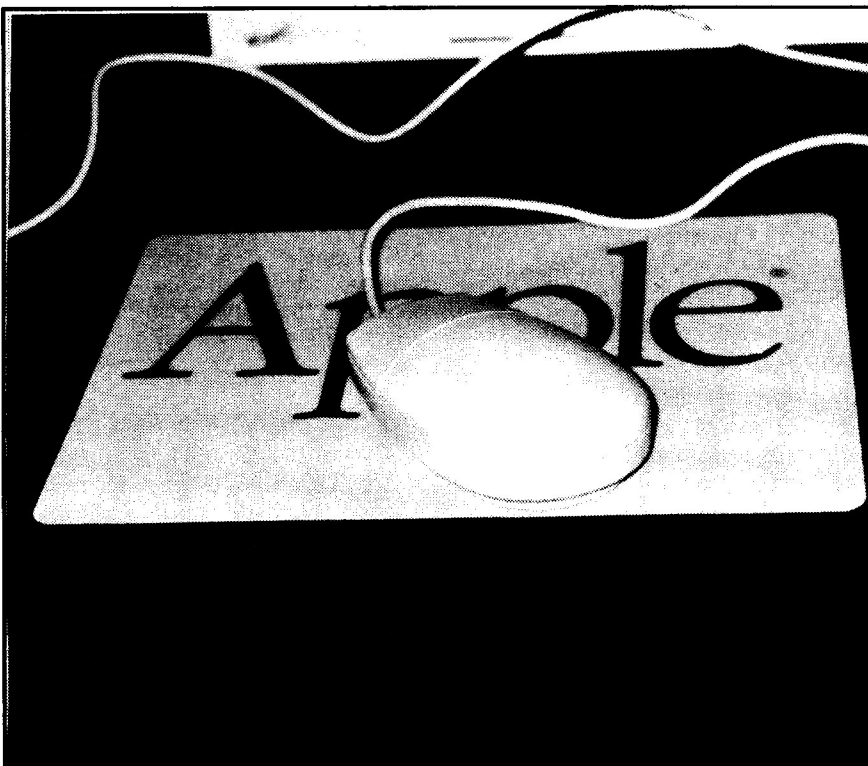
The last major selling-point for this mouse is that it is "ergonomically designed." That's a \$20 phrase that means it was designed to fit your hand better and reduce stress on your wrist and hand while you are using it. With that in mind, the ADB Mouse II has a "hump" near its back end. This hump fits *very* comfortably in the palm of my hand and makes it feel like I'm gripping a handball or racquetball.

Using this mouse takes a bit of getting used to. When I'm using an old-style mouse, my fingertips are on the button, which forces the majority of my hand off of the mouse, and onto the desk. With the ADB Mouse II however, my palm is resting on the mouse itself, which elevates my wrist (which relieves stress on my wrist) and my *fingertips* are left hanging off the front of the mouse. So, when I click the mouse button, I'm actually using the bottom of my second knuckle to do the clicking. It's weird, but I think I like it. (It's possible, of course, that the "right" way to hold this mouse is the same way I held the old mouse, but no instructions were included, and this way feels the most comfortable to me.)

It's A Rat Race

So, should you buy one of these things? Well, if your mouse-wrist bothers you after long sessions at the computer, you should definitely pop down to your local Apple dealer (or the closest Office Town or Circuit City) and give one of these a try. And, if you need a *new* mouse (you can get a broken mouse fixed, see "What's New" in this issue for more details), this is the only game in town (Apple has discontinued the old mouse).

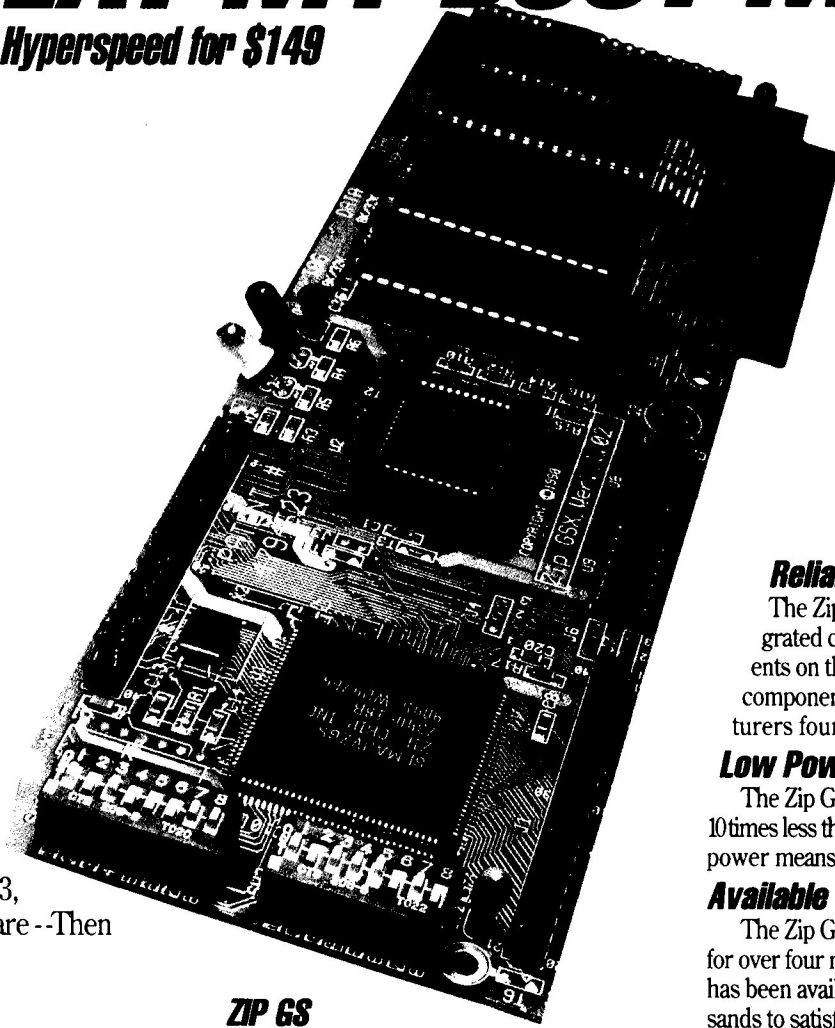
But, if your wrist *doesn't* hurt and your *don't* need a new mouse, you probably shouldn't bother. **GS+**



EAT MY DUST Mac...

Hyperspeed for \$149

GS+ Magazine



If You Use...

- Appleworks GS
 - Managing your Money
 - Printshop GS
 - HyperCardGS
 - Springboard Publisher
 - DeluxePaint
 - Quicken • Publish it 3,
- or any other GS software -- Then you need a Zip GS.

Here's Why...

To use powerful programs you need a powerful computer. Apple Computer left one thing out of the IIGS when they designed it...speed. The Zip GS puts the speed back in. The Zip GS comes standard with 8 K cache memory and runs at a very speedy 7 Mhz. The Zip GS gives you all the speed you need now and in the future because it's expandable. You will never have to buy another accelerator card again. All upgrades are available now.

Can you imagine the time you will save having your GS running up to 10 Megahertz faster. Appleworks performs like you always thought it should, recalculations in the blink of an eye. Word processing faster than on the new line of Macintosh computers. Nibble magazine said it this way "Apple Computer take note: this chip makes a full featured GS word processor faster than several Macintosh word processors running on a monochrome display." (monochrome display is the fastest) Hallelujah! **ZIP GS DELIVERS!**

ZIP GS

- Is very easy to operate.
- Needs no special boot-up.
- Provides Macintosh speeds for your GS
- Is compatible with all GS hardware and software.
- Uses 1/10 the power of competing boards.
- Address all memory.
- Upgradable to 64 K cache memory.
- 16 variable speeds at the touch of a key.
- 30 day money back guarantee and a 1 year warranty.
- Upgradable to 10 megahertz.
- Fully DMA compatible.

Installation

Anyone can install the Zip GS in a matter of minutes. To help with the installation, we include an animated pictorial instruction manual which gives detailed instructions on installation and operation.

Upgradable

The Zip GS can be upgraded at any time. Zip Technology has available upgrade kits that boost the speed to 10Mhz.! We will be happy to do the upgrade labor for free within 48 hours.

Reliable

The Zip GS has only one custom integrated circuit. The other three components on the Zip GS are the same reliable components from the same manufacturers found in your GS Computer.

Low Power

The Zip GS requires only 120 ma of power - 10 times less than other accelerators. The low power means it will always run cool.

Available

The Zip GS has been available and shipping for over four months. In the short time that it has been available, we have delivered thousands to satisfied customers around the world.

Special Introductory Offer

The Zip GS is priced at \$199.00 retail. During this introductory offer the Zip GS is only \$149.00, a savings of \$50.00.

ZIP GS Introductory Offer \$149.95

8Mhz upgrade	add only	\$29.95
9Mhz upgrade	add only	\$59.95
8K cache upgrade	add only	\$19.95
32K cache upgrade	add only	\$49.95
Zip GS--10 Ultra Fast 10 Mhz	call	

Risk Free Offer/Money Back Guarantee

If you are not satisfied with the performance of your GS Plus, simply return it in the original box within 30 days for a refund.

Checks, Visa, MasterCard, and Discover cards accepted
Now Shipping
Standard Air By:



5601 West Slauson Avenue, Suite #283 • Culver City, CA 90230 • Phone: (310) 568-2002 • Fax: (310) 568-2005

All product names are trademarks of their manufacturers

Baccarat

Programmed by Jim Johnson

Retail price: \$24.95

Typical mail-order price: \$22.95

Not copy protected

Requires System 6.0 with 1.25MB or v5.0.4 with 1MB. Installation on a hard disk requires at least 660K of free space.

Felicity Software
1027 N. Rutland Avenue
Wichita, KS 67206
(316) 636-2207

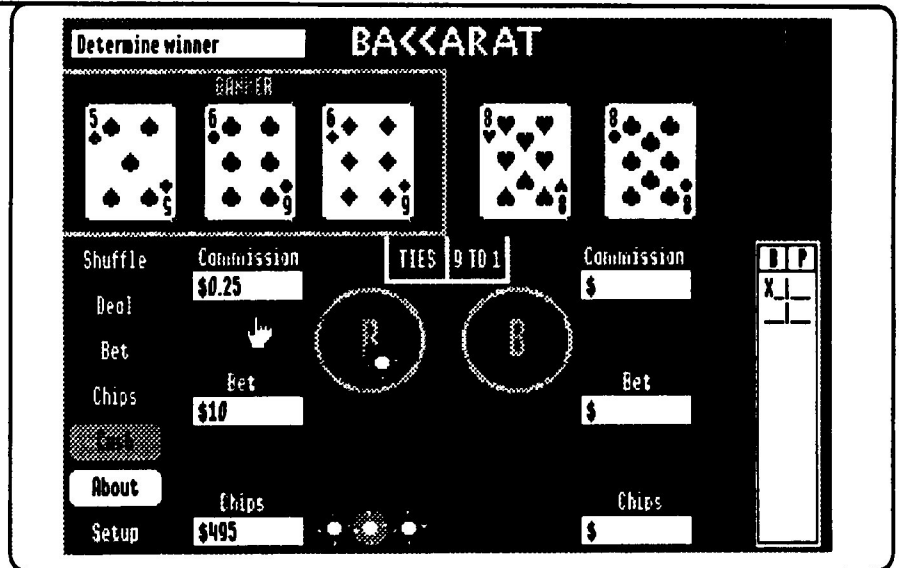
Reviewed by Robert A. Ribaric

What's a Baccarat?

Baccarat is a card game played in casinos around the world. It offers the best odds of any card game played there, because of its unique betting method. The player may place a bet on his own hand or that of the dealer. A shoe of eight decks is shuffled and dealt. Each person gets two cards, with the possibility of a third. You can't say "hit me"—it is done automatically under certain conditions. The best possible hand is nine. If your first two cards equal less than six or more than nine, you get the third. A combination that equals ten yields a true score of zero. A six or seven causes you to stand, and an eight or nine is a "natural." If you receive a natural, the banker cannot draw a third card, so you win. If a tie occurs, the hand is played over. In this game, aces count as one, and tens and face cards are zero.

"The French Way"

At first, my review of this translation was based solely on the documentation. I decided to do some research in order to better understand who plays the real game, and why. *According To Hoyle* states that this game is often played for high stakes in French casinos. A slightly different variation, known as Chemin-de-fer, has all but replaced it, however. In both games, there can be up to ten players (or punters) who can bet on the



group to either or both sides of the banker. Also, in the real game the acting banker rotates among the seated players. It seems that this game is played as a quick way to win big. Almost always, someone calls "Banco!," which means they intend to risk it all.

Did We Need a Computer Version?

I personally had never heard of Baccarat. The author states that this is "the game the big boys play." Apparently, someone loves this game, but I don't see why. After playing the game for a while, I soon realized that I wasn't doing *anything*. All I had to input was the amount of my bet. The rest was automatically done by the computer. It seemed like more of a demonstration than a game.

Although I found this incredibly boring, I can only assume that this is how the real game is played, so this computer translation deserved a review. I will proceed with this assumption, and the fact that some people might be interested. The only problem I discovered from reading about how the actual game is played was that the players should take turns being the banker. This, and the fact that there should

be a lot more players, leads me to think that a really accurate computer version of Baccarat can't easily be made.

The Programming

The program itself is very good for what it is. It was written with HyperStudio, and a run-time version is included on the Baccarat disk. The game's screen consists of a simulated Baccarat table along with a few buttons and text areas. The mouse is used to shuffle, deal, and bet. You may bet using chips or key bets. The digitized sounds are quite interesting, and you may select how much of the sound you want to hear. The graphics are clear and very colorful. To play, you simply select an amount of money to start with and then bet until you're out. A text area keeps track of the results of each hand. If you run out of money you can just start over.

My Opinion

This game really left me a bit confused. The programming is excellent with a lot of time obviously having been spent on its creation. On the other hand, I'm not sure *why* a lot of time was spent creating this game. The card game, Baccarat, seems to be very, very dull. I'm sure I would like it more if I was playing with ten of my buddies for big bucks on the French Riviera. The author must really love it to put this much into a translation, because I can't see where there would be much demand for a single player computer version of it. However, I would like to see Felicity Software try their hand at some other card games. Poker's been done of course, but how about Spades or something similar? At least these games would require player input and skill. I guess if you love Baccarat, or you're planning a trip to Vegas, you could use this to practice. Other than that, what's the point? **GS+**

Bob's Download Dogs

While searching online for freeware and shareware to review, I often come across stuff that just flat out . . . well, let's just say that you shouldn't waste your time with it. I'm certainly not going to waste your time by reviewing any of these dogs, but I thought I should at least warn you so that you don't waste any of your precious online time downloading them. So, this issue's stuff to keep away from is:

Bomb - A strange little game that is hard to control and even harder to play.

Castle Arms - A desktop version of the old "aim the cannon and fire over the mountain" exercise that you find in lots of beginning programming books.

There would have been more, but after I downloaded Solarian GS, I had so much fun playing it that I forgot to download anything else! **GS+**

Key Fonts Pro CD-ROM

Typical mail-order price: \$30

Not copy protected.

Requires System Software v6.0, a CD-ROM drive and Pointless by WestCode Software. Installing all of the fonts in this collection will occupy approximately 15MB of disk space.

Softkey Software Products of Florida, Inc.
4800 North Federal Highway
3rd Floor, Building D
Boca Raton, FL 33431
(407) 367-0005

Reviewed by Steven W. Disbrow

If you are a font junkie, you have probably been going hog wild over all of the TrueType font collections that have recently appeared for the IIGS. However, since most of these are collections of public domain fonts, you may have been worried about the quality of the fonts included. One solution is to buy only collections of professionally designed fonts, like TypeWest, but those can be a little expensive (in terms of the cost per individual font) compared to the cost of the public domain collections. Wouldn't

it be nice if you could get the same number of fonts as one of the public domain collections, with the same quality as the more expensive professional collections, at a lower cost? Well, you can! But there's a catch: you have to have a CD-ROM drive, and you have to be willing to give money to a non-Apple II vendor. If these things aren't a problem for you, read on

Guess What!?

The Key Fonts Pro CD-ROM might just be the most cost-effective collection of TrueType fonts available. Although this CD-ROM is intended for the Macintosh (and Microsoft Windows), if you have System 6, a CD-ROM drive, and Pointless (which, I will admit, is a pretty costly up-front investment), you can use the TrueType fonts on this CD-ROM with no effort at all. All you have to do is make sure the HFS File System Translator is installed, and pop the Key Fonts Pro CD-ROM into your CD-ROM drive. You can then use Pointless to access the fonts on the CD-ROM just as you would any other TrueType fonts you might own. (For a more detailed explanation as to how and why this works, see "The Scavenger" elsewhere in this issue.) At this point you

probably want to know exactly how many fonts we are talking about here. Would you believe three hundred and three (303) professionally designed fonts? And if you shop around, you can get them all for under \$30! (Which is a good place for me to point out that our "Typical mail-order price" for this product is taken from a CD-ROM Warehouse catalog [which is a sister publication of the MacWarehouse catalog]. If you call an Apple II vendor and ask for this product, they probably won't know what you are talking about—unless they read this review and decide they need to get in on a good thing.)

Why This CD?

If you know anything at all about the Macintosh market, you probably know that there are dozens of font-filled CD-ROMs available for the Mac. So why didn't I ever review any of those CD-ROMs? Well, the main reason is that, until recently, almost all Macintosh font collections are made up of PostScript Type 1 fonts, and not TrueType fonts. (PostScript Type 1 fonts have been around longer than TrueType fonts, and TrueType is just beginning to reach "critical mass" with Macintosh users and vendors.) The Key Fonts Pro CD-ROM makes good use

Figure 1 Samples of a Few of the Fonts on the Key Fonts Pro CD-ROM (Fonts Chosen at Random)

Aladin

The Quick Brown Fox Filed For Unemployment.

Arena Black

The Quick Brown Fox Filed For Unemployment.

Bailey

The Quick Brown Fox Filed For Unemployment.

Brandy Script

The Quick Brown Fox Filed For Unemployment.

Civic

The Quick Brown Fox Filed For Unemployment.

Columbo

The Quick Brown Fox Filed For Unemployment.

Fastrac Fashion

The Quick Brown Fox Filed For Unemployment.

Graverplate

THE QUICK BROWN FOX FILED FOR UNEMPLOYMENT.

of the CD-ROM format by including both kinds of fonts on the CD-ROM.

Another reason that I like this CD-ROM so much is that all of the fonts on the disk are unlocked and ready to use. "What does 'unlocked' mean," you ask? Good question. In the Macintosh and Windows markets, it is a common practice to sell a CD-ROM font collection (with several hundred, if not thousands, of fonts on the disk) for a dirt cheap price (like, maybe, \$50). The catch is that only ten or twenty of the fonts on the disk are actually usable when you first get the disk! The rest of the fonts are compressed and/or encrypted on the CD-ROM disk. To be able to use them, you have to call the publisher of the CD-ROM, with your credit card at the ready, and pay for the passwords to unlock the fonts you want! This can mean that the ultimate cost of one of these disks can be in the thousands of dollars!

The Key Fonts Pro CD-ROM however, does not do this. All three hundred and three fonts are unlocked and ready to go.

What Else Do You Get?

As if this package weren't a fabulous deal

already, the Key Fonts Pro CD-ROM comes with something that I didn't really expect: great documentation! Of course, as IIGS owners, we can just ignore the sections on installing the fonts on the Mac or in Windows, but what I found really cool was the appendix and the font character set listings. The appendix was something I had never seen before: descriptions and history of each font family by a typographical expert (Robert Long). It might not be everyone's cup of tea, but I found it very interesting reading. The font character set listings were another pleasant surprise. For a collection of over three hundred fonts, I expected maybe a "Quick Brown Fox . . ." type sample. What I got however, was a complete character listing (although at a small point size), of the "plain" fonts in each family, along with a shorter sample of each of the stylistic variations in the family. In addition, the Key Fonts Pro CD-ROM manual includes tables of key equivalencies for all of the included "Accent" fonts (i.e. fonts like Symbol and Dingbats). The only thing missing from the 81 pages of documentation is an index, but I can't think of any real reason that you would need one for a product like this.

What's the Catch?

Well, as I've said several times, the use of this product requires a pretty steep up-front investment. You must have a CD-ROM drive and a SCSI card to control it. And you must have System 6 to use the HFS File System Translator to access the files on the CD-ROM. (Not to mention the cost of the hardware to run System 6 comfortably.) And, you also need Pointless—but it seems like almost everyone already has that!

Still, if you love fonts, and you have been on the fence as to whether or not you should get a CD-ROM drive, this collection is a definite nudge towards getting one. If you already have a CD-ROM drive and are praying for something to use it for, the Key Fonts Pro CD-ROM is an inexpensive answer to your prayers!
GS+

Figure 2 **Samples of a Few *More* of the Fonts on the Key Fonts Pro CD-ROM** **(Fonts Chosen at Random)**

Memoir

The Quick Brown Fox Filed For Unemployment.

Optical Character OCR-A

The Quick Brown Fox Filed For Unemployment.

Painter

The Quick Brown Fox Filed For Unemployment.

Slicker

The Quick Brown Fox Filed For Unemployment.

Stinger

The Quick Brown Fox Filed For Unemployment.

Trekker

The Quick Brown Fox Boldly Went Where No Fox Had Gone Before.

Universal

The Quick Brown Fox Filed For Unemployment.

Vagabond

The Quick Brown Fox Filed For Unemployment.

MAZER II: The Ghost of Mordaine

Programmed by Mike Howard

Retail price: \$25.00

Not copy protected

Requires 1.25MB, one 3.5-inch drive, and System 5.0.4 or 6.0. Installation on a hard drive requires 750K of free space.

Distributed by:

Big Red Computer Club
423 Norfolk Avenue
Norfolk, ME 68701
(402) 379-4680

Reviewed by Robert A. Ribaric

In the Beginning

Mazeworld is in peril! The Dark King has shrouded the land under a cloak of darkness and evil. A name from the past—Mordaine, also known as *The Adversary*, has won the Mazewar. He has plunged the friendly inhabitants of the catacombs into despair. All but three of a good race of snails have been annihilated, and they beg for your help. They are safe, but trapped outside their maze home and wish to return to the upper galleries where they belong. Your help in continuing the resistance against their oppressors would also be appreciated. Only you can defeat the evil intelligence that controls Mazeworld. Your magic is powerful enough to destroy Mordaine and return life to the way it was before *The Sundering*. It is your destiny.

Your only companion on this quest is George—an invisible friend from outside the maze. He will act as a translator for all the creatures you might encounter on your journey. Some of these beings will be good; most will be bad. Your arsenal consists of four magic spells which you can cast. These missiles cause different reactions from their targets. Affirmative and negative energies can be used to say “yes” and “no,” respectively. Creative shots express good intentions while destructive power is used to attack. You must be cautious because your spell power is limited, as is your life force. Both can be drained to the point of uselessness. You must wander through the maze until you discover what needs to be done.

What You See is What You Get

Although the author dubs this as “virtual reality,” MAZER II is in actuality a 3-D, completely mouse-driven fantasy game for your IIGS. The screen has a window for you to “see” the outside world. It also displays your health and power status, as well as what shots you’re firing and the things people say. You move about using the mouse like you would

expect—forward is forward, backward is backward, etc. Rotating left and right is possible, and the mouse button delivers a shot. The escape key allows you to pause, save game, load game, and return to game. Up to four positions may be saved to disk.

Take it from me, don’t even try to solve this game without making detailed maps. You can look around to get oriented, but to go anywhere you must take notes. The different energy bursts must be experimented with and you really need to seek advice from others. At first, just try shooting different objects and creatures with the four, color-coded magic spells. And remember, MAZER II is played in real time—you’ve got to think on your feet.

Mazeworld

The Dark King’s realm consists of several different mazes, or levels. (I would say there are about five or six parts to this game.) Each level has a definite objective, and all of them must be accomplished to win. The order isn’t as important, but some things do need to be seen to continue logically. If you sneak around a bit, you can see a path of definite increasing difficulty. That’s the way to go. Some places won’t even endanger you, yet some areas include monsters that will constantly bombard you.

Mazeworld’s objects and inhabitants are very interesting. The beings include snails, “Eashire” cats, amoeboids, rats, seahorses, tentacle-heads, starfish, shades, walking eyeballs, and flying face-suckers. Some individual characters are “Lips,” “Midnight Blue,” a brain, and the Adversary himself. Inanimate objects include “waterfalls,” beacons, lava lamps, gates, pools, spheres (orbs), and of course—many, many walls. Some things

can actually be “picked up,” but most things serve useful purposes right where they are. For instance, there is a place where you may move spheres around. It’s up to you to determine who to talk to or destroy, and what to make work for you.

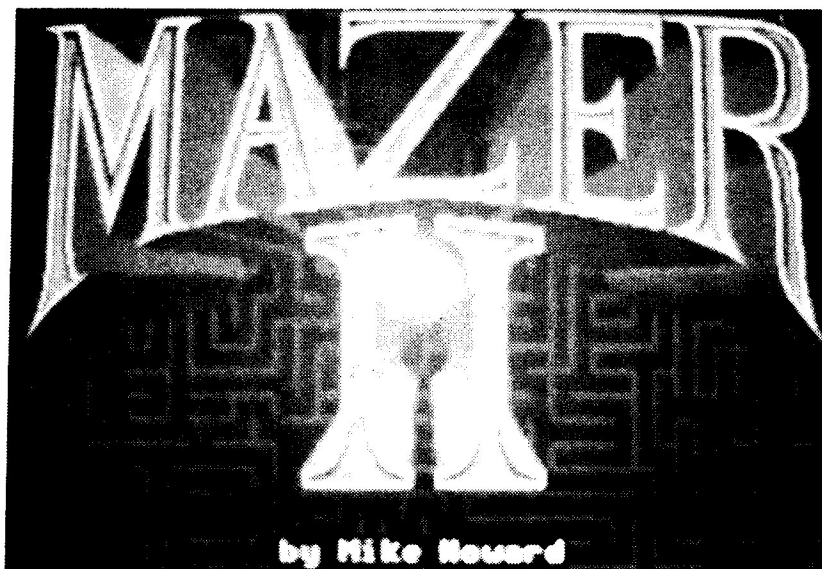
The Play

Even though I’ve seen games like this before, I’ve never seen one this good in real-time. No, it’s not really virtual reality, but it is a really good adventure simulation. The mouse control is great—no keys to memorize here. One does get the impression that they are actually there. Consequently, you can really become addicted to MAZER II. It starts off fairly simple, but you’ll be pulling your hair out by the finale (luckily I had the programmer available for advice). You have to think and you have to act. There’s usually only one or two ways to accomplish any particular task and you have to find out what that might be. It really gets intense by the end of the game.

The programming and graphics are spectacular! Your movement and that of the monsters is great. Everything is finely detailed and very realistic. The game goes quite smoothly, and with real-time speed. It never slows down, even in battles. The colors are bright and eye-catching when they aren’t purposely evil-shaded. The mazes and brain puzzles are very, very intricate. It was easy to get frustrated, but in hindsight—the game was just very complex.

I Loved It! (For The Most Part)

This game is great! The packaging includes a poster and the documentation is informative. The only thing that seemed to be missing was sound. I don’t know if it would have taken up too much space or slowed things down too much, however.



Actually, the eerie silence is deafening! MAZER II is really hard on your mouse, as well. This game also takes some getting used to, as it is not like conventional games and is sometimes hard to control. A problem we found especially annoying here at the magazine was the way the program kills our Appletalk network link. It interrupts contact with the server in order to speed up the game. Also, things got a bit difficult toward the end. I almost gave up and started to write an incomplete review.

Suggestions

Don't get me wrong—this is a great game as it is. However, after playing the game for so long I came up with so many ideas that would have made it spectacular. As I stated before, sound would have added another dimension to MAZER II. Sound effects for your shots would be neat. There could also be noises when you die, run into walls, or encounter monsters. How about music? A song at the beginning and end of this game would be cool, or even when you complete a level. The newest technique used is digitizing.

Why not sample some sounds and voices for the game?

The selfish side of me would also like to see a better goal for the game. Sure, you save the universe—but everyone likes treasure! A better reward at the conclusion of MAZER II would make it much more, umm . . . *rewarding!* Even just a song like I suggested would make the finale more satisfying.

Now, MAZER II is very complicated the way it is. Instead of the nauseating final maze confusion, I would like to see a final puzzle or riddle before you can win. Maybe, the intricacies of that last level could be toned down in exchange for a spoken or written riddle. You do have to make a few wise choices at the end, but a final brain-teaser might be good.

What I'm getting at is that I'd like to see a new version, or better yet—a sequel! These ideas are not criticisms, but suggestions. So, if you're listening Mike—I beg you to use your talent to create something even greater! And

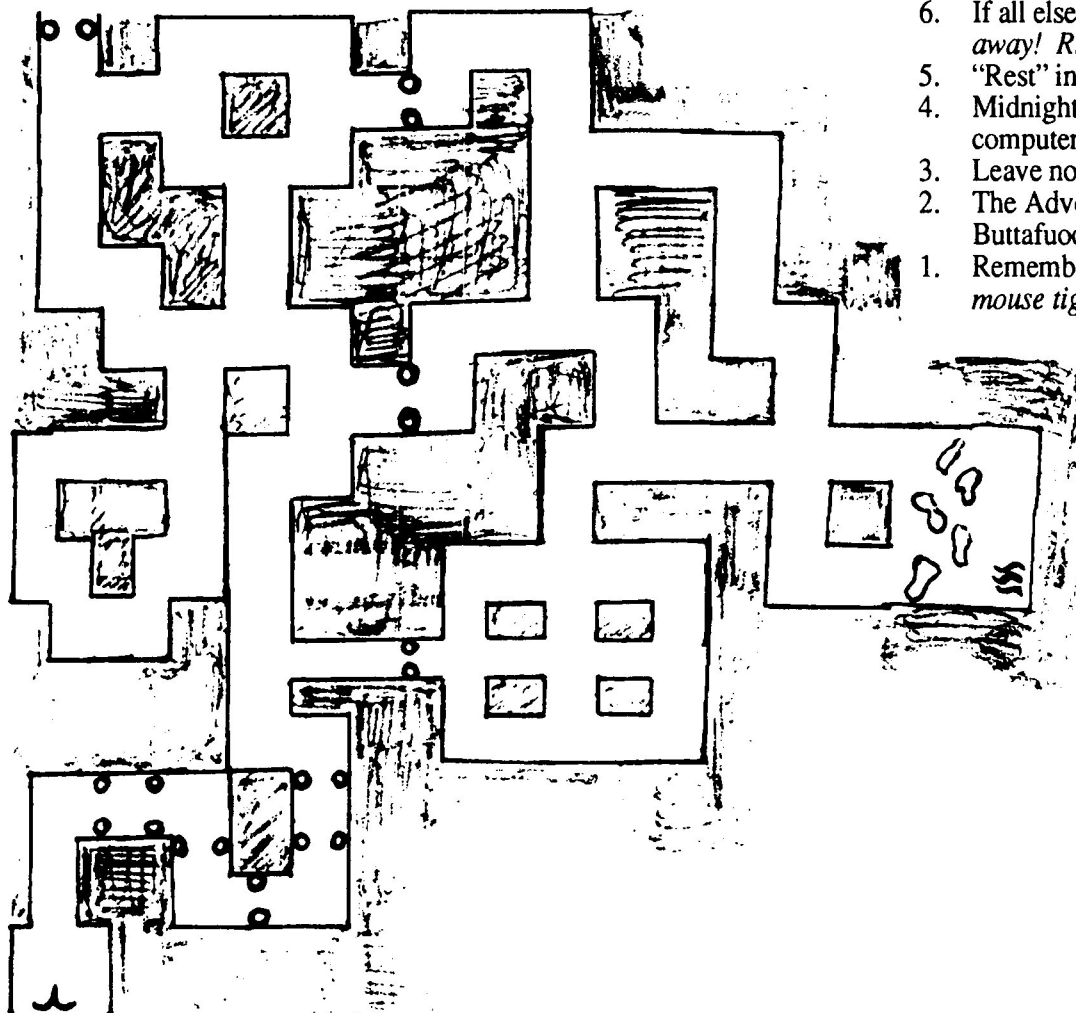
readers, support this author by buying this game. It is well worth the price and that will encourage more games like this.

I Couldn't Do It Alone

Obviously, I'd like to thank Mike Howard personally for taking the time to give me a few hints. Also, Michelle, Joe, and Steve were around to offer some helpful advice. You readers could probably also use some tips and I don't think swamping the author with phone calls will hasten the creation of a sequel. Therefore, the characters here at *GS+* Magazine offer their thoughts on how to go about winning MAZER II. We have also included one of my hand-drawn maps to help(?) you get started. GOOD LUCK!

Top Ten MAZER II Tips:

10. Try all of your magic missiles on everything.
9. MAPS! MAPS! MAPS!
8. Save often, for tomorrow may be too late.
7. You dummy, lava lamps like positive energies.
6. If all else fails—*run away! Run away!*
5. "Rest" in corners and alcoves.
4. Midnight Blue—your computer friend.
3. Leave no stone unturned.
2. The Adversary—Joey Buttafuoco.
1. Remember kids . . . *grip the mouse tightly!*



Pick 'n' Pile

IIGS version by P. Lacuchay, J. Dore, E. Laquehay, and H. Aalbert

Retail price: \$29.95

Typical mail order price: \$25

Not copy protected

Requires one 3.5-inch drive, at least 1MB RAM, and System 5.0.4 or later. Installation on a hard disk requires at least 450K of free space.

Procyon Enterprises, Inc.
P. O. Box 620334
Littleton, CO 80162-0334
(303) 933-4649

Reviewed by Michelle Bell

Pick 'n' Pile is an interesting game that is just a little like Tetris. Alright now, before you begin gagging and screaming "No, please god, not another Tetris clone!", remember, I said it was just a *little* like Tetris—just as long as you break the old Tetris blocks apart, round down their edges so they would roll around, add walls, spreading fire balls, crashing flowerpots, and deathheads.

So What Does This Game Do?

At the start of the game the computer drops balls of four different colors from the top of the screen. Your job (should you chose to accept it) is to clear all the balls off the screen by piling two (or more) balls of the same color on top of one another before your time runs out. When the pile is made, the balls (and special items) in it disappear. Sounds easy, doesn't it? And so it is—in the beginning. As you advance, your allotted time decreases, and the number of balls dropped increases. After a few levels, the minimum number of balls you have to stack for a pile to disappear increases. And of course, the top balls won't stay on top unless there is something beside them, so you end up building lots of piles to try to get some of these rolling things off your screen. To build a column, you simply click on the ball or object that you wish to move and place it where you want it to go with another click. As you advance through the game it gets harder. For example, balls and some special items, like deathheads, can only be moved by *exchanging* them with other objects and not simply by moving them to empty spots.

Every time you clear five levels, your screen and its contents change so you don't get bored looking at the same thing over and over and over When you start, you can chose if you want to play the easy or the hard version. The hard choice starts you on level 50.

Jerry Garcia? Where?

To make this game a little more lively, there are a few additional items that are dropped on you from above. Some are good, and, of course, some exist only to destroy you. There are: walls which do nothing, but can be quite helpful for stackability purposes, bonus blocks that can add up to 1,000 points to your score, multiplier blocks which will multiply your score for a column by that factor, an hourglass which will add 200 points to your time limit, and diamonds which appear when you have 1,000 points or more in a cleared column. When you clear a diamond off the screen, it goes in a "storehouse" at the bottom of the screen. Twenty diamonds in your storehouse will make your score leap. There is also a bomb that will the make eight objects around it disappear, but you don't get any points for those eight objects.

So much for the good guys, now meet your enemies. Your first encounter will be with fire. The fire balls will burn whatever is above them (which *sounds* great). Unfortunately, they spread (yes, like wildfire) which makes it difficult to build or even place a column. Flowerpots will destroy whatever is beneath them. They are impossible to move, and no column can be built wherever they have taken root. And finally there are the deathheads. When they touch the ground, these lovely creatures make your time diminish twice as fast and they set off the delightful sound of 1,000 rattlesnakes. Even better, you can't move them directly—you have to exchange them with another object.

Are Nuts and a Cherry Included?

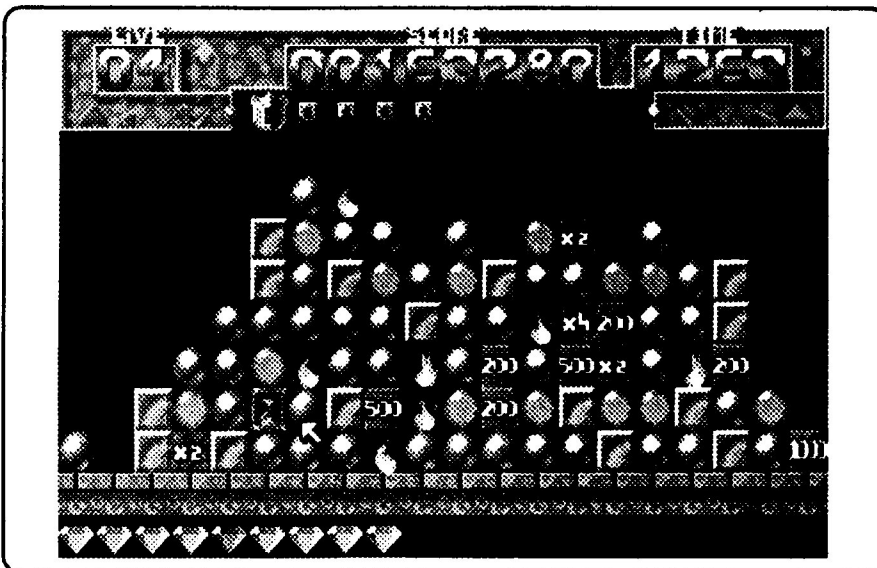
Sounds interesting so far. But does it have any problems? Of course it does, but they aren't that bad. You can pause the game, but only after the computer has dropped all the balls. Okay it's a minor problem. My

only major complaint could be fixed with a good pair of earplugs. The sound. In the beginning there is a option to turn the Tic Toc sound on or off, but the manual never explains exactly what tic toc sound is and what exactly it turns off. We did discover, after contacting Procyon, that the "Tic Toc" option turns on or off the loud clicking noises when the timer is about to run out. However there is no way to turn the rest of the sounds off. But, how bad can that be? So there's a loud, long buzzer after you clear a screen, I can live with that. But after that, there's music. At first it was cute. I had half the office wandering around trying to find the ice cream truck. Then it became annoying. Luckily, for the office's sanity (what sanity?) we found out that if you turn the sound all the way down from the control panel the music goes away, and so do all the other sounds; but you have to do this either before you start the game or you have to access the control panel Classic Desk Accessory from the Pick 'n' Pile main menu screen. Finally, Pick 'n' Pile is not a desktop friendly game—it won't let you get to your NDAs.

Since I had so many unanswered questions, it leaves me no choice but to tell you about it's rather poor documentation. It's a single dot matrix printed sheet, folded over to form a couple of pages. (It's errata is even stapled onto the page.) Procyon obviously put a lot of time into the creation of this game, so it's kind of odd to me that they would include such poor documentation with it.

The Real Scoop

So, is it really worth your money? I think so. Pick 'n' Pile is one of those addicting games that will have you glued in front of your computer screen until three in the morning. Of course if you don't like repetitious games in the first place, then Pick 'n' Pile is not for you. **GS+**



Shanghai II: Dragon's Eye

IIGS Version by John Wrenholt & Steve Luellman

Retail price: \$49.95

Not copy protected

Requires 1.25MB, one 3.5-inch drive, and System 5.0.4 or System 6. Installation on a hard drive requires 1.3MB of free space.

Distributed by :

Big Red Computer Club
423 Norfolk Avenue
Norfolk, ME 68701
(402) 379-4680

Reviewed by Michelle Bell

What do mermaids, monitor lizards, chrysanthemums, baseball umpires, the Ace of Diamonds, and Spring all have in common? They're all tiles in Shanghai II. [For those of you that are new to the IIGS, you should know that Shanghai II is a sequel to the original Shanghai, that was available for the IIGS (and many other computers) back in 1987. The original version was one of the first real "blockbuster" game titles for the IIGS, and it generated a lot of excitement and sleepless nights among early IIGS owners. - Ed.] For those of you that have never heard of Shanghai before, you should know that it is a computerized version of the game Mah-jongg. Introduced from the mysterious East (China specifically), Mah-jongg can be thought of as a mutant form of dominos, and has been addicting Americans to its challenge for almost 100 years.

Snake

Shanghai II is a game of strategy and of mental agility. It consists of 144 tiles on a game board. These tiles are arranged in a mixture of single and stacked tiles. At times, five tiles can be stacked upon each other. To win, you must clear the board of all the tiles. In order for a tile to be removed it must be matched with its mate. For example, you might have to match a four of coins with another four of coins. Sounds simple enough. But, both of these tiles have to be free to move off the board. Being "free" means that nothing can be on top of the tile, and that it can slide out to either the left, or right, or both. Not as easy as it sounds. There are two versions of Shanghai II—the normal board game, similar to the original Shanghai, and the Dragon's Eye. In the regular game the tiles are arranged in the shape of one of 12 different animals from the Chinese calender or in the original Shanghai tile layout. There are four easy, five advanced, and four master boards for

you to try your skill with, from a long snake to a horse's head. All of them are great and challenging, and, to me, even more addicting and fun than the original Shanghai.

Horse

Shanghai II lends a hand if you get confused from time to time. The elaborate options menu allows you to be told if no more moves exist. It will also suggest moves, and be forgiving enough to let you back up one move. If your problem is that you can't quite figure out exactly what it is that you're matching, just select Guide to These Tiles to get pictures and names for all the tiles. (Just be warned—the descriptions of the Ring and Treasure Chest tiles in the fantasy set are reversed, but everything else seems right on the money.)

Dragon

Besides the basic Shanghai game, this program comes with another game. It's called Dragon's Eye, and it pits the Dragon Master against his opponent, the Dragon Slayer. The slayer's hand has six tiles, the master's, three. The master places tiles upon the board to build the Dragon up to full strength, with particular attention to the dragon's heart and limbs (after all, whoever saw a heartless, limbless dragon?), and the slayer tries to kill the dragon by removing the pieces by matching the tiles. Both of these games can be played solitaire, challenge, or in a tournament against your friends.

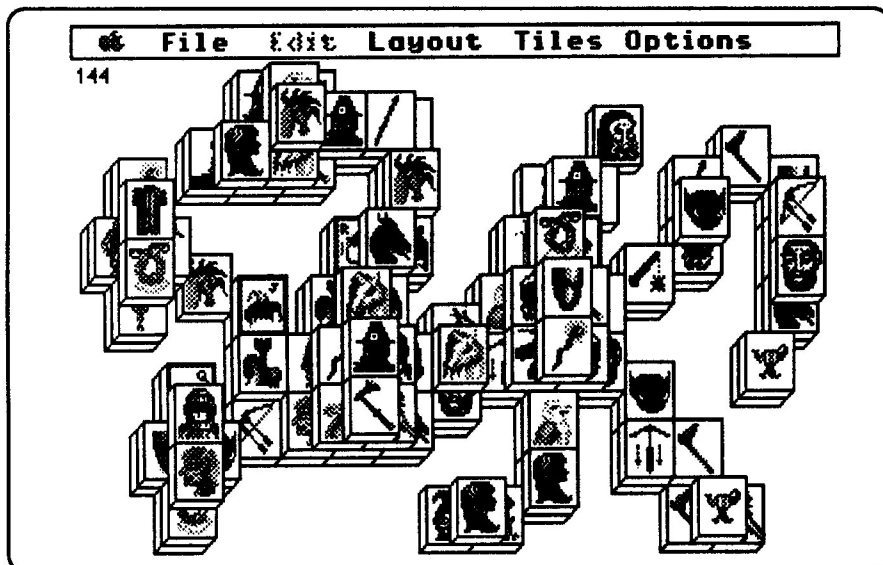
If you like competition, then Dragon's Eye is wonderful. It does seem to move slower than Shanghai II simply because moves must be staggered between players, but it is a wonderful game and definitely a good companion to the original Shanghai game, although Shanghai is still my favorite.

Tiger

Before you begin playing either game, you need to choose a set of tiles. (If you don't choose a set, the computer will default automatically to the Mah-jongg set, similar to the one used in the original Shanghai.) There are nine different tile sets to choose from. Besides the traditional Mah-jongg set, there are two versions of playing cards (hilo, and lohi), hanafuda—Chinese tiles, flags of the world, sports, the alphabet, animals, and a fantasy set. The game's graphics are really quite excellent and has incredible sounds for the tiles, or songs for the flags, and great tile animation on all. Plus you can skip back and forth between tile sets to experiment with them and not have to begin a new game every time you switch tile sets. When you match a pair of tiles, two things can happen. First the sound off. If you matched two lions, then you would hear a lion roar, or part of the Canadian anthem for its flag, or the bubble of the magic cauldron. But sounds aren't the only interesting thing that happens. Before your tiles disappear, the lion scratches the tiles leaving huge gashes on it, or the wizard disappears in a puff of smoke. Both the sound and the animation can be turned off from the options menu if you don't want a lion roaring out of your computer or a prince turning into a frog to ruin your concentration.

Boar

Shanghai II comes complete with a very nice instruction booklet. Besides telling you how to play the game, the booklet also tells you about the 12 calender animals that the tile layouts are based on, gives you their dates, and lists some famous people born in the year of each animal. (But everyone already knew that Ronald Reagan and Woody Allen were Boars, right?) In addition to the standard



instruction booklet, Shanghai II comes with a reference sheet for the IIGS version that points out errors in the manual, and gives installation information for IIGS owners.

Rooster

So what's not great? Well, for me Shanghai II moves to-o-oo—o sl—o-w. You have to slowly click on a tile so that the click is recognized, and then you have to slowly double-click on its match. Both of which take way too long when you've just spotted 3 new matches and you're on the verge of winning. It's not really a long time, but if you're good with a mouse you can get frustrated. My

biggest disappointment with Shanghai II is that, unlike versions for other computers, the IIGS version will not let you create your own tile layouts. However, the game does come with three custom tile layouts (Fish, Face and Gravity Defier), that you can load and play. It also includes a custom tile set that looks just like the tiles from the original Shanghai. Unfortunately, no information is included that tells you how to design your own tile layouts or tile sets.

Ram

So why should you buy Shanghai II if you already have Shanghai? Well, with

Shanghai II you get two games, not just one, and this one isn't copy protected like the original was. Plus, you get nine different tile sets with an additional 12 tile layouts. That's 108 different combinations besides the traditional Shanghai and Dragon's Eye games. And Shanghai II's sounds and tile animations add a new level of fun and excitement to the addicting game.

So all in all is it worth it? Not if you hate memory games or challenges. But if you like them, then you've found your match in Shanghai II. **GS+**

Solarian GS

By David Tolson

Shareware price: \$10.00

Download time (at 2400 bps): Approximately 30 minutes.

Requires 1.25MB and System Software v5.0.4 or later. Installation on a hard disk requires at least 550K of free space.

No author contact information given.

Reviewed by Robert A. Ribaric

Where It Came From

The author states that Solarian was originally written for the Macintosh. I seem to remember, however, playing it on earlier 8-bit systems. Whatever the case, Mr. Tolson wanted to play this game on his IIGS, so he wrote it himself. Was it worth the trouble? You bet.

How It Plays

This game is a "shoot 'em up" game similar to Galaxian. You control a ship at the bottom of the screen using the mouse. You can move side to side and, of course, fire shots! You also start off with two

seconds worth of shield protection. This deflector repulses anything. You begin the game with three ships. An army of five different kinds of enemy ships stands ready to fight at the top of the screen. The leaders are known as Krushus, and they fire shots back at you. They are protected by Rotors, which can take three hits before they die. Pentagons dive down to slam into your ship from the side. Bluebottles dive and shoot, while Birds simply hover. At first, you have to rely on your shield because your original arsenal is not too impressive. This can be improved by catching power-ups dropped from helpful storks, biplanes, shuttles, and blimps that pass across the top of the screen at random intervals. Some power-ups allow you to fire more quickly or to fire two shots at once, while other power-ups can increase your ship's speed or replenish its shield, and some do nothing at all!

Solarian GS offers several set-up options. The starting level can be anywhere from one to nine (although you can't record a high score if you skip levels) and the sound level can be adjusted. There are





also many instruction screens to be perused, and a pause feature to freeze play.

But let's talk about the sounds for a moment. All of the sound effects are digitized samples of real sounds. They range from hysterical laughter to disgusting belches. There are also roosters, trumpets, boings, and moans. Two of the best sounds are a voice saying "Yes!" (ala Marv Albert) and one announcing "Game over, man!" (like Hudson from *Aliens*). The graphics are fast and colorful. The enemy ships are pretty detailed, and everything moves smoothly. Scrolling stars give you the impression of hurtling through space.

My Thoughts

My brother and I were sitting around reminiscing the other day when the topic of video games from our childhood came up. "Hey, remember Berserk and Pitfall?" "What about Adventure or Warlords?" Solarian came a bit later, but obviously the author had fond memories of his own about this game. He's not the only one to write his own version of a game not available for his system. With the waning IIGS support from many computer software companies, this is sometimes necessary if you want to show a classic game to a new generation of computer users (or if you just want to play it yourself).

Solarian GS is an accurate and entertaining rebirth of a great game. Since it is shareware, it doesn't cost much to recapture the past. In this case, the author asks that you send your registration fee to a school—not him! This should be even more incentive to send in your ten bucks. And who knows—if you support these kids, they might end up writing IIGS versions of other classic games! In the mean time, get Solarian GS and blast some bad guys for a while! **GS+**

The Good Guys:	
	Ship Suppliers
	Present
	Bonus Star
	Bonus Multiplier
	The ship suppliers appear once per level and bring presents. The stork drops its present automatically. The others have to be shot to release their presents.
	Presents can be one of the following: nothing, 6000 points (added to bonus), fast ship, fast gun, two guns, or shield. You can get up to two fast guns. You lose one of each of the fast gun, fast ship and two guns if you lose a life. You must catch the present with your ship.
	Shooting this will add up to 3000 points to your bonus. This appears once during the level and not for long.
	Shooting this will multiply your bonus after the level is complete. These come in different amounts depending on the level. This appears once during the level and not for long.
Last page - click mouse button to exit	

Twilight II

By Jim Maricondo and the DYA

Retail price: \$39.95

Typical mail-order price: \$34.95

Requires two 3.5-inch drives or a hard disk, 1.5MB RAM and System Software v6.0 or later. A full installation requires at least 1.5MB of free disk space.

DigiSoft Innovations

P. O. Box 380

Trumbull, CT 06611

(203) 375-0837

Reviewed by Steven W. Disbrow

Drawing a Blank

You probably already know that your IIGS screen is made up of lots of little picture elements called *pixels*. What you may not know is that each of those pixels is made up of three even smaller beasts, called *phosphors*. For every pixel, there is a Red, Green and Blue phosphor (hence the term, "RGB monitor"). To set a pixel to an particular color, each of these phosphors is set to an intensity between 0 (off, or black) and 15 ("on full blast" or Red or Green or Blue, depending on the phosphor). (Techno-weenie-wanna-be's note that: 16 values for each phosphor, with three phosphors per pixel, means each pixel can be any one of 4,096 colors [(16 shades of Red) x (16 shades of Green) x (16 shades of Blue) = 4,096 possible shades].) The three phosphors glow at the appropriate intensity, and since they are so close together, they appear to be a single pixel of a single color on your IIGS screen.

So, what does all this have to do with this review of Twilight II? Well, you see, like everything else in the universe, phosphors can get overworked and worn out. More precisely, if a phosphor is set to the same intensity for a very long time, it will tend to "remember" that intensity and it will be very reluctant to display any other intensity of light. (This is similar to trying to retrain a civil servant.) When you apply this to an entire screen full of phosphors, you end up with a single image that simply won't go away. This is commonly called "screen burn-in." Which brings us to Twilight II.

Twilight II is what is known as a "screen saver." The job of a screen saver is to monitor your computer usage and prevent the phosphors on your computer screen from burning in. The simplest way to do this is to simply keep track of how long the computer has been idle (i.e. how long it's been since the human did anything interesting) and then, after "x" number of minutes, turn off all of the phosphors on your screen so that it is pitch black.

However, a plain black screen is extremely boring, so today's modern screen savers take pains to make the salvation of your phosphors a form of entertainment. Usually, this is done by displaying animations on your screen. By presenting an ever-changing animation, the screen saver keeps your phosphors from becoming stuck at a single intensity.

Dark As Night

Twilight II does all this, and it does it with a vengeance. Not only does Twilight II come with over 40 different animations for your screen saving entertainment, it also has a host of other features that make it one of the most powerful screen savers I've ever used on any computer.

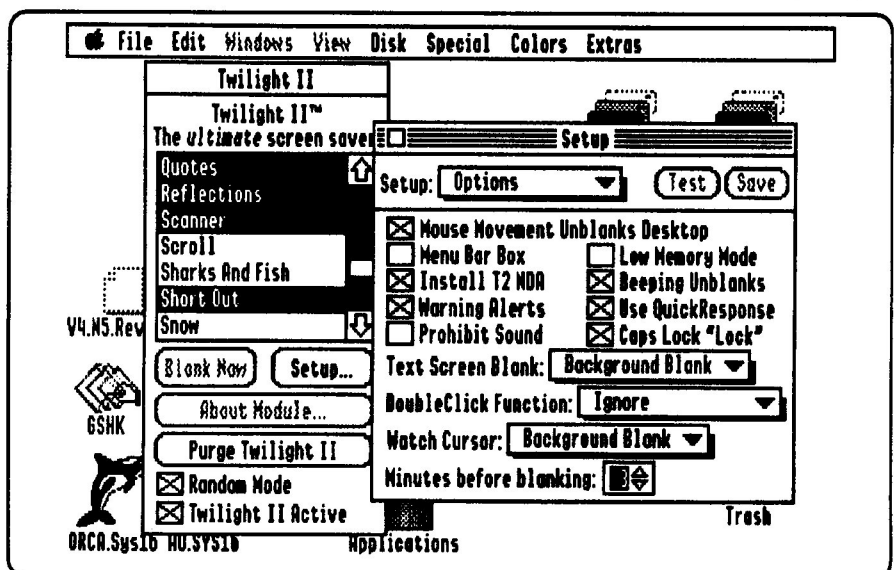
First of all, Twilight II defines two different types of screen blanking: foreground blanking and background blanking. Foreground blanking is the type of blanking we've already discussed: Twilight II takes control of your computer, blanks the screen and plays the animation of your choice. Background blanking on the other hand, is a bit different: Twilight II clears the screen to black, but it allows the current application program to continue executing normally. In this mode, Twilight II won't play any animations, and it won't interrupt anything that your IIGS is currently doing. This can be very important if you are in the middle of copying a large number of files, or printing a long document. If Twilight II were to start an animation at this point, the copying or printing would be interrupted and wouldn't resume until you pressed a key or moved the mouse to stop the animation.

Twilight II also makes extensive use of background blanking to ensure compatibility with older programs and programs that aren't desktop-based. For

example, if you are using an 8-bit program (like AppleWorks Classic), a program that makes its own desktop (like Publish-It!), or just a program that uses the text screen instead of the desktop (like America Online), Twilight II will *only* perform a background blank while in these programs. You might miss the animations, but playing it safe in this way will go a long way to ensure that Twilight II won't cause these older programs to crash.

Background blanking is great, but most folks will be interested in foreground blanking and all of the neat animations that Twilight II can play. (These animations are usually referred to as "blanking modules" or simply "modules.") If you install everything that comes with Twilight II, you'll end up with over 40 different modules to choose from. Among these modules you'll find a floating clock, a kaleidoscope, a snow storm, a screen full of static that will make you think your cable TV has gone out, and a lot of other really professional looking animations. While there are no flying toasters (awww!), there are several really cool modules (my personal favorite is the "Quotes" module) in Twilight II that you probably won't find in any other screen saver package. (My apologies to all the authors that contributed modules to Twilight II, but there are just too many modules for me to discuss them all here. However, I will say that you all did a great job!) In fact, there are so many neat modules that you will probably be torn as to which one to use. Fortunately, Twilight II has a "Random Mode" that allows you to select several of your favorite modules for random display.

Twilight II also has a ton of other options that you can use to customize it to suit your tastes. The first of these options you



will need to set are the "Screen Corners" options. By setting this group of options, you can tell Twilight II how to react when you move the mouse to a particular corner of the screen. For instance, you can have Twilight II automatically blank the screen whenever you move the mouse to the upper left corner of the screen. Or you can use that corner to tell Twilight II that it should *never* blank the screen when the mouse is there.

And that isn't all; other options let you tell Twilight II how it should behave in text-based programs (only do a background blank, only blank in text-based programs when GS/OS is active, or don't blank at all), whether or not to allow modules to play sounds (yep, Twilight II modules can play sounds along with their animations!), and, of course, you can set the number of minutes that Twilight II will wait before blanking the screen. (Note these aren't all of the options that Twilight II has, these are just the ones that I have room to tell you about.)

My two favorite options, though, are the one that allows you to install a Twilight II New Desk Accessory (NDA), and the "Caps Lock Lock" option. The Twilight II NDA is just that: a NDA that allows you to pull up Twilight II simply by picking it from the Apple menu, thus saving you the trouble of having to go to the Control Panel NDA first. The Caps Lock option is a neat way to "lock" the screen so that Twilight II won't blank or unblank it. In other words, if you don't want Twilight II to blank the screen, put the Caps Lock key down. If the screen is already blank, and you want it to stay that way, put the Caps Lock key down. This can be extremely handy if you are in a situation (perhaps an online conference) where what is on the screen is constantly changing, but there aren't many occasions where you have to interact with the computer. (Twilight II can't tell that what is on the screen is changing, it only knows when *you* do something that the computer has to respond to. So, if you sit there watching the screen change, but not doing anything yourself, Twilight II will eventually blank the screen.)

While these options affect the overall operation of Twilight II, each blanking module can have its own set of options that you can change to control their operation. The options for each individual module are accessed from a Setup menu that appears when you click the Setup button in the main Twilight II window.

Well, I'm sure I've forgotten a feature or two, but don't worry, if you get Twilight II you'll have no problem finding out all about all of its features. The reason is the Twilight II documentation—it's excellent. If you are familiar with any of the products from Seven Hills Software, you'll recognize the format of the Twilight II documentation immediately. And, just like the excellent documentation that comes with Seven Hills products, the Twilight II docs are straightforward, well-written, and easy to follow. Every aspect of Twilight II is discussed, from installation all the way to patching the Sound control panel to play sounds when Twilight II blanks and unblanks the screen! (Twilight II comes with a special application to perform this patch for you.) There is an extensive question and answer section covering some common and uncommon questions that you may have about using Twilight II, and, best of all, an index! In all, the Twilight II documentation is a very nice (and useful) piece of work.

The Big Blank Off

Originally, this review was to be a big three-way comparison between Twilight II, Phantasm (from the Signature GS package [see review in GS+ V3.N3]), and the screen saver in The Desktop Enhancer [see reviews in GS+ V3.N4 and V4.N2]. After playing with Twilight II for a few days however, I could see that it was really no contest. Twilight II wins hands down over Phantasm and the Desktop Enhancer. The main reason here is the sheer number of animations included, and the fact that Twilight II just seems more stable than either of the other products. However, another reason that Twilight II wins over Phantasm is that it comes with a blanking module, called Phantom, that actually allows you to use all of your old Phantasm blankers from Twilight II! Twilight II even comes with several freeware Phantasm animations for you to use with Phantom. However, these animations just aren't as good as the normal Twilight II animations, so you'll probably abandon them after looking at them once or twice.

A Shot In the Dark

Of course, there are a few minor problems with Twilight II.

First and foremost, I was very disappointed to find that Twilight II does not allow for any sort of password protection when unblinking the screen. Since Twilight II works in just about every conceivable IIGS mode (8-bit text mode, the normal desktop, etc.), this would be *extremely* valuable to educators (and parents) that work with all sorts of

IIGS programs, and that don't want their kids messing with their systems while they duck out to the teachers lounge.

Another problem is that if you install *all* of the modules supplied with Twilight II, they will take up a *huge* amount of disk space on your boot disk. While these modules make Twilight II incredibly versatile, it's a shame that Twilight II doesn't include the ability to keep them on a disk separate from the disk the Twilight II control panel is on. (Some modules, Phantom and Movie Theater for example, do allow you to keep the files they use on other disks, but the bulk of Twilight II's modules must be on the same disk as the Twilight II control panel.) Of course, you *can* keep your entire Twilight II system on a disk other than your boot disk, but it wouldn't install itself when you start up your computer, and you would have to remember to install it yourself (by double-clicking on the Twilight II control panel in the Finder) each time you reboot. Fortunately, Twilight II includes a wide variety of installation options so that you don't *have* to install everything if you don't have the space for it all.

Come The Dawn

Twilight II is an *excellent* product, and a great example of what IIGS software can be and *should* be. If you want a screen saver for your IIGS, there is really no other way to go.

However, with all of this talk of how wonderful Twilight II is, I seem to have skipped one very important point: you probably don't need a screen saver. The reason is that today's monitors are the result of years of research intended to (among other things) decrease the occurrence of screen burn in. In other words, to get a IIGS screen to burn in, you would probably have to leave an image on it for at least a couple of weeks.

If Twilight II had some sort of password protection, I would recommend it without hesitation to educators and other IIGS owners with reason to be paranoid. However, if you just use your IIGS a few hours a day, and turn everything off at night, you probably have nothing to worry about. Even if you use your computer for 8 or more hours a day, like myself, you still probably don't have that much to worry about. However, burn-in *can* happen, even to a good quality monitor like the IIGS monitor. So, if you think that \$39 is a pretty cheap insurance policy for a \$400 monitor, or if you just like to put top quality software on your IIGS, you should probably get Twilight II. **GS+**

TypeWest Volume 1
Fonts by Castcraft Software, Inc.

Retail price: \$49.95

No individual mail-order price could be found. Mail-order companies advertise TypeWest only in a bundle with Pointless (usually for about \$70).

Not copy-protected

Requires a 3.5-inch drive, 1.25MB RAM, and Pointless v2.0 or later. Installation of all the fonts in this package will take up approximately 2MB of disk space.

WestCode Software, Inc.
15050 Avenue of Science, Suite 112
San Diego, CA 92128
619-487-9200

Reviewed by Steven W. Disbrow

TypeWest is, to my knowledge, the *only* professionally designed collection of TrueType fonts specifically intended for the Apple IIGS market. It consists of three disks, containing twenty-three (23) font families, with a total of forty (40) typefaces in all. (What's the difference between a font family and a typeface you ask? Well, Courier Italic and Courier Bold, for example, both belong to the Courier *family*, but Courier Italic and Courier Bold are each a distinct and separate *typeface*.)

Now, if you can do a quick bit of math in your head, and if you've already read my review of the Key Fonts Pro CD-ROM,

elsewhere in this issue, you might be a bit disturbed by the price per font difference between that product and this one. Of course, I don't know how any company (other than my own) figures their prices, but I can pretty well guess that the main difference in the cost is the fact that TypeWest comes on three diskettes and not on a CD-ROM. (Believe it or not, those three disks probably cost about the same [or more!] than a single CD-ROM disk.) And, if you figure in the cost of all the *hardware* that is required to even consider using the Key Fonts Pro CD-ROM, the cost per font begins to shoot up like a rocket. So, with that out of the way, let's consider TypeWest on its own merits.

Good Looking Fonts

As I said, as far as I know, this is the only professionally designed font collection intended for sale to IIGS owners. As such, the fonts in this collection look really good, and, for the most part, include all of the special characters that you need to type things like this: ™©@ã ó. Quite surprisingly, however, there are a couple of fonts that don't include lowercase alphabetic characters! I suppose the reason is that these particular fonts are intended for headings and other eye-catching uses, so if you use them as they were intended, you *probably* won't miss the lowercase characters. Still, I was surprised to find them missing from a collection of professionally designed fonts.

Good Looking Manual Too!

In addition to good, usable fonts, TypeWest also comes with a good manual. The best part of the manual is the discussion of fonts and the terminology behind them. Among the subjects touched upon are the difference between bit-mapped fonts and TrueType fonts, serif and sans-serif fonts, styles and families, and what types of fonts to use for different typographical situations. If you are a font novice, you need to give consideration to TypeWest just for the information contained in the manual.

In addition, the TypeWest manual contains print samples of all of the fonts included in the package. This is very handy to have, and always a plus in a product like this.

In Conclusion . . .

If you are a font monger, you'll definitely want to pick up a copy of TypeWest and add these fonts to your collection. If you *aren't* a font monger, you might want to take your chances on one of the public domain collections that are current available. However, if you are a font novice that is confused by all of the font terminology that you hear bandied about, you'll probably find the TypeWest documentation invaluable, and the TypeWest fonts a good way to dress up your documents. If you don't yet have Pointless, but you want to get it, I would definitely suggest buying it together with TypeWest. **GS+**

Figure 1
Samples of a Few of the Fonts From TypeWest Volume 1
(Fonts Chosen at Random)

Antique Bold
The Quick Brown Fox Filed For Unemployment.

Berling Agency
The Quick Brown Fox Filed For Unemployment.

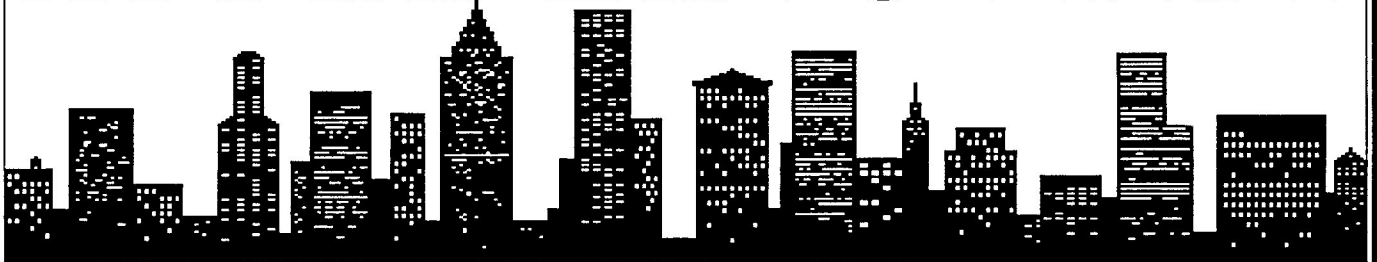
Cochise Black
The Quick Brown Fox Filed For Unemployment.

Diana Script Agency Bold
The Quick Brown Fox Filed For Unemployment.

Formula One
The Quick Brown Fox Filed For Unemployment.

Franklin Gothic Wide
The Quick Brown Fox Filed For Unemployment.

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So you wanna write a fat bits type editor, eh? Well, so did I. In order to do this, I took a look at a couple of existing editors (Dlced, Genesys, and IconEd) and took some ideas from them for the basis of my editor.

Data Structures

You'll get a better understanding of how Anna Matrix works when you understand what information it's keeping around and why. The data structure in Figure 1 is used to keep track of editing a cursor—the handle to the data structure is in the refCon field of an edit window. The most important variables in this structure are the rectangles, the off-screen grafports, and the cursor structure to edit.

All changes are made to the cursor image directly (in the Cursor handle), and the fat bits displays are in the off-screen grafports. When a change is made to the cursor, an appropriate fat bit rectangle is drawn in the off-screen grafports as well as to the window on screen. The new cursor image is then drawn in the off-screen bitmap areas for a white background, black background, and a blue desktop background.

It's important to note the differences between ImageRect and ImageDataRect (and MaskRect and MaskDataRect). The ImageRect (and MaskRect) are the rectangles that actually frame the editable area in the editing window. The

ImageDataRect (and MaskDataRect) are the rectangles *inside* the framed rectangles the comprise the actual editable area. There's a small area of whitespace between the two rectangles. When the editor window needs to be drawn, the image, size, and mask rectangles are framed, the off-screen bit maps from the off-screen grafports are transferred to the window, and then the white, black, and blue off screen bit maps are transferred to the window. It's much faster to transfer an off-screen bitmap to the window than to draw an image directly to the window. This is because you only have to draw the image once, and whenever an update needs to occur, all drawing is done and the transfer routine just has to copy bytes from one location to another (which is very fast).

Cursor Tracking

Whenever the cursor goes into an edit area, the cursor changes to a pencil. In order to keep track of this, a simple test is done to see if the cursor is inside the image rectangle or the mask rectangle. The check is done every time through the main event loop. If the cursor is inside the rectangle, then it is changed to the pencil (or a hand if the shift key is down, or a bow-tie if the Command key is down, etc.). Whenever the cursor is out of an editing rectangle, it is forced to an arrow. It looks like there should be more magic to keeping track of the cursor than that, but basically, that's all there is to it.

Hit Testing

All of the cursor editing actually takes place when a winContent task is received from TaskMaster. If the hit is inside the big color picker rectangle, the new color to draw in is determined. If the hit is inside an editing rectangle, then drawing actually occurs. For most hits in an editing rectangle, the code in Figure 2 is executed. The code tracks the cursor until the mouse button is released. Pay special attention to the StartDrawing calls—they make sure that the correct grafport is switched in *and* that the origin is correctly set in case the window content has been scrolled. Don't forget that a SetOrigin (0, 0) call is made at the end of all this code to put the origin back to where the Window Manager and Control Manager think it should be. The WaitMouseUp call makes sure that the mouse button hasn't been released yet. (StillDown could have been used, but WaitMouseUp is a bit cleaner since it removes the mouseUp event from the event queue.) If the mouse button is still down, GetNextEvent is called to determine the new coordinates of the mouse. The global mouse coordinates are then translated into local coordinates and tested to see if the cursor is still inside the editing rectangle. If so, the cursor location is translated so that (0, 0) is at the top left of the editing rectangle and the PointToXY function is called to translate the point into a fat bit pixel array location. If the color of the corresponding

Figure 1: Edit Window Data Structures

```
Type
EditInfo = Record
  WindowType : TypeOfWindow;      {Window type - will ALWAYS be Edit}
  SavedFlag : Boolean;             {Cursor is NOT dirty flag}
  Color : Integer;                 {Current drawing color}
  ParentWindow : grafPortPtr;     {GrafPort of window cursor belongs to}
  OriginalCursor : Handle;        {Handle of the cursor in the parent window}
  Cursor : Handle;                 {Handle to the cursor to edit}
  WhiteBitMap : Handle;           {Off screen bitmap to cursor drawn on white}
  BlackBitMap : Handle;           {Off screen bitmap to cursor drawn on black}
  BlueBitMap : Handle;            {Off screen bitmap to cursor drawn on blue}
  ImageRect : Rect;               {Cursor image frame rectangle}
  SizeRect : Rect;                {Size box frame rectangle}
  MaskRect : Rect;                {Cursor mask frame rectangle}
  ImageDataRect : Rect;           {Rectangle enclosing editable image area}
  MaskDataRect : Rect;            {Rectangle enclosing editable mask area}
  ImagePort : grafPort;           {Grafport for off screen editable image area}
  MaskPort : grafPort;            {Grafport for off screen mask image area}
  UndoCode : TypeOfUndo;         {Undo type}
  UndoCursor : Handle             {Undo cursor state}
End;
EditInfoPtr = ^EditInfo;
EditInfoHndl = ^EditInfoPtr;
```

Figure 2: Hit Inside An Edit Rectangle

```
StartDrawing (FrontWindow); {Set correct port and origin}

{While the mouse button is held down}
While WaitMouseUp (0) Do
Begin
    EventResult := GetNextEvent ($0000, CurrentEvent); {Get the cursor position}

    GlobalToLocal (CurrentEvent.eventWhere); {Convert position to local coordinates}

    {Make sure the cursor is in the editing rectangle}
    If PtInRect (CurrentEvent.eventWhere, EditRecord^.ImageDataRect)
    Then Begin
        {Convert position to local within the editing data rectangle}
        CurrentEvent.eventWhere.h := CurrentEvent.eventWhere.h -
            EditRecord^.ImageDataRect.h1;
        CurrentEvent.eventWhere.v := CurrentEvent.eventWhere.v -
            EditRecord^.ImageDataRect.v1;

        {Convert position to a point within the cursor}
        PointToXY (CurrentEvent.eventWhere, X, Y);

        {If the color for the point is not the DrawColor, change it}
        If GetColor (EditRecord^.Cursor, X + 1, Y + 1) <>
            DrawColor
        Then Begin
            DrawNewColor (EditRecord, X + 1, Y + 1, DrawColor);
            {DrawNewColor changes the origin, so set it back}
            StartDrawing (FrontWindow)
        End
    End
End;

NewBitMaps (EditRecord); {Editing is done so create new bit map samples}
InvalidCode := invBitMaps; {Prepare to invalidate the bit map sample areas}
```

pixel is the same as the draw color, nothing is done, otherwise the color of the pixel is changed with the `DrawNewColor` routine (which resets the origin, so a new `StartDrawing` call must be issued). The `DrawNewColor` routine sets the new color in the cursor image handle, draws the new fat bit rectangle to the window, and draws the new fat bit rectangle in the off screen grafont as well.

Undo

In order to implement undo, the `UndoCode` and `UndoCursor` variables are used. The `UndoCode` variable tells what kind of undo to perform, and the `UndoCursor` variable is a handle containing the previous cursor state to revert to. The `UndoCode` variable may seem rather useless since all the undo information can be obtained from the `UndoCursor` variable, but `UndoCode` helps to only redraw the parts of the window that need to be redrawn. For example, if the previous action had been to change the hot spot, all that needs to be done is to invalidate the image and mask rectangles so they are redrawn with the new correct hot spot. But, if the previous action had been to resize the cursor, new

bitmaps need to be generated for the edit areas, the cursor sample displays, and everything needs to be invalidated and redrawn. Right before any action takes place that can be undone, the `UndoCode` variable is set to the pending action and `UndoCursor` variable is set to a copy of the current cursor. Finally the action is performed on the current cursor. When an undo is actually performed, the `Cursor` and `UndoCursor` variables are simply swapped so the undo is only one "level" deep.

Low Level Routines

Most of the fat bits editor is written using ORCA/Pascal 2.0, but some very crucial routines that deal with the actual cursor structure are written using ORCA/C 2.0. I used C because the cursor structure is variable length and Pascal doesn't deal very well with variable length structures. In choosing to do things this way, I've done a pretty good deal of localizing all the cursor-specific routines. This means that if you re-write the C code, you could actually end up with a fat bits editor for just about anything. I'm not saying that it wouldn't take some work, but it wouldn't be all that difficult to do. You'd certainly have to change the Pascal

code that calls the routines to take into consideration new features that your editor would have, and to remove features it wouldn't have (namely hot spots).

Miscellania

Unrelated to fat bits editing, there are a few Anna Matrix tricks I'd like to share. First off is switching the graphics mode. While this was *much* easier than I thought it would be, it was difficult in ways I hadn't thought of. In order to switch graphic modes, `QuickDraw II` must be shut down and started up again. Fairly simple... until you realize that the `QDStartUp` call requires a pointer to some direct page space. If you've started up all your tools by hand then it's pretty easy to just retain that pointer for later use. However, if you've started up all your tools with the `StartUpTools` call then the direct page space for `QuickDraw II` has already been allocated. The only trick is to try and find out where it already is. Luckily, `QuickDraw II` stores this pointer in its `Work Area Pointer (WAP)` field. All you have to do is issue the `GetWAP` call and provide `QuickDraw II`'s tool set number and you'll get its direct page space pointer. Incidentally, most of the other tool sets that require direct page

space also work this way, as the guidelines for writing tool sets recommend this method. However, you can't *always* depend on this being true—the WAP area is just like a refCon field for a window, only the WAP has a suggested use.

And on another graphic mode switching note . . . you might notice that Anna Matrix has its own resource definition for the 320-mode cross cursor. The reason for

this is because the system resource for the 320-mode cross cursor (and the 320-mode-plus cursor, which Anna Matrix doesn't use) is incorrect! It looks like the 640-mode cursor was just copied and the flag that says it is a 640-mode cursor was cleared. As you may remember from the Anna Matrix article, going from 640 to 320 is not very pretty. Another thing to note is that the hot spot isn't translated correctly (Anna Matrix performs the translation automatically) so the system

320 cross cursor (and plus cursor) has a hot spot far to the right of its intended location.

I've given a description of the majorly interesting points here. You can, of course, browse through the source code to see how things are specifically done. If you have any problems with understanding how Anna Matrix works, let me know and I'll attempt to give a clear explanation. **GS+**

Miscellaneous Library

By Josef W. Wankerl

[Editor's Note: The Miscellaneous Library is not a stand-alone program! It is a programming tool that we think advanced readers of *GS+* Magazine will find very useful. It is intended for those doing advanced IIGS programming. The information provided here is an overview of what's new in the Miscellaneous Library and does not provide complete documentation for all of its calls—if you plan to use the Miscellaneous Library, read the *MiscLib.Docs* file (which is on your *GS+* Disk) for complete information!]

The Miscellaneous Library (*MiscLib*) is a collection of various routines I have found myself using over and over. They can be used from any language that supports linking to standard libraries, such as ORCA/C and ORCA/Pascal. For detailed assembly language stack diagrams on how to make the calls, and for a short description of the parameters, see the figures in the *MiscLib.Docs* file. (This file is located in the *GSP.V4.N5.SEA* self-extracting archive that is on your *GS+* Disk.)

List

The list section of calls has not changed except for, once *again*, the Pascal header file. Last time I finally got the *DeleteMemRec* call correct. This time,

I've changed the *AddMemRec* and *GetMemRec* functions. Although the old definitions worked, they would only work for a standard *memRec* record. If you wanted a custom *memRec*, you were out of luck because Pascal can't type cast parameters passed with a *Var* specification. Now, instead of coding *GetMemRec* (1, *MyMemRecHandle*, *sizeof* (*MyMemRec*), *MyMemRec*) you'll code *GetMemRec* (1, *MyMemRecHandle*, *sizeof* (*MyMemRec*), *@MyMemRec*) instead. See the *@* difference? Subtle, but it will let you perform a type cast so you can use custom *memRecs*. (Somebody should have told me that you couldn't use custom *memRecs* from Pascal—instead I have to find out the hard way by actually trying to use the *MiscLib* routines from Pascal myself!)

Pathname

There is one new routine in the Pathname section: *GetRezFilePath*. This routine returns a handle containing the pathname of an open resource file. I have used a similar routine from inside quite a few control panels in conjunction with the *PreferencePath* call, and I have finally decided that I don't want to code it any more. For the details on the new *GetRezFilePath* call, see the *MiscLib.Docs* file.

Patch

Over the years, I've done quite a lot of Toolbox patching. As any good programmer would, I've been reusing some old routines to get the job done. While I was rewriting *Cool Cursor*, I (finally) noticed how archaic the routines were, and I actually cringed at the thought of using them in such a beautiful new version of *Cool Cursor*. So I devised some new routines to aid in patching the Toolbox and threw them into the *MiscLib*. For all the gory details on patching the Toolbox, see the *MiscLib.Docs* file.

For the specifics on how to use the new routines (and all the other Miscellaneous Library routines) from your programs, break out the *MiscLib.Docs* file located in the *GSP.V4.N5.SEA* self-extracting archive on your *GS+* Disk.

If you have any questions about the Miscellaneous Library, send them in! I especially want to hear any suggestions you might have for additions to the Miscellaneous Library. Putting all of these routines in one place has already made my IIGS programming easier—I hope it does the same for you. **GS+**

Figure 1 The New Miscellaneous Library Calls

Patch Calls

<i>NewFPT</i> :	Creates a new blank function pointer table for a Toolbox patch
<i>PushEnvironment</i> :	Saves the environment for a Toolbox patch
<i>PullEnvironment</i> :	Restores the Toolbox environment and optionally dispatches to the real Toolbox routine
<i>SetFuncPtr</i> :	Installs a patch in a function pointer table

Pathname Calls

<i>GetRezFilePath</i> :	Returns a handle containing the pathname to an open resource file
-------------------------	---

FOR THE APPLE IIGS POWER TOOLS FROM LUNAR/PRODUCTIONS

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```
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```

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```
1C/4578: 22 B1 67 1C JSL 'Foobar'
```

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InWords v1.1 Ships!

After a very long wait, WestCode Software has finally announced that an update to InWords (the only Optical Character Recognition [OCR] software for the Apple II) is now available. This new version contains many new features and enhancements, including better handling of horizontal and vertical lines and faster and more accurate text recognition. Also, the new version has a new feature called Font Search, that automatically finds the best font table to use for a particular document.

According to the press release, InWords v1.1 began shipping in late April. All registered owners can upgrade for a measly \$5.00 (which is for shipping and handling). The retail price will remain at \$129.

As if that weren't cool enough, WestCode has also announced the release of *TableTrained*, a set of pre-trained font tables for use with InWords v1.1. This first *TableTrained* collection contains font tables for twenty (20) different publications: *II Alive*, *AppleWorks Educator*, *Car and Driver*, *Consumer Reports*, *Discover*, *Entrepreneur*, *Field and Stream*, *Golf Digest*, *Home Office Computing, Inc.*, *inCider*, *Men's Health*, *MotorTrend*, *National Review*, *New Yorker*, *Reader's Digest*, *Ski*, *Smithsonian*, *USA Today*, and the *Wall St. Journal*. When used in conjunction with InWords new Font Search feature, these tables should make a good starting point for training InWords to recognize just about any new fonts that you throw at it. *TableTrained* requires InWords v1.1, and the price is only \$9.95.

For more information on either of these products, contact:

WestCode Software, Inc.
15050 Avenue of Science, Suite 112
San Diego, CA 92128
619-487-9200

Spectrum Ready To Ship

Speaking of long delays, Seven Hills Software recently announced that their many-times-delayed IIGS telecommunications program, *Spectrum*, should be ready for release sometime in June (no exact date was given).

Among the many promised features are support for baud rates from 50 to 38,400, lots of file transfer protocols (including ZModem and CompuServe B+), a

scripting language that allows you to automate "almost anything" (including emulating a bulletin board), a built-in text editor (with support for ASCII Text, Teach, and AppleWorks Classic files), and multi-tasking when used under The Manager (also from Seven Hills, see review in GS+ V4.N4).

Spectrum will require System 6 or later, at least 1MB of RAM (of course, more will be better), and it should work with just about any modem.

The suggested retail price is \$129.95, but I've already seen it offered mail-order for less than \$80. Better still, you can trade up from any other telecommunications program for just \$60 (plus \$3.50 shipping) by ordering directly from Seven Hills. (And if you do it before July 31st, the upgrade is only \$50.)

Seven Hill Software
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566

Finger On the Button

Is your mouse button broken? It is? Well, if you don't want to shell out \$79 for a new Apple Desktop Bus Mouse II (see review in this issue), you should contact the folks at Kitchen Sink Software. For only \$29.95 (plus shipping), Kitchen Sink will fix your mouse button, complete with a one-year warranty on the parts and labor! (Note that they can *only* fix broken mouse buttons! If something else is wrong with your mouse, they can't fix it.) For more information, contact:

Kitchen Sink Software
903 Knebworth Ct.
Westerville, OH 43081
(800) 235-5502

Solutions For You II

With the demise of *A+/inCider*, you may be saying to yourself, "What's Joe Kohn (author of *A+/inCider's* popular "Grapevine" and "Shareware Solutions" column) going to do?" Well, Joe's going to be starting his own publication, and it's going to be called *Shareware Solutions II*. *Shareware Solutions II* is going to focus on all of the neat freeware, shareware, and public domain software that is available for the Apple II. And, in a continuation of the efforts he started while with *A+/inCider*, Joe will continue to make this software available to his readers through the mail.

In addition to discussions of freeware and shareware, each issue will contain Apple II hints, tips and "how-to" tutorials. *Shareware Solutions II* will also provide Apple II news and information on new Apple II products.

The first issue of *Shareware Solutions II* is scheduled for July publication (shortly after the last *A+/inCider* hits the streets), and will be available via subscription only. Subsequent issues will appear every other month, although Joe states that his goal is to eventually publish on a monthly schedule. Each issue will be at least 12 pages in length, and there will be no advertising. The North American subscription price is \$25 for 12 issues; for overseas air mail delivery, the cost for a subscription is \$40. Checks and money orders (in U.S. funds only) should be made out to "Joe Kohn," and should be sent to:

Joe Kohn
166 Alpine Street
San Rafael, CA 94901
U. S. A.

Full Speed Ahead

SHH Systeme has announced a new version of their Turbo IDE disk controller card, and a new price to go along with it! For those of you that don't know, the Turbo IDE is an expansion card that lets you use up to two IDE hard disks on your IIe or IIGS. (IDE hard disks are the type used by most IBM PC clones.) In addition, the Turbo IDE is a DMA (Direct Memory Access) card, so it operates these drives with about the same speed as a RamFAST/SCSI card operates SCSI drives. (I saw one in action at last year's KansasFest, and it was *very* fast!) Another feature of the Turbo IDE card is that it can be used as a replacement controller card for any of Applied Engineerings Vulcan disk drives! So, if you are tired of waiting on your Vulcan, this might be just the ticket to put a little pep back in your system.

The new price of the Turbo IDE is \$145 (U.S. currency) or 235 Deutsche Marks.

For more information, you can contact SHH Systeme on GENie at J.LANGE7 (an information file "TURBO.IDE.BXY" is also available on GENie in the A2 Library). If you prefer to use the InterNet, you can send electronic mail to "BEHRENS@INFORMATIK.TU-MUENCHEN.DE". Or, you can write to them at:

SHH Systeme
Bipl. Ing. Joachim Lange
Bergstrasse 95
82131 Stockdorf
Germany

X-Cellent!

ECON Technologies has just announced two things: the SoundMeister sound card began shipping in late April (see last issue's "What's New" for complete information), and a new line of external hard disks for the IIGS, the X-Drive. Not content to sell another "cookie-cutter" hard drive, ECON created the X-Drive to be an *expandable* drive. The X-Drive is about the same width as an Apple 5.25-inch drive and stands just a little taller than the main IIGS case. This "tiny-tower" design gives the X-Drive three device bays that can hold any 5.25-inch or 3.5-inch storage device. So, if you want, you can put a 525MB hard disk in the bottom bay, an 88MB SyQuest removable in the second bay, and a DAT tape backup drive in the top bay!

At this point in time, ECON is offering the X-Drive with installed hard disks in sizes from 42MB to 525MB and 44MB and 88MB SyQuest removable drives. ECON plans to add CD-ROM and other storage media options in the near future. For more information, check ECON's ad in this issue or contact them at:

ECON Technologies
P. O. Box 195356
Winter Springs, FL 32719
(407) 265-4209

Online Price Wars

On April 20th, America Online announced a new pricing structure for its services. Not to be outdone, GENie announced similar changes on May 24th. Let's take a quick look at each of these new pricing structures:

Effective May 1st, the monthly fee for America Online is \$9.95. This includes five (5) hours of access each month. After that, (beginning July 1st) each additional hour that you use is \$3.50. Sound good? Well, the best part is that America Online has done away with the notion of prime time and non-prime time! In other words, no matter what time of day (or day of the week) that you use America Online, the first five hours are included in your monthly fee, and every hour after that is only \$3.50. (Of course, special services, like reserving airline tickets and stuff like that will still cost extra.) It can't get much easier to figure out than that.

Effective July 1st, the monthly fee for GENie is \$8.95 (\$9.50 in Canada). This includes up to four (4) hours of non-prime time usage. Additionally, the basic hourly rate drops to \$3 an hour for non-prime time usage (\$4 an hour in Canada). While this means that GENie has pretty much cut their rates in half, they still charge an additional \$9.50 an hour for prime time usage (\$12 an hour in Canada). This brings the total cost to \$12.50 an hour if you log on during prime time—and your four free hours don't count during prime time. (GENie defines "prime-time" as between the hours

of 8 A.M. and 6 P.M. local time.) If you are communicating at 9,600 baud, there is yet another surcharge of \$6 an hour (\$8 an hour in Canada). However, in GENie's favor, I don't think that America Online offers 9,600 baud connections.

If you belong to either or both of these services, you can get more information by going to each services online billing system. For more general information on America Online and GENie, contact:

America Online
8619 Westwood Center Drive
Vienna, VA 22182-2285
Voice: (800) 827-6364

GENie
401 North Washington St
P. O. Box 6403
Rockville, MD 20849-6403
Voice: (800) 638-9636

Do you have a product or service that would be of interest to Apple IIGS owners? Let us know about it, and we'll let our readers know about it! Send your press release to:

GS+ Magazine
P. O. Box 15366
Chattanooga, TN 37415-0366

FAX: 1-615-843-3986
America Online: GSPlusDiz
GENie: JWanker!

GS+ Classifieds

Readers can place an ad in the GS+ Classifieds for only \$5. This cost buys 25 words in one issue of GS+ Magazine. Additional words are just 25 cents each. The GS+ Classifieds are a great way to contact thousands of other IIGS owners.

The deadline for inclusion of a classified ad in the next issue (Volume 4, Number 6) of GS+ is July 23, 1993. Simply send your ad along with your name, address, phone number, number of issues to run, and payment (made payable to "EGO Systems") to GS+ Classifieds, P. O. Box 15366, Chattanooga, TN 37415-0366; or call us at (615) 843-3988, Monday through Friday between 9 a.m. and 6 p.m. Eastern Time, to place an ad with your MasterCard or VISA. You can also FAX us your classified ad by calling our FAX number: (615) 843-3986.

Apple IIGS Software

The finest in public domain, freeware and shareware programs for the Apple IIGS. \$5/disk. Send for your free catalog:

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Contact:
Nite Owl Productions
5734 Lamar Lane
Mission, KS 66202

Glossary

In each issue of *GS+* Magazine, we present a glossary of some of the more common terms in the IIGS world and some of the more uncommon terms that we use in each issue. If you have a term or bit of jargon that you would like to see explained, let us know and we'll try to get it in a future "Glossary" installment. Also, don't forget about the glossary that's in your IIGS owner's manual! At this point, it contains many more terms than the *GS+* Glossary!

Past installments of the *GS+* Glossary can be found on your *GS+* Disk in the plain ASCII text file, *Glossary*, in the *Documentation* folder (which is in the *GSP.V4.N5.SEA* self extracting archive). (Entries marked with an "*" have appeared in previous installments of the *GS+* Glossary and are repeated here for our beginning readers or because they have relevance to topics discussed in this issue.)

Apple Desktop Bus (ADB)

The Apple Desktop Bus (ADB) is a standardized interface that is used by all Apple computers to communicate with keyboards, mice and other input devices. Because *all* Apple computers use this standard, you can usually use any ADB input device on the IIGS. However, to make use of these devices, you may need to have an appropriate device driver (see below).

Bit-mapped Font *

A bit-mapped font is a font whose characters are defined by a series of bits showing explicitly which pixels on the screen (or other output device) should be turned on or off to give the characters their shape. For each point size of a bit-mapped font, you need a separate bit-map showing the definitions of the characters in the font.

Command Key *

The Command Key (also known as the Open-Apple key) is a key that you press in combination with other keys to send commands to the program that you are using. These key combinations are known as "key equivalents" or "shortcut keys" that may be used instead of choosing an item from a menu.

For example, in the Finder, the menu item "New Folder" has a shortcut key combination of Command-N. To activate this item, you would simply hold down the Command key and then press the "N" key.

CD-ROM *

Basically, this is simply a compact disk (physically similar to the one's you buy at a music store), that can contain text, pictures and sound instead of just music. Generally speaking, CD-ROMs are not usable in an audio (music) CD player.

A CD-ROM can hold well over 600 megabytes of information, making it ideal for distributing large amounts of information (like an encyclopedia).

Cursor

A cursor is a small picture that appears on the computer screen to tell you where your mouse is currently positioned.

Device Driver *

A device driver is a piece of software (known generically as a "System Extension" on the IIGS) that allows the system to "talk" to a particular piece of hardware.

File System Translator (FST) *

File System Translators allow GS/OS to access different types of diskettes. At this point in time, FSTs exist that allow GS/OS to access ProDOS disks, High-Sierra CD-ROMs, and AppleShare file servers.

Font *

A given combination of typeface design, weight, size and style.

Font Family *

All instances of a given typeface design (for example, the "Times" family includes Times, Times Bold, Times Italic, etc.)

HFS FST *

This is a File System Translator that allows GS/OS to access Macintosh disks. The name of the Macintosh file system is the Hierarchical Filing System, thus the abbreviation HFS FST.

Installer *

The Installer is a program that automates the process of copying files. It is provided with the IIGS System Software and with many third-party software products (such as the *GS+* Disk). In the simplest terms, the job of the Installer is to "put the right files in the right places." By using the Installer (when provided) you reduce the possibility of the wrong file being copied to the wrong place.

Outline Font *

An outline font is a font whose characters are represented by a set of mathematical

equations. By scaling these equations, the characters in the font can be accurately rendered at any size.

Phosphor

The display on your IIGS screen is made up of tiny picture elements or pixels (see below). Each of these pixels is, in turn, made up of phosphors. In fact there are three phosphors in each pixel: a Red phosphor, a Green phosphor and a Blue phosphor. (Hence the term, "RGB monitor.") When these phosphors are "turned on," they glow in their respective colors. Since these phosphors are so close together, their colors blend together to form a single, colored pixel on the screen.

Pixel *

Pixel is short for "Picture Element." A pixel is the smallest dot that the computer can display on it's screen.

SCSI Device

A SCSI device is any device that uses the Small Computer Systems Interface (SCSI) to talk to other devices.

Screen Saver *

When you leave your monitor on for long periods of time without doing anything, you run the risk that the unchanging image on the screen will become "burned" into the the screen permanently. A screen saver helps prevent this from happening by playing an animation on the screen.

Small Computer Systems Interface (SCSI) *

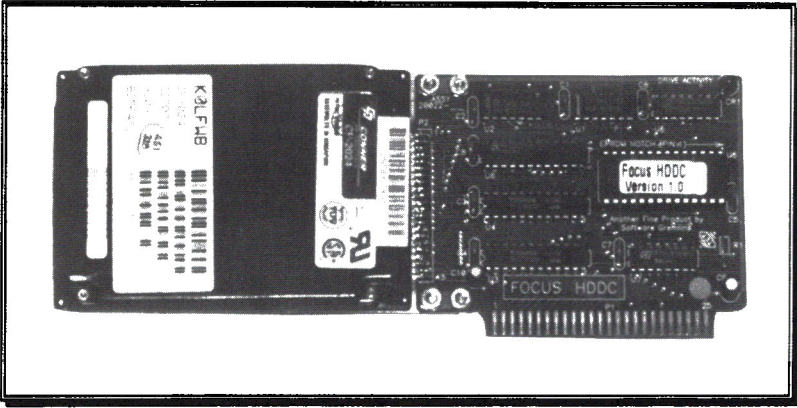
Put simply, the Small Computer Systems Interface is a standardized way for computers to communicate with peripherals (hard disks, scanners, etc.) Because it is a standard, a single SCSI device can be used on many different types of computers. For example, most SCSI hard disks can work "out of the box" with both the Macintosh and NeXT computers. With the appropriate SCSI adapter card, the same drive could be used on a IIGS, IIfx, Commodore Amiga, or IBM PC clone. The SCSI standard also allows devices to be be daisy-chained together so that you can have more than one SCSI device online at a time.

Typeface *

All sizes of a given font design, weight and style (such as "Times Italic"). *GS+*

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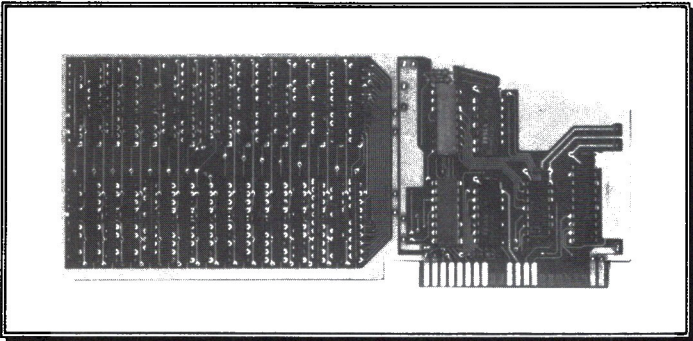
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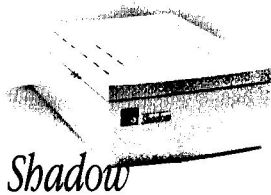


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