



September
October
1995

Volume 7
Number 1

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

AutoArk[™] v1.1 Finally Ships!

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Writer's Block

By Steven W. Disbrow

Believe it or not, I'm writing this editorial while this issue of *GS+* Magazine is at the printer. This page is actually being substituted for the "Writer's Block" that I had already written for this issue. So, what you read on this page will take precedence over some of the other information that you will find in this issue. Why am I telling you this? It's because I've got some very bad news . . .

It is with great sadness that I am forced to announce that this is the last issue of *GS+* Magazine. After six years, and thirty-seven issues, it has simply become impossible to continue publication.

As you might be able to guess, the main reason for this decision is money. Specifically, the lack of it. As I mentioned an issue or two ago, renewals have been off. Since then, renewals went through the floor and new subscriptions have been almost non-existent. I've tried everything I could think of to reverse this trend, but nothing has worked. The end result is that EGO Systems has no more money to publish *GS+* Magazine. So, I've reluctantly decided to pull the plug.

I know what you are thinking, "Hal! Now Diz will show his true colors and disappear like all the rest." Well, I'm not gonna do that. While *GS+* Magazine is ceasing publication, EGO Systems will stick around for just as long as possible. Specifically, we'll still be selling and supporting all of the back issues of *GS+* Magazine, as well as our other Apple IIGS and Newton products. We will also continue to sell Procyon's, Zip's, Animasia's and WestCode's products for just as long as there is a demand. Heck, we might even come out with some new stuff after the dust from this settles . . .

What About my Money?

Of course, if you're thinking ahead, you've figured that, if there's no money to publish *GS+* Magazine, there's probably no money left to repay your subscription. Sadly, this is true. But, that doesn't mean I don't intend to try. It's been my intention since day one of *GS+* Magazine to repay every penny of subscriber money, one way or another. So, here's what we are going to do:

First, check your mailing label. If it says "<*>Last Issue!*>" this was your last issue of *GS+* Magazine, so you've gotten all the issues you've paid for. (You can skip to the last paragraph if you want.) Otherwise, your label will have a dollar amount and a volume & issue number on it. (It will look something like this: "\$30.00/V7.N6".) This tells you how much credit you have in your account as well as when your subscription would have expired.

To translate this last issue figure into an actual number of issues that you had coming to you, use the following: V7.N2 = 1 issue, V7.N3 = 2, V7.N4 = 3, V7.N5 = 4, V7.N6 = 5, V8.N1 = 6, V8.N2 = 7, V8.N3 = 8, V8.N4 = 9, V8.N5 = 10, V8.N6 = 11, V9.N1 = 12.

After you figure out how many issues we owe you, you need to decide how you want to be repaid for those issues. Here are the options we are making available at this time

1) Back issues. You can take back issues for unmailed issues on a "1 for 1" basis. So, if you have five issues remaining, you can take five back issues. Just send us a list of the ones you want. (We'll pay the shipping. I'm not sure *how* we'll pay the shipping at this point, but we're going to try. If you'd like to throw in a little money [\$3 would be a good amount] to help us pay for shipping, I won't complain!)

2) Out of print Back Issues. If you have all of our available back issues, that first option might not appeal to you very much. So, for the first time ever, I'm making available *disks* containing the text of our sold-out back issues. Like regular back issues, you can take these on a "1 for 1" basis. So now you can have *any* *GS+* Magazine back issue you want. We'll also pay the shipping on these.

3) Use the credit that's shown on your label. If you don't just want back issues, you can use your credit towards the purchase of anything we sell. That includes AutoArk, Addressed For Success, *GS+* T-Shirts (*please!*), Balloon, or any of the third party products we sell. You can also use your credit to pay for multiple products, or to pay for shipping. You should figure shipping costs for the products you order as detailed in the ads in this issue. If you don't have enough credit to cover everything you want to get, send us your Visa or MasterCard information, and we'll bill you for the difference. You can also send us a check for the difference if you want, but it will be easier for us to bill an exact amount to a credit card. By the way, if you want to use your credit to buy back issues, figure their cost using the costs shown on the back issue information page in this issue. I realize it's more expensive that way, but it's just too much trouble for us to figure all the different costs involved. (By the way, the special back issue offer detailed in the a.Read.Me file on the *GS+* Disk is no longer valid.)

Remember, we aren't going out of business! We are just stopping publication of *GS+* Magazine. So, I intend to do everything in my power to keep your trust. (In other words, you needn't worry about sending us your credit card info.)

This also means that we are retaining the copyrights to all of our programs and all of the back issues of *GS+* Magazine. So please, if you know someone that wants copies, don't make copies for them, just send them our way.

Special Notes

If you are a magazine and disk subscriber, you'll get magazines and disks. If you are a magazine only subscriber, you'll just get magazines. When a paper version of a back issue is gone, we'll switch to the disk-based text version. If we don't have the T-shirt size you request, we'll substitute the next largest size. If you use your credit to order some of the third-party products that we sell, be sure to list alternate products that you want, just in case we are sold out of something and we can't get more! (In fact, be sure to list *lots* of alternate products!) Also, be sure to include a phone number (and the best time to call), or e-mail address that we can reach you at.

Expiration Date

Since we will probably have to move out of our offices soon (I plan on taking EGO Systems back into my basement.), we need to get all of these back issues out of here as soon as possible. So, this offer expires on *October 31, 1995*. After that, I'll assume that you've taken pity on me and you've decided to let me keep your money. (Not that I still have it . . .) Frankly however, I'd much rather get rid of all these back issues! Otherwise, they'll be going to the recycling plant on December 31!

Finally, over the next several weeks I'm going to attempt to sell off quite a bit of our office and computer equipment. The production of *GS+* Magazine was the main thing that we used it all for, so we really don't need a lot of it any longer. So, if you are looking for a particular piece of hardware or software, call me. The only catch is that I'll ask you to pay the shipping.

The Phones

As I said earlier, EGO Systems is very cash poor at this moment. However, I'm hopeful that this won't be the case forever, so the 1-800 number is still in service. Until then however, I'd like to ask that you not use the 1-800 number for calling to request your back issues or credit purchases. Instead, call us at 615-332-2087, or FAX your order to us at 615-332-2634. Better still, if you can, please e-mail your orders to me at Diz@genie.com or GSPlusDiz@aol.com. (Don't bother sending e-mail to my old Delphi account, I had to cancel it in a last ditch attempt to cut costs. It didn't work.)

The End

Well, that's it then. It's been a hard, but enjoyable six years. There were times that I truly thought that it would last forever, but there were far more times that I just wanted to curl up in a little ball and cry.

GS+ Magazine has always felt like my "baby." But it certainly couldn't have been delivered by me alone. So, I need to thank the following people for helping me to make *GS+* Magazine a reality through the years

First I need to thank my mom. She loaned me the money I needed to get this whole thing going. (And some day I might even pay her back!)

Even though they weren't around long, Susan Thoeming, Wilma Tucker, Michelle Davidson and Bill Moore all deserve recognition for putting up with me for as long as they did.

Michelle Ribaric deserves a *huge* thanks for getting *GS+* Magazine on schedule and keeping it there.

Thanks to Robert "Bob" Ribaric for making the workplace more fun and for doing all the tiny little crap jobs I could throw at him. He never complained and always had a smile and a cheese joke for us when the day started.

I've always thought of myself as the "Idea Man," but the truth is that Joe Wankerl had some great ideas himself. It would be a lie if I were to tell you that I could have done *GS+* Magazine without him. He always met his deadlines and he never wrote a bad program. In fact, I'd say that Joe's the best programmer that's ever touched an Apple II keyboard, bar none. Whatever platform he ends up on will be damn lucky to have him. Thanks for all your help Joe.

That brings me to Nory . . . People, if it weren't for this marvelous woman, there never would have even *been* a *GS+* Magazine. When I wanted to start this magazine, she was there with all the support any man could ever hope for. She helped with editing, layouts, testing, accounting . . . you name it, she did it. And, she never took a dime for any of the work she did. She's been with *GS+* Magazine from the beginning, and without her help and support, the end would have come much, much sooner. I love you Nory!

Finally, of course, I have to thank all of you. From our first customer (Mark DePeo Jr.), to our last, you guys have stood by *GS+* Magazine through bad times and worse times. You gave us your monetary and emotional support and we couldn't have done it without you.

Thanks, and farewell.

Diz

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GS+

Magazine

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Operations Director
ROBERT A. "CHEEZUS" RIBARIC

On the Cover

Get it? "Joah?" The animals
in the *automobile*? Get it?
Hey! This is high-concept
comedy here!

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Or phone Monday-Friday 9 am to 5 pm Eastern Time:
(800) 662-3634 (orders only)
(423) 332-2087 (technical support)
(423) 332-2634 (FAX—available 24 hours a day)

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EGOed - Text Editing
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We use a Power Macintosh 6100 as a file server because we have to.

Letters

Sirs,

For us Europeans, it is surprising how you Americans tend to omit the FAX number in your advertisements! This is essential for quick action, time differences, and language problems. On the other hand, 800-numbers are completely useless here. Please try to include FAX information regularly in *GS+* Magazine. That will certainly be positive in the shrinking Apple II market! I urgently need to know FAX numbers for Roger Wagner Publishing, Sequential Systems, and Seven Hills Software.

P. A. Benedetti
Pisa, Italy

Well, we really don't have any control over whether our advertisers include their FAX numbers or not, but I can get those numbers for you now! Roger Wagner Publishing - 619-442-0525. Sequential Systems - 303-665-0933. Seven Hills Software - 904-575-2015.
Diz

Hi Diz,

... My *GS+* V6.N6 disk had corrupt files on it. I was kind of suspicious when only applications that had resource forks had problems copying (i.e. Launch Alias). *GS/OS* kept saying the disk was damaged, even after a shift-boot. I ran it over to my Mac, and copied the file successfully. I guess my *IIGS* disk drive needs a cleaning. Not to imply that everyone who owns a *IIGS* also has a Macintosh, but it might be something you can suggest to people who have problems with disks ...

Steven Bytnar
Urbana, IL
Internet: s-bytnar@uiuc.edu

GS+:

I got so excited on learning of the availability of a reasonably priced CD-ROM drive that I put the cart before the horse and ordered one. It arrived and it is great. Now I need a CD-ROM to use in it! I looked through my back issues of *GS+* Magazine and found just three discs since I have only been subscribing for one year. They are GIFs Galore, the *AUGE CD #1* and the *Golden Orchard Apple II CD-ROM*. I want more than just those ...! Are there any others that I should consider?

George H. Murphy
Naperville, IL
Internet: G.MURPHY15@genie.com

*Well George, here's a list of all the CD-ROMs that we've reviewed in *GS+* Magazine: *The 1990 GEM Apple II CD-ROM (GS+ V4.N2)*, *The Key Fonts Pro CD-ROM (GS+ V4.N5)*, *the discQuest system (which gives you access to 16 CD-ROMs, and was reviewed in *GS+* V5.N5)*, *the discQuest Encyclopedia (GS+ V6.N1)*, *The AUGE CD #1 (GS+ V6.N2)*, and *the Golden Orchard Apple II CD-ROM (GS+ V6.N6)*. All of these CD-ROMs are pretty decent, but you should check out each review for complete information about them. (And yes, this is a shameless attempt to sell you some back issues.)*
Diz

Dear Diz,
What happens to *IIGS* sounds, *rSounds*, and music if I install a *ZipGS*? Does it speed them up so they sound like they are on drugs?

William R. (Bob) Dawdy
Tucson, AZ

*No sir. On the *IIGS*, sounds play back through the Ensoniq sound chip, which runs at its own speed, independent of any accelerator you install. The only sounds you would have to worry about would be "old" Apple II sounds that play by directly turning the speaker on and off. However, the *ZipGS* card is set up so that even these sounds and music play at the speed they were intended to play at. However, if you like, you can override this (using the classic desk accessory that comes with the *ZipGS*), so that your old Apple II sounds and music would sound like a bunch of chipmunks.*
Diz

Dear Steven:

... I am writing to you about the question [in *GS+* V6.N6] P. M. Lim from Singapore had about turning his Apple external 3.5-inch 800K drive into an external 3.5-inch 1.44MB SuperDrive. The answer is a definite yes!

I am a repair technician for an Apple Computer dealer and have done several of these upgrades for Apple II and Macintosh owners. All you need to do is replace the 800K drive mechanism (Apple service part #661-0345) with a 1.44MB drive mechanism (Apple service part #661-0474). The cables, daisy chain board, frame, and case are completely compatible. The only minor difference is the 1.44MB external drive from Apple has a yellow LED where the Apple 800K

external floppy drive has a red LED. But, who cares what color the read/write LED is? Apple has stopped making internal 800K and 1.44MB drive mechanisms so you may have a hard time finding one from an authorized Apple dealer that can do this for you. Apple only sells repaired drive mechanisms to authorized Apple dealers to exchange out a bad drive mechanism. Apple dealers are not authorized by Apple Computer to sell service modules to customers. If anyone is interested in getting an internal 1.44MB SuperDrive mechanism I would recommend one of the two following third-party dealers:

Contemporary Concepts
3365 Lamar Avenue
Paris, TX 75460
Phone: (903) 784-7348
Fax: (903) 784-1259

Compu Pro Services
1512 Montague Expressway
San Jose, CA 95131
Phone: (408) 383-9351
Fax: (408) 383-9355

One last thought: Make sure you order the *auto-insert* 1.44MB SuperDrive mechanism (Apple part number 661-0474). The new *manual-insert* 1.44MB SuperDrive mechanism (part number 661-0121) that is in all new Apple Macintosh/PowerMac computers is not compatible. It must have a hole cut in the case so that you can push the disk inside the drive manually.

Scott Jelsma
Creston, IA

Thanks for the info Scott! I'm sure this will come in handy for lots of our readers!

Diz

Dear *GS+* Publisher,
Your *NDA Balloon* is a wonderful idea only if you are using a desktop communication program [like *Spectrum*], but I still use *ProTERM*, which is an 8-bit program. Is it possible to write a CDA that would shrink and un-shrink files while I was online using *ProTERM*?

Rick H. Jenkins
Anaheim, CA

Well, yes, it is possible. But, you are the only person to ask for such a thing ... so I don't think we'll be doing it any time soon. (Unless of course, about a

thousand other people let us know that they would like to see it too!)
Diz

GS+:

I've just acquired an Apple II Video Overlay Card. The manual says, "You must insert the card in slot 3." I want to install it in my ROM 01 IIGS but . . .

I already have my TransWarp GS in slot 3. I see a suggestion in your review of the Second Sight VGA Video Card that a TransWarp could be moved to slot 4. However, the TransWarp manual says the card should be in slot 3 and the cable which attaches the TransWarp to the CPU socket is so short that I can't move the TransWarp to any other slot. Any suggestions?

Bob Steventon
Prince George, B.C., Canada
Internet: bstevent@cln.etc.bc.ca

Well, the most logical solution would be for you to build a new, and longer, cable to attach the TransWarp GS to the CPU socket. We printed information on how to do this in the "Letters" column of GS+ V6.N4 (in the third column of page 4 to be exact). The TransWarp GS should work fine from any other slot, after you have a cable long enough to let you move it!

Diz

Hi Steve!

I really liked your recent review of the Second Sight video card. I've been using one for a few weeks now and really like it . . .

The reason I'm writing was I ran into the same problem you mentioned about the screen "swimming" when using my original Apple RGB monitor. In my case it was really bad. To make a long story short, I found the source of the problem while fiddling with the knobs on the back of my monitor. After a very frustrating half-hour of pulling cards and trying different configurations, I accidentally knocked my clock off my desk while reaching behind the monitor . . . When the clock hit the floor, the screen settled down! It seems the Second Sight card makes the Apple RGB monitor very sensitive to nearby electric fields, perhaps even sources like the IIGS's power supply (my CPU sits under my desk where it doesn't seem to have any effect). So, the fix for a swimming screen is to make sure there aren't any electric sources nearby.

John L. Graham
Kettering, OH
Internet: ag847@dayton.wright.edu

Dear GS+ Magazine,
First, I want to thank you for that most brilliant idea, Rainbow v1.0.2. [From GS+ V6.N5.] I have only too often tried to move things around and got lost trying to arrange things on the screen so I could remember which folder to move from and which folder to move to.

Second, a letter in GS+ Magazine V6.N6 asked questions about HyperCard for the IIGS. As I have a copy of HyperCard IIGS, I would certainly be interested in seeing more concerning it in GS+ Magazine. You have my vote on reinstating your HyperCard column. Since ICON ceased publishing their HyperCard IIGS disk, I don't know of any other source than you for information/programs.

Third, kindly keep up the good work. There have been other interesting programs and problem-solving in your magazine that have sparked my interest!

Rodney G. Williams
Lakehills, TX

Thanks for the kind words, Rodney! You'll be happy to know that our HyperCard IIGS department, "HyperActivities" makes its return in this issue. You'll also be pleased to find out that Joe Kohn has rescued all of the back issues of ICON's Script-Central HyperCard IIGS publication. For more on this, check out "What's New?" elsewhere in this issue.

Diz

Diz:
Regarding the GS+ V6.N6 article on the Iomega Zip Drive, I would like to know if the Zip Drive can be shared by a Mac and a IIGS. My own setup is a Zip-chipped (9MHz) IIGS with a RamFAST SCSI card (version 2.something) with 4MB of memory and a 105MB HD; and an 8MB Performa 475 with a 160MB HD and CD-ROM. Currently the machines aren't connected to each other. How might they be connected?

Everardo Verguizas
Miami, FL
Internet: Skepticus@aol.com

Well, if you are asking "Can I plug this drive into my IIGS and my Mac at the same time?" the answer is a big "NO!" About the only way you can share this drive between the two machines is to either:

• Hook the drive up to the Mac and then make it available to the IIGS over AppleTalk. (See "Apple (Jive) Talkin'" in

GS+ V5.N1 for information on how to do this.)

• Hook the drive up to the Mac, do some work with it, disconnect it. Hook the drive up to the IIGS, do some work with it, disconnect it. Hook the drive up to the Mac, . . . etc.

So, your best bet would probably be to set up an AppleTalk network. I'd also recommend that you contact Sequential Systems (see below for how to contact them) about updating your RamFAST card to the latest ROM version!

Diz

Diz:
Your Internet address in GS+ Magazine is shown in two different ways. Which is correct? One is "diz@genie.com", the other is "diz@genie.geis.com".

Clifford Bruhn
Eureka, CA
Internet: cdb2@axe.humboldt.edu

They are both correct actually! You see, until recently, sending Internet e-mail to GENie required the longer version of the system address "genie.geis.com" ("geis" stood for "General Electric Information Services"). But, a few months ago, GENie shortened this to just "genie.com". Both addresses still work, but "genie.com" is now the preferred form.

Diz

GS+:

I have some questions for you regarding GraphicWriter III, since, I understand, you use it often.

1. Is there any way to preset what font and size it will default to? Now it defaults to some unknown font (no font in the font list is checked), which is too small and unreadable.

2. Is there a way to change the size of the document without distorting the fonts? If I use Scale To . . . in the View menu, and scale to the size of the screen, the fonts become distorted . . .

3. Is there a way to use TrueType fonts?

4. Why [do new documents always start] with 5 pages?

5. Is there a way to print graphics without a line around them?

[Here are some more questions for you.]

6. Are you selling Animasia 3-D? In "Writer's Block" in GS+ V6.N6 you said

to check the EGO Systems ads, but I didn't find it.

7. In your Second Sight review [in GS+ V6.N6] you seem to imply that Animasia is not compatible with Second Sight. [Is this the case?]

8. I remember reading somewhere that someone was going to write a patch so that we could use a DeskWriter 550 printer with the Print Shop IIGS. Is it available?

Rodney Avilla
Hilmar, CA

You got questions, we got answers! (I feel like that Beakman guy!)

1) According to the GraphicWriter III manual, the way to set a default font and size is to start up GraphicWriter III and then, with no documents open, simply select the options that you want as defaults from the GraphicWriter III menus. So, to set a default font of Times, 10 point, simply pick Times from the font menu and then pick 10 point from the Size menu. (All this is described in the "First Guided Tour" section of the GraphicWriter III manual.)

2) Sorry, but changing the scale of a document will pretty much always hose the way it looks. The only way this will ever change is if Seven Hills reworks GraphicWriter to work with the Second Sight video card.

3) To use TrueType fonts with GraphicWriter, you need Pointless. Once Pointless is properly installed, GraphicWriter will use your TrueType fonts just like it uses your bit-mapped fonts.

4) It sounds like your default document size is set to 5 pages. As in answer number 1, with no documents open, go to the Page Setup dialog and tell GraphicWriter III that you only want 1 page.

5) Sure. First, select the graphic, and then, from the Pen menu, pick the "None" menu item.

6) Yes, we are selling Animasia 3-D. But, due to a screw-up on this end, the ad didn't make it into the last issue. It's in this issue, though!

7) The Second Sight card does not, at the present time, support Fill Mode graphics.

Animasia 3-D uses this mode in the movies that it creates to make them play back as fast as possible. So, these movies won't play back properly through a Second Sight card.

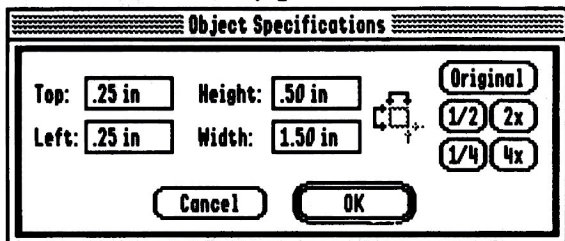
8) What you are referring to here is a project that Joe Kohn of Shareware Solutions II had started. Basically, Joe issued a challenge to the Apple II programming community to come up with a patch for Print Shop IIGS that would allow it to print to an HP printer. So, I contacted Joe to see what the status of the project was... Unfortunately, he told me that, so far, no one has been able to do it. But he also told me that he's taken another approach to beating the problem, namely, Shareware Solutions II recently published an article (in Volume 2, Issue 3) on how to design and print greeting cards on any type of printer, by using a page layout program. He also made a contest out of it (i.e. to see who could design the best card), and a collection of the best entries should be available by the time you read this. For more information, contact Joe Kohn at Shareware Solutions II, 166 Alpine St., San Rafael, CA 94901-1008. Badda-bing! Badda-boom!
Diz

It's Here!

GraphicWriter III – Version 2.0

v2.0 sports these **AND OTHER** new features:

- standard Font menu and Choose Font dialog box (compatible with Super Menu Pack!)
- Object Specifications lets you set an object's size and location by precise numbers



- supports the standard System Clipboard, including QuickDraw PICTures (which can be reduced to increase quality!)
- redesigned dialog boxes that can be navigated with the keyboard
- inch rulers now show 1/16th marks

Requires 1.25MB memory. Hard drive strongly recommended.

If you own any previous version:

Order the upgrade now for only \$25*

If you don't own GraphicWriter III:

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Dear GS+,

. . . I am writing an astronomy program using BASIC in Call Box (v2.0), and would like to print out star maps as made on the SHR screen, to an ImageWriter II printer. At the present time, I can save the screen to a file using a CDA utility, and then start up Deluxe Paint II to print it out.

The above is a clumsy, time-consuming method, and I would like to be able to use the printer driver from AppleWorks GS (v1.1), or some other appropriate driver, directly in the program. Is there a way this can be done? Thanks much for any ideas you might have.

Bob Zeier
Billings, MT

Well, Bob, I don't know much about Call Box, but the best way print out your maps would be to use the Print Manager. Be sure to check out the documentation for Call Box to see if it will let you access the Print Manager. If it does, check out "Working With the Toolbox - Part 15: The Print Manager" in GS+ V6.N3. If it doesn't, I'm afraid you're going to have to seriously think about abandoning BASIC for Pascal or C.
Diz

Steve:

. . . I recently bought a Macintosh and Apple laser printer for my wife and kids. I would like to use the laser printer with my IIGS (ROM 01) so I have decided to set up a network using the Mac as the file server. I read "Apple (Jive) Talkin'" in V5.N1, but I can't figure out how to apply the information in the article to my situation. I have a hard drive connected to an Apple High-Speed SCSI card in slot 7 which is my boot device. I also have a 3.5-inch drive and a 5.25-inch drive connected to the Smartport. What do I need to change to be able to connect my IIGS to the network?

Also, if I want to continue to use my HP DeskJet as a direct connect printer, how should I configure everything so that I can switch back and forth between the DeskJet and the laser printer?

Keith Hock
St. Louis, MO
Internet: keithhock@aol.com

Well, since you didn't say exactly how far you've gotten in trying to set up your network, I'm really not sure what bit of information in the "Apple (Jive) Talkin'" article is missing the mark. However, one thing I did notice is that you will have to move your SCSI card out of slot 7

in order to use AppleTalk on a ROM 01 IIGS. Slot 7 must be set to "Built-in AppleTalk" for a ROM 01 IIGS to go on a network. I'd recommend moving the SCSI card to slot 6 and losing the 5.25-inch drive (unless you use it a lot). Beyond that, you'll need AppleTalk connectors (one for each computer and one for the printer) and you'll need to install the appropriate system software, as described in the article.

As for using your DeskJet . . . Well, you could just hook it up to the other serial port (i.e. the one that the network connector isn't plugged into) and use it from there. If you've got a modem hooked to that port already, you could buy an A-B switch box and use that to flip between the modem and the printer. But, frankly, once you get a few pages out of that laser printer, you'll probably forget all about the DeskJet!
Diz

Dear GS+,
I've got two questions for you. I hope you can help me by providing some answers!

1) I love AppleWorks 5. But, I would love it even more if I could change the default Paper Length in the Standard Settings/Word Processor Options menu. Over here in Europe, we use A4 size paper which measures 11.67 inches long. AppleWorks assumes 11 inches as a default which is most inconvenient and I am tired of having to change it manually in the OA-O menu every time I start a new WP document.

I used to use AppleWorks 3, and after much trial and error I managed to patch the disk so that 11.7 inches replaced 11.0 as the default. For the life of me, I cannot find the relevant bytes to change in AppleWorks 5. Do you or any of your readers know how I can achieve this with AppleWorks 5?

2) I have a Casio SF-4300A Digital Diary which has a serial (3-pin connector) output to allow one to back up its contents to a computer. Unfortunately, Casio only sells a cable and software for PCs and Macs. I want to back it up on my good old IIGS. Why should I have to buy a new computer?

I have tried wiring the thing up to the serial port on the IIGS and also to a Apple Super Serial card that I salvaged from my old (long dead!) Apple II+ and have tried using various communications software packages, but to no avail. I realize that at best I would probably only get a raw ASCII dump from the Casio, but I am

willing to reformat the data by hand if I have to.

Again, can any of your readers help?

Marc Eskenazi
Surrey, England

Well, I certainly hope that some of our readers can help, because, sadly, I don't know the answers to either of your questions. So how about it? Does anyone else out there have the information Marc is looking for?
Diz

GS+:

[I have a question about] AppleWorks GS v1.1 If I use the Save As menu item, the directory window displayed is on the third partition of my hard drive. AppleWorks GS is on the first partition. I believe it used to display the directory that I save AppleWorks GS documents to, which is a subdirectory of the first partition. The Save command saves to that directory. Why doesn't Save As go to the same directory? How can I change it back to the way it used to be? I don't even know how it changed. I used Save As and chose the proper hard drive partition in the hopes of teaching it, but it still goes back to the third partition the next time I try Save As.

Bill Abate
Roslyn, PA

This is a known problem when using AppleWorks GS with System Software v6.0.1. Now, I was going to tell you that Softdisk G-S had published a patch program that fixed this (because I'm pretty sure they did), but I haven't been able to find it on any of my back issues, and I haven't been able to get through to their technical support to find out for sure if they published it or not. It might have been a freeware program, but none of us here at the office can remember for sure. Can anyone out there help me out here? (Maybe I dreamed the whole thing?)
Diz

Dear Diz,

I received my Second Sight card a few days after reading your review. I'd like to alert you to a hardware incompatibility that I've found (and reported to Sequential). My Apple II Memory Expansion ("Slinky") Card won't work with Second Sight installed. During boot, a message that ". . . volume /RAM6 may be damaged . . ." appears and when the Finder starts displaying the drives, it pops up an invalid disk format for /RAM6, and prompts me to eject or

format it. Formatting causes the Finder to hang. I've tried a minimal boot and disabling the A2.RAM GS/OS driver without success.

This isn't a catastrophe, since I could set up a IIGS RAM disk (and use the slot for my Quickie), but the Slinky has served faithfully for ten years and was great for surviving crashes and reboots (short of self-diagnostics or a power off) . . .

David Kavanaugh
Overland Park, KS
Internet: 74220.2637@compuserve.com

I sent your letter on to Jawaid at Sequential Systems, and here's what he said . . .

David, we are aware of the problems with Second Sight boards with serial numbers above 2,000, and have found a solution.

Your problem can be quickly remedied (without sending the board back to Sequential) by simply clipping the capacitor from the back of the board. The capacitor is soldered directly to the gold-fingered edge connector (the one you plug into a slot in your IIGS). There is a blue wire also attached to one pin; be VERY CAREFUL you do not cut the blue wire as well! A standard pair of wire cutters will do the trick.

If you do not feel comfortable doing this modification, call Sequential's technical support at 800-999-1717 and we'll issue an RMA (Return Merchandise Authorization) to fix your board. The actual proper fix involves putting a different part on the board in a slightly different configuration, but clipping the capacitor will work in 95% of situations.

*In addition to the Slinky memory card, other peripheral cards that may exhibit problems are the RamFAST SCSI card, TransWarp GS, and the Apple II SuperDrive Controller Card.
Jawaid - Sequential Systems*

Diz:
. . . This isn't really your problem, but it occurred to me you just might be able to help, or know someone else who can.

A colleague here in Perth bought a "Hard Card" from Zip Technologies a couple of years ago. The little 2.5-inch Conner hard disk on the card suffered a head crash some time ago, and he was able to get it replaced very cheaply through a local second-hand computer dealer. The big question now is "How to format it?" The device originally arrived from Zip without

any documentation or software; it was already formatted and ready to use. He has tried all of his ProDOS utilities, but nothing works . . .

. . . Have you guys ever seen one of these things, or know anyone who has? I'd really love to get a solution to this.

Peter Hinchliffe
Perth, Western Australia
Internet: hinchlif@numbat.murdoch.edu.au

*The "Hard Cards" that were sold by Zip Technology later reverted back to their designer, Parsons Technology, and became known as the "Focus Drive." In the last few months, Parsons sold the Focus Drive, lock, stock, and barrel to Alltech Electronics. Of course, there should have been formatting software with the drive your friend bought, but it was most likely on the hard drive itself, and was probably lost when the drive crashed. I called Tony Diaz at Alltech to find out if they have the software, and he told me that, due to differences in the ROMs that the Zip Hard Card used, he doesn't have the software, yet. But, he is working on it. For more information, you can call Alltech (ask for Tony Diaz) at 619-724-2404 or FAX them at 619-724-8808 for more information. You can also send e-mail to Tony at T.Diaz@genie.com.
Diz*

Diz:
On May the 30th I ordered by FAX several items from you . . . [and I would like to] take this opportunity to comment on two minor issues, which by themselves wouldn't justify writing you:

1) Neither the Pointless software nor the TypeWest font collection came with a registration card (or, for completeness sake, a change of address card; TypeSet included both); of course, I'm simply going to send the relevant information to WestCode on a separate sheet for the registration.

2) I was charged for an Air Mail fee of \$47.00 (the exact amount I precalculated from your information), but I expected to see a small savings with several items in one shipment (as hinted at in the ordering instructions for the GS+ Magazine back issues); and in fact the envelope carried a postage stamp for \$42.65. Did I misinterpret something?

In general, I want to applaud you for your mail-order offerings, since they make a significant number of Apple IIGS products easily available to non-US customers. Before seeing your announcement on comp.sys.apple2.marketplace, for example, I had already tried to get Pointless directly

from WestCode earlier this year, without any success . . .

Matthias Kapffer
Wiesbaden, Germany
Internet:
kapffer@Informatik.Mathematik.Uni-
Mainz.DE

Thanks for writing Matthias! In answer to your questions:

1) WestCode didn't send us any registration or change of address cards in the first "batch" of Pointless or TypeWest that we got from them. Your solution of just sending them the information should work fine. (Just be sure to mention that you bought the products from us so that they can double check it with us if they feel they need to.)

*2) You didn't miscalculate. The shipping fees that we print for Air Mail are used to cover not only the postage, but also the cost of the mailer (Which in your case, cost over a dollar all by itself—it was a big envelope, no?), and the time it takes us to package and process the order. Yours was a large order, which took quite a while to process and package, so our total cost probably came out to a bit more than \$47. (I guess the best way to think of our mailing fees is as a maximum that we would charge.) On the other hand though, if an order is small, and the cost to actually mail it (including postage, packaging, and processing time) is less than the printed fee, we'll charge the lesser amount.
Diz*

We can't read your mind! If you have something to say about GS+ Magazine, you have to let us know! So don't just sit there and stew! Write us a letter! If you don't, it's nobody's fault but your own!

Due to space limitations, letters may have to be edited and we can not answer every letter here in GS+ Magazine. If you want a personal reply, please include an e-mail address (preferred), a daytime phone number (and the best time to call), or enclose a self-addressed, stamped envelope with your letter. If you don't include one of these things, we will try to answer your letter in a future issue of GS+ Magazine.

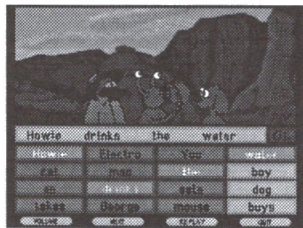
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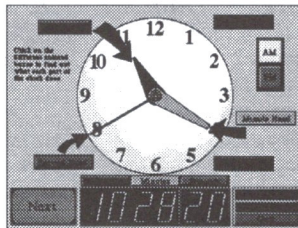
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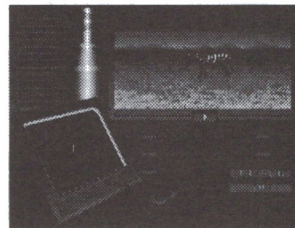
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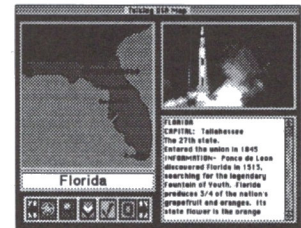
Talking First Writer



Talking Clock



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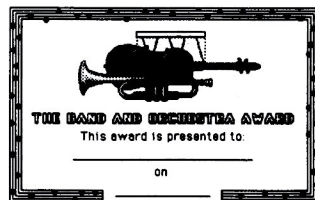


Talking U.S.A. Map

Language Skills/Early Learning

- Talking Speller I
- Talking Speller II
- Talking First Reader
- Talking First Writer
- Talking Clock
- Talking Money
- Talking First Words
- Talking ABC's
- Talking First Dinosaur Reader
- Talking Colors & Shapes
- Talking Reading Railroad
- Talking Animals Activity Set
- Talking Dinosaurs
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- Talking Classroom
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Super GS Award Maker



Science

- World of Nature
- Jungle Safari
- Weather

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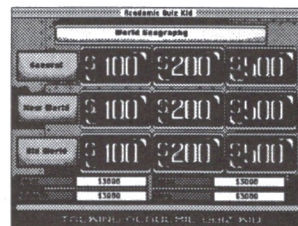
- Cloze Technique: Greek Mythology
- Global Express Atlas
- Talking USA Map

Math

- Space Shuttle Word Problems
- Talking Multiplication & Division
- Talking Addition & Subtraction
- Math Story Problems
- Talking Numbers

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GS+ Back Issue Information

Jan-Feb 1991 (V2.N3)

- AppleFest/Long Beach '90 & Apple II Achievement Awards
- Interview with Jim Carson of Vitease, Inc.
- Introduction to System Software v5.0.4
- RAM Namer - A CDev that allows you to rename RAM disks
- Reviews: ZipGSX, LightningScan, Design Your Own Home, Print Shop Companion IIGS, Your IIGS Guide, Dragon Wars, 2088: The Cylonian Mission - Second Scenario, Space Ace, Sirbad & 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
- 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: Bard's Tale IIGS

Jul-Aug 1992 (V3.N6)

- KansasFest 1992
- Introduction to 3-D Graphics - Part 3: Speeding Things Up
- Working with the Toolbox - Part 8: The Control Manager
- Understanding FSTs
- Using Bundles in Your Programs
- Quick Folder - Open folders from the Finder's Extras menu.
- Extra Bits - A Control Panel that lets you change the BRAM parameters that System 8 didn't provide a Control Panel for.
- Reviews: ZipGS (10MHz/64K), 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.
- II Notes - A 20-page NDA notepad.
- Miscellaneous Library - A collection of useful routines to use from any language that supports linking to standard libraries
- 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 to display and print any font.
- Reviews: AutoArt, 1990 GEM Apple II CD-ROM, IIGS System Transport Case, Out of This World, TrueType Font Collection, Universe Master, 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
- Rainbow - Change the colors of your Finder device icons
- GS+ program updates: 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, Art Wars, FloorFiles, Quest for the Hoard

Mar-Apr 1993 (V4.N4)

- Beginner's Guide to Finder v6.0
- Working with the Toolbox - Part 10: LineEdit
- LASERbeam - Download PostScript files to a PostScript printer
- Font Memories - Keep your bit-mapped fonts on any disk
- EGOed lite - a smaller, faster version of EGOed
- GS+ program updates: Rainbow v1.0.1, NoDOS v1.8
- Reviews: Salvation—Deliverance, DreamGraphix, The Manager, The Passport House Letter, The Lost Tribe, DuelTris

May-Jun 1993 (V4.N5)

- Only 30 copies left!
- The Scavenger - Use CD-ROMs from other computers on a IIGS
- Anna Matrix - a Cool Cursor Editor
- GS+ program update: Cool Cursor v2.0, Miscellaneous Library
- Reviews: Apple Desktop Bus Mouse II, Baccarat, Key Fonts Pro CD-ROM, MAZER II: The Ghost of Mordaine, Pick 'n' Pile, Shanghai II: Dragon's Eye, Solarian GS, Twilight II, TypeWest

Jul-Aug 1993 (V4.N6)

- System 6.0.1—For Users
- KansasFest 1993
- Catch the .WAV: A Guide to Scavenging Sound Files
- Secrets of Writing Twilight II Screen Blankers
- Finder Binder: Avoid the "An application can't be found for this document" dialog by connecting documents to an application
- GS+ program updates: AutoSave v2.0, EGOed lite v1.0.1, Extra Bits v1.0.1
- Reviews: Castle Metacrus, HardPressed, The Lost Treasures of Infocom, Treasures From Heaven: Quest for the Hoard 2, Your Money Matters, Zip Drive

Sep-Oct 1993 (V5.N1)

- So You Bought a Hard Disk... Now What?
- Apple (Live) Talkin'
- An Introduction to Object Oriented Programming
- File Dump: A complete Object Oriented Programming example
- GS+ program updates: Anna Matrix v1.0.1, Cool Cursor v2.0.1
- Reviews: Applied Engineering's High Density Disk Drive, Apple II SuperDrive Controller Card, MODZap, soniqTracker, ORCA/Pascal v2.0.1, SoundMeister, TypeSet

Nov-Dec 1993 (V5.N2)

- IIGS Maintenance—Part 1: The Mouse and Keyboard
- SCSI ("Simple Connections," Says Igor.)
- Balloon v1.0: A Finder extension that lets you extract files from Shrinkit Archives
- CD-ROam: An application that scavenges files off CD-ROMs
- KaBloote! A IIGS version of the game Minesweeper
- Reviews: 3D Logo, Focus Drive Hard Card, Prism, Tulin Floptical Disk Drive

Jan-Feb 1994 (V5.N3)

- IPC (Igor's Playful Code) - A guide to using IPC on the IIGS
- EGOed v2.0: Read and write RTP files, plus a new color menu
- MIDI Surgeon: Convert MIDI data files to MIDI Synth format
- Reviews: Ancient Glory, Apple Extended Keyboard, AudioClips, GNO/ME 2.0, HP DeskWriter 550C Printer, HyperLogo, NCS Pro 240 Hard Disk, Pedigree

Mar-Apr 1994 (V5.N4)

- Programming the IIGS - Part 1: Getting Started
- Playful - A Finder extra that plays ALL rSounds in ANY file!
- What Is This? - Get formation on any icon you select.
- LASERbeam v1.1 - Now, download PostScript files and FONTS to your PostScript printer!
- Miscellaneous Library - Now you can read Macintosh resources!
- Reviews - Addressed for Success, ORCA/Debugger vs. Splatt!, ORCA/Modula-2

May-Jun 1994 (V5.N5)

- Programming the IIGS - Part 2: Programming the IIGS
- Mr. Priceguide Looks at Hard Disks - Advice on buying a hard disk mechanism.
- FLI Convert - An application that converts PC FLI animations into PaintWorks animations!
- MoreSound - An application that lets you change the events in the Sound control panel.
- Reviews - DiscQuest, MS-DOS File Utilities, Salvation: Backup v2.0, Spectrum

Jul-Aug 1994 (V5.N6)

- Programming the IIGS - Part 3: GS/OS and the Toolbox
- So You Bought a Hard Drive Mechanism. Now What?
- Working With the Toolbox - Part 12: Standard File
- Clip On - View the System Clipboard from any desktop program
- Sun Dial - A great new clock NDA
- What To Do - NDA to do list manager
- Reviews - Six Pack, The Tines

Sep-Oct 1994 (V6.N1)

- Halloween Fun With Your IIGS
- All About IIGS Graphic Formats
- Find Original - Easily locate the files your Finder aliases point to
- Table Scraps - The best IIGS scrapbook program yet
- Reviews: DiscQuest Encyclopedia, Quick Click Calc

Nov-Dec 1994 (V6.N2)

- Programming the IIGS - Part 4: Program Building Blocks
- Everything you need to know about buying a laser printer
- Working With the Toolbox - Part 14: The TextEdit Tool Set
- Copy Icon - Copies icons from the Finder desktop
- Elucidation - Edits Finder File Type Descriptor files
- Geeker - Edits the Finder's "geek" preferences
- Ultimater I - An Ultima I game and character editor
- Reviews: AUGC CD #1, The SimpleScript Workbook, Ultima I - The First Age of Darkness

Jan-Feb 1995 (V6.N3)

- How to shop for a modem
- All about Nifty List
- Working With the Toolbox - Part 15: The Print Manager
- The GS+ XCMD for Spectrum v2.0
- ElfieFont - View any font, just by double-clicking on it!
- GS+ program updates: Cool Cursor v2.0.2, AnnaMatrix v1.1
- The GS+ FAQ File
- Reviews: Financial Genius, GS Invaders, Stalactics, Switch-III

Mar-Apr 1995 (V6.N4)

- How to buy a CD-ROM drive for your IIGS
- Programming the IIGS - Part 5: TaskMaster
- Special Edition - Alerts you to changes in edition files
- GS+ Magazine Policies or "Where's my magazine?"
- GS+ program updates: II Notes v2.0, Finder Binder v1.0.1
- More of the GS+ FAQ File
- Reviews: Contacts GS v2.0, FAXination

May-Jun 1995 (V6.N5)

- The Beginner's Guide to Archives
- Understanding IIGS Icons
- ICE - Finally, an icon editor that handles both Finder icons and ricons!
- GS+ program updates: II Notes v2.0.1, Rainbow v1.0.2
- More of the GS+ FAQ File
- Reviews: Arimasias 3-D, Blockade, Cogito, BlueDisk PC floppy disk controller

Jul-Aug 1995 (V6.N6)

- Mr. Priceguide Investigates VGA Monitors
- DocAlias, Launch Alias and Find Original v1.1 - Three utilities that make IIGS aliases more useful than ever!
- MIDI Surgeon v2.0 - Faster and more powerful!
- Reviews: ANSITerm v2.12, Golden Orchard Apple II CD-ROM, Iomega Zip Drive, Second Sight VGA Video Card

Back Issue Prices

\$5 For Each Magazine - \$6.50 For Each Disk
\$10 For Each Magazine and Disk Set

All programs require System Software v6.0.1 unless otherwise noted.

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An Introduction to Aliases

By Steven W. Disbrow

In our last issue, we published three alias-utility programs (DocAlias, Find Original, and Launch Alias) that we thought would help every IIGS owner use their IIGS more productively. Unfortunately, what we didn't realize was that a *lot* of IIGS owners really have no idea what an "alias" is!

So, in an effort to fill in this knowledge gap, this article will explain what an alias is, how a IIGS alias differs from aliases on the Macintosh, and how you can use aliases (and those three programs from the last issue) to become more productive with your IIGS.

What Is It?

Out in the real world, an "alias" is an identity or name that someone assumes in order carry out a deception. In the world of computing however, an alias is far less sinister. In computing, an alias is a *file* that points or refers to *another* file, which is called an *original* file. Later, when you open the alias file, the original file will be the one that is actually opened. Usually, the alias and the original file it points to will be on different disks (or at least be in different folders) and they will usually have different names.

"Points? Refers?"

So, what exactly do I mean when I say an alias file "points to" another file? Well, consider an alias file that points to a folder. (In case you didn't already know, a folder is just a file, a special kind of file to be sure, but just a file nonetheless.) When you open the alias (perhaps by double-clicking on it in the Finder), the system looks inside the alias and sees the name of the folder that it points to. The

system then opens the original folder instead of the alias itself. So, if you were in the Finder, and you double-clicked on an alias to a folder, the Finder would open the original folder that the alias pointed to instead!

So What?

OK, so why is this useful? Well, let's assume that you have a folder that's a couple of folders deep on your hard drive. Let's further assume that this is a folder that you open a *lot* because you are always using the program that is in it. In fact, let's assume that the folder's pathname is `:HD1:Apps:Telecom:Shareware:xtcTerm`. So, whenever you want to open this folder, you have to go through the following steps in the Finder:

- Open the disk `:HD1`
- Open the folder `Apps`
- Open the folder `Telecom`
- Open the folder `Shareware`
- Open the folder `xtcTerm`

That's five steps you have to take just to open a single folder! And when you've finished, your desktop will be cluttered with windows!

Now, let's say that you make an alias to this folder and you save it on `:HD1` in an alias file called `xtcAlias`. In this case all you have to do is:

- Open the disk `:HD1`
- Open the `xtcAlias` alias file

As soon as you double-click on the `xtcAlias` file, the Finder will see that you want to open an alias file, look inside it, and then open the folder

`:HD1:Apps:Telecom:Shareware:xtcTerm` instead. That's all there is to it!

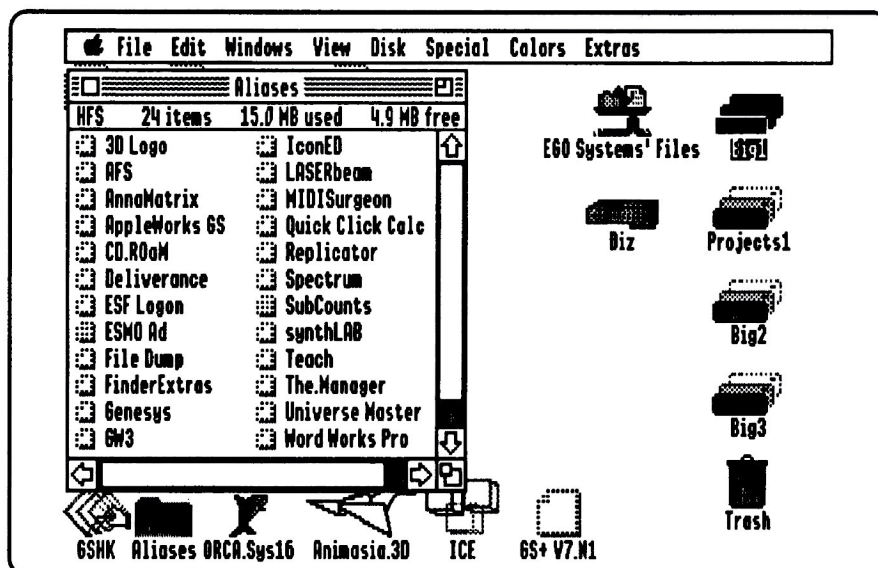
IIGS Aliases

Alias files and the concept of aliases (as they are used on the IIGS) were actually adapted from the alias file concept as it is used on the Macintosh. On the Mac, alias files can represent just about any kind of computing object: a disk, a file server, an application program, a folder, or a data file. Another important point about Macintosh alias files is that you can use them from *any* properly-written Macintosh program. So, for example, if you have an alias that points to a data file, you can use that alias from the Mac's Finder, from Microsoft Excel, or any other Macintosh program. The reason for this is that support for the alias concept, and alias files, is built into the Mac operating system at just about every level. (Note that OS/2 and Windows 95 also support the alias concept. In OS/2, alias files are called "shadows," and in Windows 95, alias files are called "shortcuts.")

Unfortunately, when Apple brought aliases to the IIGS, they implemented them in a much more limited fashion. Specifically, instead of having support for aliases built-in to GS/OS, alias capabilities on the IIGS were originally supplied by a single Finder extension called EasyMount. (To give the IIGS Mac-equivalent alias capabilities would require either a re-working of the operating system and the Toolbox, or a monster set of patch programs!) So, right off the bat, this meant that EasyMount alias files could only be used from inside the Finder! To make matters worse, the first version of EasyMount (which came with System Software v6.0) would only let you create aliases for *file servers*! You simply couldn't make aliases to folders, applications, or anything else.

Fortunately, when System Software v6.0.1 came out, Apple enhanced EasyMount to allow it to create aliases to two other types of files: folders and applications. Unfortunately, this means you still can't use EasyMount to make aliases to document files. (This is why we wrote and published DocAlias in the last issue. It lets you create aliases for any kind of document file.) And, since EasyMount and DocAlias are still just Finder extensions, you can't use their alias files outside of the Finder.

This would probably be a good place to point out why we wrote Launch Alias. Since EasyMount and DocAlias are both



To Make an Alias

Making an alias on the IIGS is simple. First of all, you have to make sure that the appropriate software is installed on your IIGS. If you've installed System Software v6.0.1 on your IIGS, you've already got EasyMount installed, it's part of the basic installation! To install DocAlias, follow the instructions in the "DocAlias" article in *GS+ V6.N6*. When the installation is finished, reboot and you'll be ready to go through these examples!

After you have EasyMount and DocAlias installed, go to the Finder. Then locate a file that you want to make an alias for. As an example, let's make an alias to the **System** folder on your boot disk. Once you get to the Finder, double-click on your boot disk to open it. Then, in the window showing the contents of your boot disk, find the folder named **System** and click on it *once* to select it. Now, pull down the Extras menu and select the Make Alias menu item. You will then be presented with a Standard File dialog asking you where you want the alias to be saved. For this example, change the name in the Standard File dialog to "SysFolderAlias" and save it on your boot disk.

After the dialog goes away, you should see a new alias file called **SysFolderAlias** on your boot disk. Move this file out onto the desktop and then close the window showing what's on your boot disk. Now, double-click on the **SysFolderAlias** alias file and Shazam! Your **System** folder should be opened!

Now let's make a document alias using DocAlias. First, we need a document file. For this example, we'll use the **a.Read.Me** file that is on your *GS+* Disk. So, insert your backup *GS+* Disk into a drive and then open it using the Finder. Next, click on the **a.Read.Me** file *once* to select it and then pull down the Extras menu and select the Make Document Alias menu item. As before, you will be presented with a Standard File dialog asking you where you want the alias to be saved. For this example, change the name in the Standard File dialog to "read.me.Alias" and save it on your boot disk.

After the dialog goes away, you should see a new alias file called **read.me.Alias** on your boot disk. Move this file out onto the desktop and then close the window showing what's on your boot disk. Now, double-click on the **read.me.Alias** file. At this point, the Finder will either launch the Teach application (which will load the **a.Read.Me** file from your *GS+* Disk for you to edit) or EGOed lite will open (if you have it installed) and show the **a.Read.Me** file to you!

Finder extensions, they become unavailable if you deactivate them or if you shift-boot your IIGS. ("Shift-booting" is when you hold down the shift key when your IIGS is starting up. This will disable all of your system extensions [desk accessories, Finder extensions, control panels, and the like], until you reboot again.) When these Finder extensions are unavailable, the alias files that you've made with them become useless! Launch Alias is an application program that fixes that. Here's how: When you open an alias file, and neither EasyMount or DocAlias is around to figure out what it is pointing to, the Finder runs Launch Alias. Then it's Launch Alias' job to figure out what that alias file was pointing to and then open the appropriate file, just like the Finder would if EasyMount or DocAlias was installed at that time.

Big Deal

At this point, you might be thinking that aliases on the IIGS are pretty worthless compared to their cousins on the Macintosh. While it is true that IIGS aliasing is limited to working inside the Finder, it's also true that, when used creatively, IIGS aliases can be very useful indeed!

For Example(s)

If your IIGS is part of an AppleTalk network, the single most useful thing you can do with an alias is make an alias to your file server. This alias can even hold your network password, so that all you

have to do to log onto the server is open the alias!

Another good use of aliases is to make it easy to find commonly used files. For example, every two months, we send out renewal notices to our subscribers. We use the same notice over and over, so it helps to be able to find it easily. Unfortunately, the notice is buried about 7 folders deep on our file server, so, I sometimes have trouble remembering exactly where it is. So, I used DocAlias to make an alias to the file. I put this alias into a special **Aliases** folder (which stays on my desktop), so all I have to do is open the **Aliases** folder and then open that document's alias. A few seconds later, I'm ready to print out my renewal notices! (And, if for some reason I ever needed to know exactly where the original file was, I could just select the alias in the Finder and then use the Find Original utility [also from last issue] to show me exactly which file that alias was pointing to!)

Speaking of my **Aliases** folder, that's another way to use alias files: put a bunch of them together in a folder and then put that folder (or even an alias to that folder) out on the desktop so you can get to it quickly. I personally just have aliases to everything that I use frequently in my **Aliases** folder, but you can break things up more logically than that if you want. You could have a folder called **Paint** that contained aliases to all of your paint programs. You could have an alias

called **Eight.Bit** that contained aliases to all of your 8-bit programs. In other words, you can arrange all of your files however you want, without moving them or making copies of them, just by using aliases!

Speaking of 8-bit programs, here's another neat way to use an alias... Keep your aliases on an HFS disk, and then you can use long, descriptive file names to tell you exactly what the alias is pointing to. For example, if you've got an 8-bit program with a cryptic file name like **aplwrks.system**, create an alias to that file, save it on an HFS disk and call it "**AppleWorks Classic v9.9**". Heck, you could even include the quotes in the name if you wanted to!

These examples are really pretty basic ways to use aliases on the IIGS. Still, they should show you that, even with the limited IIGS implementation of aliases, they can be very useful.

John Doe Has Left the Building

Hopefully, this article has helped you get a better understanding of what alias files are and how you can use them on your IIGS. I also hope that I've convinced you to dig out your copy of *GS+ V6.N6* and take another look at those three programs. If you have any questions on this article, or if you've got any other alias tips, let me know!

GS+

Apple II Software

Quick Click Morph Puts the G for Graphics Back in Apple IIGS!

You've seen them in movies and commercials, and now your own version of those amazing Hollywood special effects is just a mouse click away. Quick Click Morph starts with two or more pictures from virtually any source and, with a few control points from



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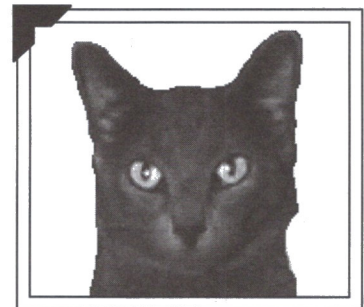
You'll quickly find dozens of uses for morphs. Educators can create morphs showing the evolution of the human skull, stack authors can plug morphs into HyperStudio as attention grabbers, or you can use morphs for the sheer entertainment value.

You can play the morphs you create with any PaintWorks movie player, including the freeware player we include with Quick Click Morph. Our movie player even lets you create movie slide shows! And for those friends or relatives who don't have an Apple IIGS, you can hook a VCR to

your Apple IIGS and record the movie.

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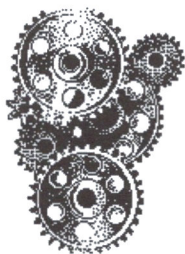
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Dr. Bazyar

By Josef W. Wankerl

If you've been reading *GS+* Magazine for a while, you might remember us talking about a "problem" in the High Sierra/ISO 9660 File System Translator (FST). Basically, this problem prevents your IIGS from recognizing (and using) ISO 9960 and High Sierra CD-ROMs that have spaces (and some other characters) in their names. So, if you have an ISO 9660 CD-ROM with a volume name of "Way Out Disc", your IIGS won't be able to read it.

To help get around this problem, we published the CD-ROaM program back in *GS+* V5.N2. CD-ROaM would allow you to look at the contents of these disks and then copy the files you were interested in onto another disk so that you could work with those files. CD-ROaM was a cool program, but it was still limited in that even it couldn't get at a *file* or *folder* that had spaces in its name.

But now, I'm happy to announce that a way has finally been found to get around *all* of these problems. All you have to do is pay a visit to Dr. Bazyar!

Dr. Bazyar to Sick Bay!

Dr. Bazyar is a temporary initialization file that patches the High Sierra FST to recognize items with "questionable" names. Because the actual File System Translator is patched, *all* of your GS/OS programs, not just CD-ROaM, will be able to access CD-ROMs with "spacey" names. This means that you'll be able to use these disks from the Finder, from FLI Convert, or *any* properly-written GS/OS-based program! (It's very important to note that Dr. Bazyar *requires* System Software v6.0.1 and the High Sierra FST that comes with System Software v6.0.1. It will *not* patch the High Sierra FST in any earlier version of the System Software!)

Spaces — The Final Frontier

Before we talk about how to install and use Dr. Bazyar, it might interest you to know that, as it turns out, the High Sierra File System Translator is *correct* in treating spaces as invalid characters in the names of ISO 9660 and High Sierra CD-ROMs! The reason that there are so many CD-ROMs out there with "spacey" names is that *Microsoft's* CD-ROM extensions *allow* these characters in volume and file names! (This leads to the question of why we need the International Standards Organization . . . After all, we have Microsoft to lead us!) This led to a lot of companies following Microsoft's

specification and ignoring (for the most part) the ISO specification. Unfortunately for us, Apple did the right thing and followed the true standard on the IIGS.

Installing Dr. Bazyar

To install Dr. Bazyar, read over the example of how to use the Installer in the "How to Use Your *GS+* Disk" article. Then, run the Installer and follow the same steps you would follow to install EGOed lite, right up to (and including) the point where you restart your IIGS. (Dr. Bazyar is a temporary initialization file, so it has to go on your startup disk, just like EGOed lite.)

Using Dr. Bazyar

After you've installed Dr. Bazyar and rebooted your IIGS, you don't need to do anything special to use or "activate" Dr. Bazyar. All you have to do is get used to being able to use your ISO 9660 and High Sierra CD-ROMs just like you would use any other disk!

Deep Space Nine?

OK, so you may be wondering why the heck I called this program "Dr. Bazyar." Well, the reason is because the person who actually tracked down the error producing code inside the High Sierra FST was Jawaid Bazyar. Around the office, we call Jawaid "Dr. Bazyar" because it doesn't quite sound like "Dr. Bashir" from DS9, but it's close enough to make us laugh. And, since this was a "patch" program and since the idea did come from Jawaid, it made sense to honor him by naming the program after him. (Besides, we've always wanted to do a product that honors the Star Trek® universe. Now, the Warpfield Engineering people can make fun of *us* for a change!)

Scanning Dr. Bazyar

Dr. Bazyar is a fairly small program, but it does some neat things in a neat way. Most of the patch programs out there are

for patching the Toolbox. Toolbox patching has been documented extensively, so writing something to patch the Toolbox is as easy as looking at the documentation and following along. However, having to patch a File System Translator is a different can of worms, *altogether*. (The chorus in the background sings, "A different can of worms.") Finding where the File System Translator resides in memory would be the hardest part, but surely there must be some way to do it. ("Yes there is, and stop calling me Shirley!") The answer lies in the system loader. The loader keeps track of all the files that have been loaded into memory by pathname and memory ID. To find the High Sierra FST, Dr. Bazyar just asks the loader to locate where `*:System:FST:HS.FST` (the pathname to the High Sierra FST) was loaded into memory. If the loader can find it, the patch is then applied. (By the way, this same trick is used by IPC Spy v2.0 to provide acceptance tracking. In fact, Dr. Bazyar started life as the acceptance tracking patch code from IPC Spy v2.0! [See the article on writing IPC Spy modules elsewhere in this issue.]

USS Patchwork, NCC-3020

The patch that is applied to the High Sierra File System Translator is one byte long. That's right, only one byte is changed! Specifically, a \$30 is changed to a \$20. The changed byte is a test for the lower bounds of a valid name. The \$30 value corresponds to the character "0" (zero) which is the correct lower bounds for a name. The \$20 value corresponds to the space character. So, after the patch is applied, all characters above the space character become valid filename characters. (Table 1 gives a list of all the additional characters that become valid in file and volume names after the patch is applied.)

That's basically everything there is to Dr. Bazyar. If you have any questions about it, let me know! **GS+**

Table 1
Valid Characters With Dr. Bazyar in Residence

Code	Character	Code	Character
\$20	space	\$28	(
\$21	!	\$29)
\$22	"	\$2A	*
\$23	#	\$2B	+
\$24	\$	\$2C	,
\$25	%	\$2D	-
\$26	&	\$2E	.
\$27	'	\$2F	/

HyperActivities

By Steven W. Disbrow

A long time ago, in a magazine far, far away . . . there was this column called "HyperActivities." The purpose of the column was to look at cool new uses for two IIGS programs called HyperCard IIGS and HyperStudio. The column presented stacks for these programs and tips on how to better use the programs. Unfortunately, few people seemed to notice the column or its contents, so it was retired.

Fast forward to 1995 . . . today, lots of IIGS owners are faced with the fact that very little new IIGS software is being produced, so they are looking to write their own. This has led them to re-discover HyperCard IIGS and HyperStudio. It's also led them to ask "Why don't you do some HyperCard IIGS or HyperStudio stuff in *GS+* Magazine?" So, here we go again!

HyperReporter

Since it's been a while (a long while!) since I've done anything with HyperCard IIGS or HyperStudio, I thought it might be best to restart the "HyperActivities" column by dusting off an old project that I had been working on when the original column was discontinued. This turned out to actually be a pretty good idea, because the project I dusted off turned out to be an aid for HyperCard IIGS HyperTalk programmers. It's called "HyperReporter" and it should come in very handy as we all try to push HyperCard IIGS to the limit.

Basically, HyperReporter is a stack that picks apart other stacks and reports back what it finds inside. For example, HyperReporter will tell you how many backgrounds are in a stack, what their names are, if they have scripts, how many cards use them, and more!

Using HyperReporter

To use HyperReporter, you need HyperCard IIGS. HyperReporter does *not* work with HyperStudio! Why not? Because HyperStudio just doesn't have the capability to figure out a lot of the information that HyperReporter reports on. (I tried to do a HyperStudio version of HyperReporter, but I just couldn't finish it because HyperStudio wouldn't let me get the information I needed from it.)

To run HyperReporter, you can either open the HyperReporter stack from inside HyperCard IIGS, or you can simply double-click on the HyperReporter stack in the Finder. (You'll find HyperReporter on your *GS+* Disk in the *Programs* folder. You can copy it to your hard drive if you like.)

Once you have HyperReporter open, you'll see a card showing the last report generated, along with five buttons at the bottom of the screen. (As shipped on your *GS+* Disk, HyperReporter contains a report about itself! Scroll through it if you like—it'll give you a good idea of the kind of report that HyperReporter generates.)

The report is just a simple text field. You can copy text out of it if you want, but as you'll see in a moment, you probably won't need to.

The first button you'll see is the Generate Report button. Its job is to generate the reports that will show up in the text field. To generate a new report, simply click on the button and then pick a HyperCard IIGS stack to report on. After you pick a stack, HyperReporter will begin generating its report. When it's finished, the report will show up in the text field. (If the report is too long to fit into the text field, it will be broken up into pieces and two new buttons will appear: an up arrow and a down arrow. You can click on these arrows to move through the pieces of the report. If the entire report fits into the text field, the arrows won't be visible.)

The next button is the Print Report button. It does pretty much exactly what you think it will do . . . it prints the current report. The font that the report will be printed in is the same one it will show up on screen in—Courier. Before you print your report however, be sure to use Page Setup (in HyperCard IIGS's File menu) to set up the printer the way you want it.

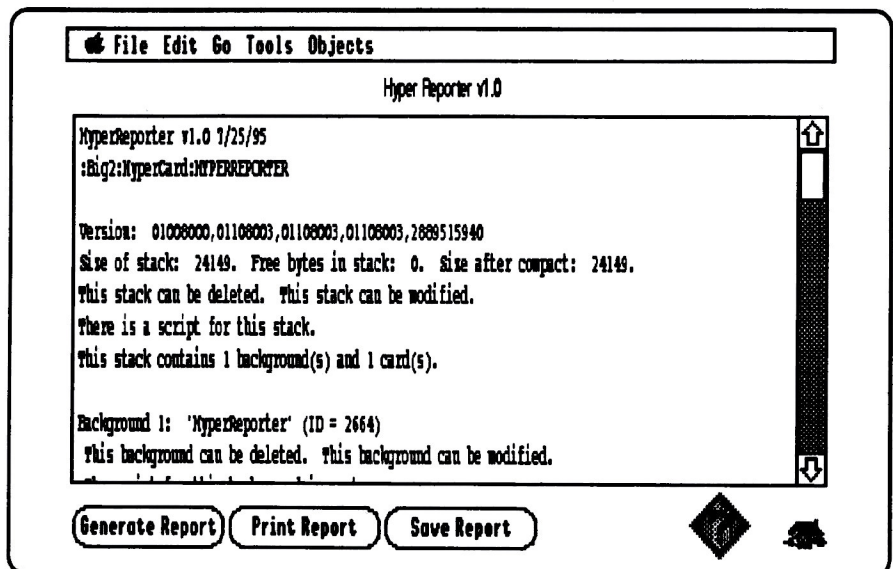
The next button is the Save Report button. When you click on this button, you will be

asked to specify the name of a file to save the text of the report in. After you specify a file, click on the Save button in the Standard File dialog and the text of the report will be saved to disk as a plain ASCII text file. (Reports saved to disk or printed can be a big help in reconstructing a stack that gets damaged or lost!)

The last two buttons are "standard" HyperCard IIGS buttons that just about every stack should have: a help button and a home button. Clicking on the help button brings up a text field telling you what you need to know about using HyperReporter (to go back to the report screen, just click on the help button again), and the home button takes you back to the first card of your Home stack.

What's in a Report?

Well, as I mentioned earlier, a report generated by HyperReporter will basically tell you about everything that is in a stack. That includes buttons, cards, text fields, backgrounds and scripts. For each of these items, HyperReporter will tell you the name of the item (if it has one), its ID number, if the item can be deleted, if the item has a script, if the item is visible, and if the item can be searched. The report is structured so that related items are grouped together. For example, HyperReporter will tell you about a background, and then it will tell you about all the cards using that background. For each of those cards, it will tell you about the fields and buttons on that card before telling you about the next card. Actually, the format of the reports that HyperReporter generates is pretty simple. One look at any report should tell you exactly what to expect from a HyperReporter report.



How Does it do That?

HyperReporter works by taking advantage of one of HyperCard IIGS's neatest abilities—namely, the ability to move back and forth between stacks easily, without interrupting the execution of the current script. So, when you pick a stack to report on, HyperReporter simply opens it and starts going from background to background, gathering information and compiling it into a report. It's actually a very simple, if time-consuming, process. (The script that does all this work is attached to the Generate Report button. To look at this script, simply hold down the Command and option keys at the same time and then click on the Generate Report button.)

Actually, the trickiest part of HyperReporter is managing a report that is longer than will fit in the text field at one time. But, all that's needed for this is a global variable denoting which characters of the report are on the screen at any given time. To see exactly how this part of HyperReporter works, check out the script hooked to the Generate Report button, as well as the scripts for the up and down arrows, and the stack's script. (Press Command-option-S to view the stack's script.)

The last HyperTalk trick that you might find useful is in the display of the help information. When you click on the help button, you will notice that before the help information appears, everything else on the screen vanishes. Then, when you click the help button again to dismiss the help information, the help text field vanishes before anything else is drawn. Things are done in this order to make sure everything gets drawn as quickly as possible. If you don't think it would make a difference, change the script for the help button so that things happen in the reverse order. The speed difference is amazing!

What Next?

After you play with HyperReporter for a while, you'll probably find yourself wishing for additional information in the report. So, let's make a contest out of it! The person who does the best job of "finishing" HyperReporter will get any *one* of the following prizes:

- 1) Three *GS+* back issues (magazine & disk) of their choice.
- 2) A free copy of Balloon.
- 3) A free copy of Addressed For Success.
- 4) A free copy of AutoArk.

To help get you started, here's some of the stuff I'd personally like to see in HyperReporter:

- The ability to include scripts in a report.
- The ability to only report on one type of item in a stack (i.e. buttons only, cards only, etc.).
- The ability to change the font used.

I can actually think of about ten new things I'd like to see in HyperReporter (Hint: One of them is a HyperStudio version!), but I want to see what *you* can come up with!

The deadline for this contest is November 30th, 1995. The winning entry will be published in *GS+* V7.N3. Send your entry to me at one of the following addresses:

HyperReporter Contest
c/o *GS+* Magazine
P. O. Box 15366
Chattanooga, TN 37415-0366
Internet: diz@genie.com

What's Next?

In our next issue, we'll look at how you can telecommunicate (slowly!) with HyperCard IIGS! If you've got any ideas for future "HyperActivities," let me know!
GS+

FROM THE MAKERS OF
HYPERSTUDIO® COMES...

The SimpleScript® Workbook

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BootTime

By Chris Vavruska

What is BootTime?

BootTime is a control panel which allows you to keep track of various and sundry information regarding how often your IIGS gets shut down gracefully, versus how often it just plain crashes. This can be handy in determining whether or not you have a serious system stability problem by letting you know if you end most of your computing sessions with a crash rather than with a normal shutdown. BootTime allows you to track this information by showing it to you when your IIGS is starting up. After your IIGS is up and running, you can also access the information simply by opening the BootTime control panel. [By the way, "booting" is geekspeak for the act of starting up a computer. A "boot screen" is the screen that you see while a computer is starting up. - Ed.]

Installation

Installation of BootTime is very easy. Simply follow the instructions for installing EGOed lite that are given in the "How to Use Your GS+ Disk" article. The only difference is that instead of picking the EGOed lite installation, pick the "BootTime" installation. If you have Seven Hills Software's TransProg III installed in your system, pick the "BootTime for TransProg III" installation option instead. Make sure that you install BootTime on your boot disk!

The BootTime Display

After you've installed BootTime, you'll need to restart your IIGS for BootTime to do its work. The first time you reboot after installing BootTime, you'll eventually see a single line of information at the top of your boot screen. This line tells you the current time, the time at which the system was last booted (which, since BootTime was just installed, will be empty the first time around), and the time elapsed since your last boot (here again, since BootTime was just installed, this will be empty the first time you boot with BootTime installed). OK, so far that's not very interesting, is it? Not to worry, it gets better.

The next time you boot your IIGS, BootTime will display the above information, along with two more lines of data. The second line contains what is called the "boot count" information. This includes the number of times today that you've booted your computer as well as the number of times you've booted since BootTime was installed. It also shows the number of crashes and normal shutdowns

for the day, as well as the number of crashes and normal shutdowns since you first installed BootTime.

The third line of information is an extension of the information on line two. It includes the status of the last shutdown (i.e. a normal shutdown, or a crash), and how long the system was up after the last boot. (Of course, if the system crashed after the last boot, then there is no way to really know how long the system was up, so no information would be provided in this case.) Finally, this line of information also contains a figure showing the overall ratio of normal shutdowns versus the number of crashes as a percentage.

The BootTime Control Panel

While all of this information is interesting to see during the boot process, it *does* take up a lot of room on the screen and it is only up there for a few seconds. So, if you don't want all that information on your boot screen or you want to review the information without rebooting your computer, all you have to do is open the BootTime control panel.

The BootTime control panel consists of three "pages" (Configuration, Previous Session Information, and Overall Statistics) which you can switch between using the pop-up menu at the top of the control panel.

Configuration

The Configuration page uses a series of check boxes, radio buttons, and simple buttons to let you tell BootTime exactly how you want it to behave. At the top of the page are three check boxes: Draw Boot Time, Draw Boot Count, and Draw Boot

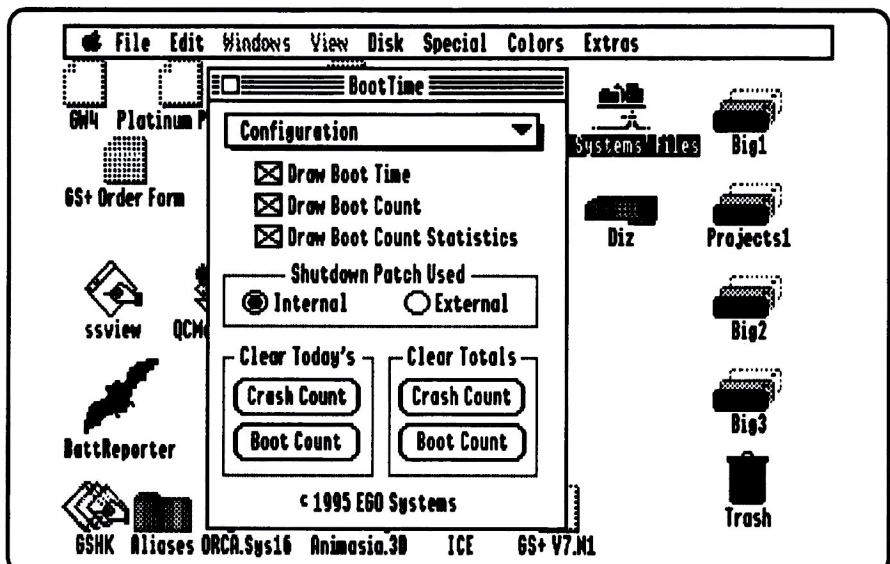
Count Statistics. Each of these check boxes corresponds directly (i.e. from top to bottom) to one of the lines that is shown by BootTime on the boot screen. If you don't want a line of information shown, simply click on the appropriate check box so that it becomes unchecked.

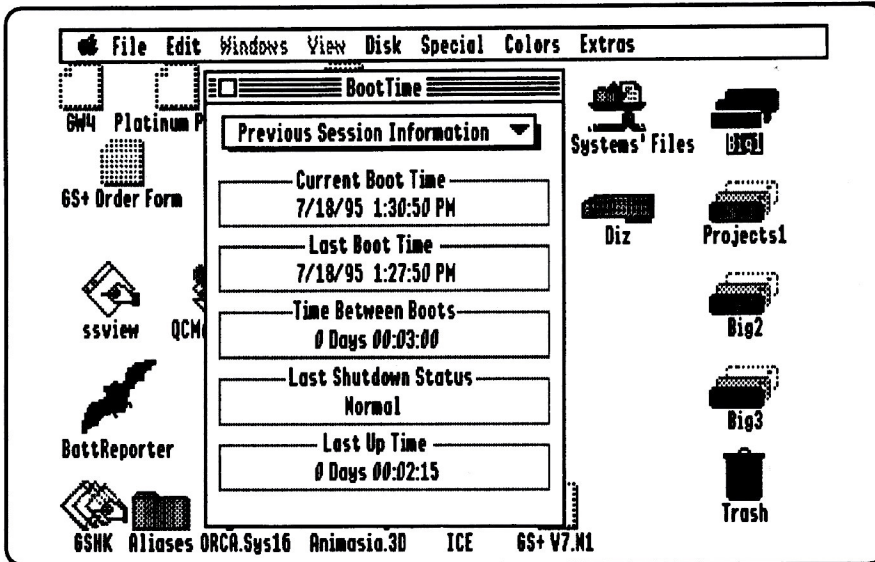
Below the check boxes is a set of radio buttons labeled "Shutdown Patch Used." This option is included because some programs, like TransProg III from Seven Hills Software, patch the GS/OS shutdown call so that the BootTime control panel cannot properly monitor GS/OS calls to record shutdown information. To work around such programs, a separate patch program, called *BTS.Patch* is provided with BootTime. Since this patch program is not a part of the BootTime control panel, it's referred to as an *external* patch program in the BootTime control panel. Normally, you won't have to use this external patch program, and you can leave the Shutdown Patch Used option set to the default value of "Internal." However, if you have TransProg III installed, you should also install the *BTS.Patch* program (by picking the "BootTime for TransProg III" installer update), and you should set this option to "External."

Finally, at the bottom of this page are four buttons that allow you to reset the number of crashes and boots that BootTime has tracked. To reset a particular statistic, simply click on the appropriate button.

Previous Session Information

This second page shows you some relevant information about your current computing session as well as all of the information about the previous session. At the top of





the page you'll see the time when you last booted your IIGS. Below that, you'll see the time of the previous boot. After that is a figure showing the time elapsed between the current and previous boots in days, hours, minutes and seconds. Next is an indication of how your last computing session ended (either a crash or a normal shutdown). Finally, you'll find a figure showing how long your last computing session lasted.

Overall Statistics

This third and final page gives you almost all of the same information that is displayed by BootTime when your IIGS is starting up. At the bottom of this page you'll also find something more: a list giving you information on the last twenty times you booted your IIGS!

That's all there is to know about using BootTime. If you want to know how BootTime actually works, read on!

A Little History . . .

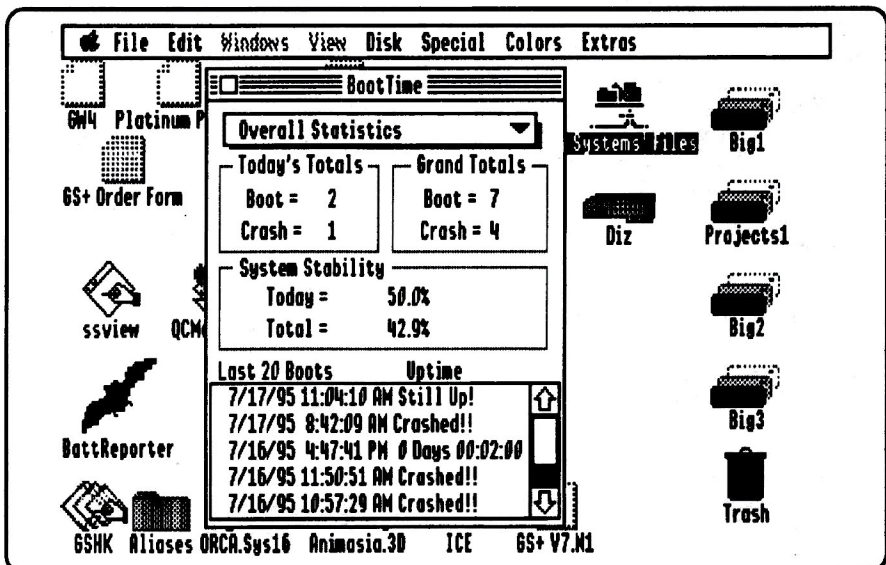
I'm a pretty proficient Pascal programmer, so when I first started writing BootTime I figured it would take almost no time to finish. I would just do a few QuickDraw commands to display the data on the screen and then write out the data to a file. The first version of BootTime was very simple: it only showed the current boot time, the last boot time and the elapsed time; and the control panel was just an on/off switch. After a little hacking around, I had all the time routines completed. But, when I tried drawing to the screen, I quickly found out that the system is very unstable during bootup! In fact, at the point BootTime tries to "do its thing," QuickDraw isn't even available! So, I had to figure out how to draw *without* using QuickDraw!

Drawing to the Screen . . .

Actually, it wasn't that tough! In fact it

only takes two steps for BootTime to draw its information on the screen. The first step is to transfer a bitmap image of the lines to be drawn (i.e. the whitespace that the characters will appear on, as well as any of the text that never changes) to the screen, by copying the appropriate bitmap from the BootTime control panel to screen memory. The second step is to draw each character to the screen in the same way. In order to do this, each character is kept as a 2 x 10 byte image in the BootTime control panel. These images are copied to screen memory as needed to draw the characters.

When I started writing the code to track shutdowns and crashes, I wrote it in Pascal. But, it quickly came apparent that Pascal would not do for this particular task. I felt there was a need . . . a need for *speed*. This routine had to patch GS/OS to check each GS/OS call to see whether or not it was an OSShutdown call. Since this check is performed every time a GS/OS call is made, it needed to be as short and as fast as possible. So,



assembly language was the way to go for this patch code.

Why Two Shutdown Options?

During the early development and testing stages of the GS/OS patch, I wrote it as a permanent initialization file. This allowed me to use IR to test BootTime by just double-clicking on it from the Finder to install it. In order to test it and make sure everything was OK, I inserted a BRK opcode so I could step through the BootTime code with GSBug. A little later on I noticed that BootTime was logging crashes for times I was sure that I had shut down normally. After a little experimenting and investigating I noticed that my shutdown code wasn't being executed when I used TransProg III's Shutdown menu option. So, I figured that when Transprog III is loaded at boot time, it must record the location of the GS/OS entry points. This enables it to manage the shutdown procedure the way it wants to, but it also keeps BootTime from properly recording that the computer was shut down normally!

So, if you are using Transprog III, you must install the BTS.Patch in the System.Setup folder of your boot partition. This will allow BootTime's patch to be executed when Transprog III's Shutdown option is used.

That's It!

I hope that BootTime helps to give you a better idea of how stable (or unstable) your IIGS is. If you have any questions about it, or suggestions for an update, feel free to contact me via GS+ Magazine! GS+

KansasFest 1995

By Steven W. Disbrow

OK, I'll admit it. One of the main reasons I look forward to KansasFest is that it gives me a cheap and easy way to fill a couple of pages here in *GS+* Magazine. But, one of the nicest things about KansasFest is that the filler that it provides is usually good stuff... interesting stuff... and perhaps most importantly of all, *fun* stuff. So, let's get to it!

A Brief History

Just in case you weren't aware, this year was, quite literally, the KansasFest that almost wasn't. The original sponsor of the show, Resource Central (a.k.a. ICON), went out of business earlier this year and, without them, it seemed as if there would be no show. Fortunately for the Apple II world, a small group of GENie members decided that, by golly, since they had already asked off for the days that KansasFest was supposed to be on, there was *going* to be a KansasFest! So, in the space of mere months, they put together a show from scratch! It was something that none of them had ever done before...

So, How Did They do?

Well, to use words of fewer than 17 syllables, they did a *fantastic* job! This year's KansasFest was one of the most professional, relaxed, and enjoyable that I've ever been to.

One of the things I most enjoyed about this year's show was that everything was in one place: the Avila College. (Last year's show was this way also, but I didn't attend, so this was a new thing for

me.) In past years, going to KansasFest meant shuttling back and forth between Avila and the Nomda convention center... While the Nomda center is very nice, it was always a pain finding a ride to and from the center (Unless you had your own car, which we usually did, so why am I complaining? Oh well, I've digressed.) and lots of times, folks had to *walk* the mile or so to get from one place to the other. Not having to put those miles on either your car, or your feet, was a nice change.

Day 1

As usual, we arrived too early in the morning. So, we had to wait in the lobby of the main building at Avila until registration began. Here, in fact, was the only procedural "glitch" that I noticed during the whole show: It had been announced that registration would take place in the main building, where we were, but it actually took place in the dormitory where we would all be sleeping. Because of this, those of us waiting in the main building had to wait a bit longer than we would have liked, but everything eventually worked itself out. After we got our room keys, most everyone in our little group took a nap until the first session began early in the afternoon.

The sessions themselves were another change from KansasFest's past. Instead of three or four "tracks" of concurrently running sessions, there were only two sessions at any one time. And, the content of these sessions was, for the

most part, a far cry from the technically-oriented sessions presented in the past. (For more on this, see the sidebar "The Ghost of KansasFests Past")

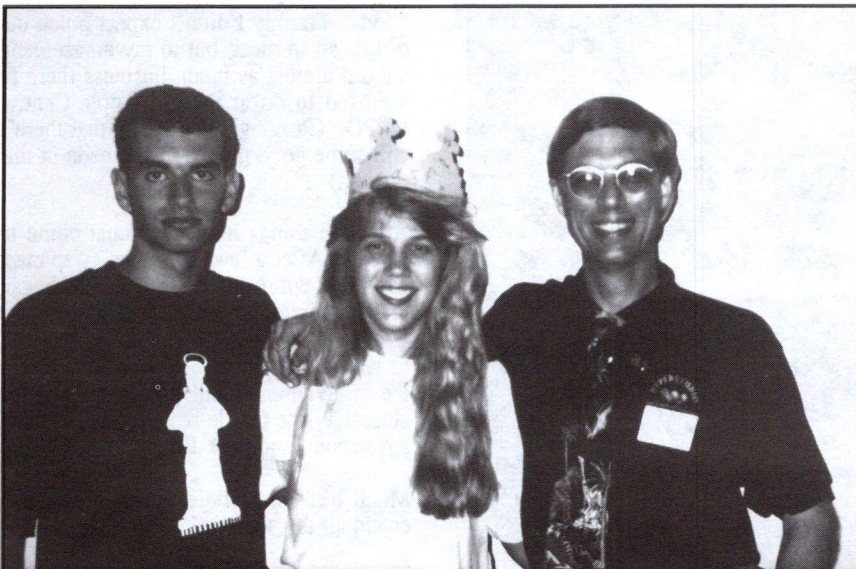
Included in the first day's sessions were such diverse topics as: how to solder, a look at Quick Click Morph (see our review elsewhere in this issue for more on this program), a chat with Joe Kohn, how to get more out of your PowerBook and/or PDA, how to use your Apple II to control external devices (like motors), and a look at the upcoming ShiftyList v2.0.

Also included in the first day's activities, was a keynote speech by Roger Wagner. Actually, Roger wasn't scheduled to speak, but was in fact pressed into service at the last minute, after the originally-scheduled speaker could not come to the show. So, Roger conducted an impromptu question and answer session, told a little about the history of his company, and showed a *very* interesting video created on a IIGS using HyperStudio, and a Video Overlay Card. The creator of the video was actually the noted film-maker Chris Marker, who just happens to be an Apple IIGS owner.

At the end of the last session, Roger Wagner announced that, as in previous years, he would be buying pizza and drinks for everyone! However, it would take a while for the local pizzeria to cook all the pies, so the next few hours were spent renewing old acquaintances, checking out "Burger" Bill's Wolfenstein 3-D demo, and generally goofing off with all the computers that everyone had brought. Eventually the pizza arrived, and, well, everybody ate some.

After all the pizza was consumed, it was time to get down to the serious business of deciding who would be this year's Bite the Bag champion. I won't bore you with a description of how to play this fantastic game; but I will tell you that this year's competition was fierce, with more people making it to the final rounds than any year past. I *had* hoped to be able to say that our own Joe Wankerl had taken this year's crown, but, the sad truth is that he didn't even place in the top three. This year's crown went to a previously unknown contender, Russ Nielson, who stunned the crowd with a final bag lift time of just 1.95 seconds! Second place went to Scott Johnson who had the most unusual style (he balanced his body on one hand) that I'd ever seen. Third place went to a champion from a previous

Paul Zaleski (far left) & Roger Wagner (far right), touching my wife, Noreen.



KansasFest - The Video

One thing I left out of my description of this year's show is the fact that during all of this fun stuff, Noreen and I were running around with video cameras trying to capture what was going on. (Which is why I didn't write a lot about what happened in each session, I wasn't *in* any one session for very long!)

The good news is that we did just that! The video we came away with has some great stuff on it! Stuff like: Bite the Bag, the Roast, a bit of each session, a tour of the Salsa-Keyboard shrine, the pizza feast, the keynote speech, etc. Another great thing we got on tape was the first-ever KansasFest "Video Yearbook." What we did was we got about half of the attendees to stand in front of the camera and tell us who they were, as well as telling us a little about themselves. So, now you can see exactly who it is that you've been corresponding with online, and you can see what all those people that write for *GS+* Magazine look like.

The bad news is that we got over *ten hours* of video, so it's going to be a while before we get it distilled down to the two hours that will make up what we've tentatively titled, "KansasFest '95 - The Video." Hopefully though, we should have the video completed and ready to go sometime before our next issue comes out. So, look for an announcement online (keep watching our bulletin board [#33] on GENie, and keep looking in comp.sys.apple2 on the Internet), and be sure to check out the next issue of *GS+* Magazine for an official announcement. (Oh, by the way, the video will cost between \$15 and \$20 and a portion of the sales will be going to help pay for next year's KansasFest!)

year—Paul Zaleski. (Joe's already started training for next year, so watch out all you bag-biters!) An Honorable Mention should go to Mike Westerfield for his, um, face first, style of play. Amazingly, no stitches were required, but he did have, ahem, *bags* under his eyes when he finally gave up.

Unbelievably, the Bite the Bag competition dragged on till almost 2 a.m. Central Time, so after it was over, most everyone went to sleep, or they went back to the computers that they had been hacking on earlier in the evening.

Day 2

As with day one, day two of KansasFest was filled with two tracks of sessions. Included in these sessions were: more soldering tips (no pun intended), how to use the IIGS for MultiMedia (three guesses who led this session), how morphing actually works, an introduction to the new IIGS front-end for GENie (it's

very cool), how to cram your IIGS into a PC-style tower case, a preview of the new features in upcoming releases of GraphicWriter III and Spectrum, and how to care for and maintain various peripherals for your IIGS. There were a few more sessions (on both days), but those are the ones that I was able to sit in on for at least a few minutes.

As soon as the sessions were over, we all adjourned to the Avila cafeteria for this year's Celebrity Roast. This year's "Roastee" was yours truly, with the roasting being done by Bill Moore (a former employee of myself and hundreds of others), Roger Wagner (who was just looking for a chance to plug HyperStudio), Tom Weishaar (who's retired from the Apple II world and would have said anything about anybody for a free meal), and Joe Wankerl (who'll *be* a former employee of mine if he doesn't win the Bite the Bag contest next year). The roast was hilarious, with Tom doing

an especially good job of thrashing myself and *GS+* Magazine. (The complete roast can be seen on the KansasFest 1995 video, when it's available.)

Nerf® Wars

After the roast, we all moved back to our rooms and began playing with our computers again. A couple of hours later however, another KansasFest tradition broke out: Nerf® Wars! Up and down the halls they ran (at a safe pace I assure you), blasting at each other with foam-tipped darts and shouting, "take that!" Alas, being a pacifist, I did not partake in the Nerf Wars, although I *was* forced to kill the pizza delivery boy the night before...

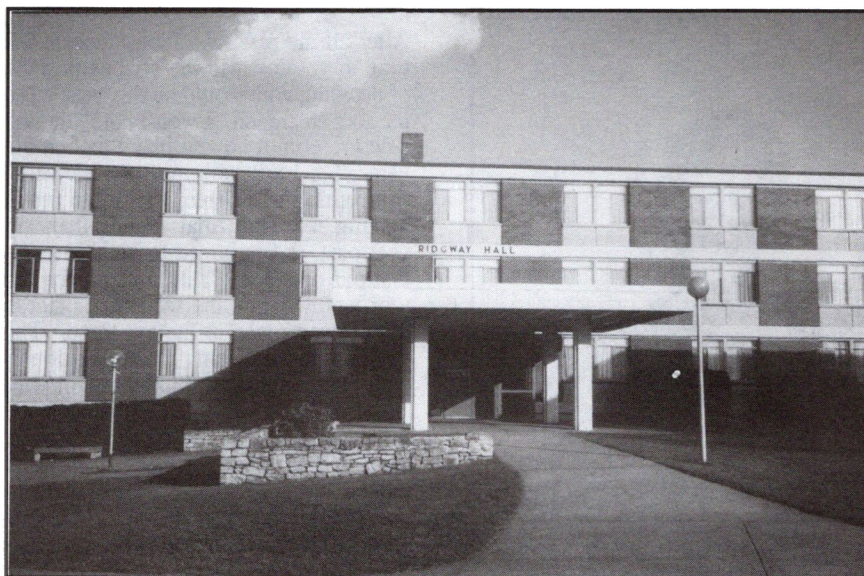
Day 3

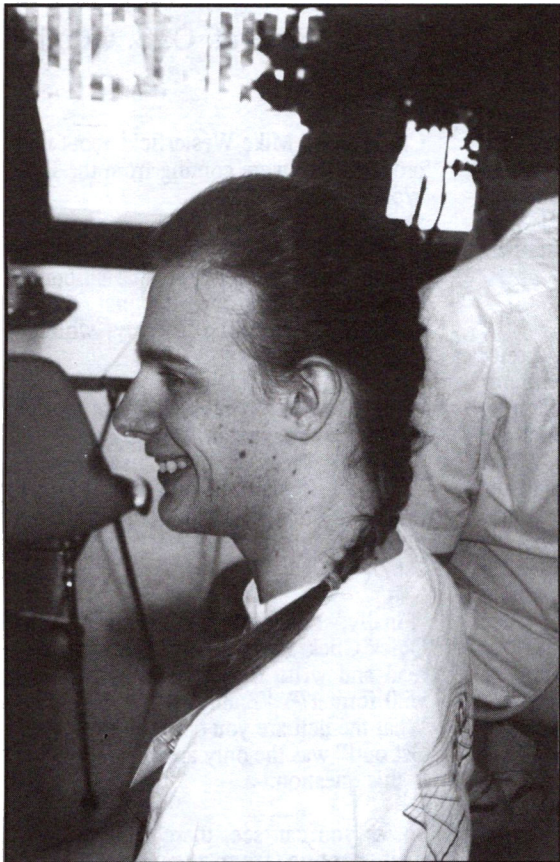
This year's KansasFest was a three day event. However, that third day was quite different from the previous two. There were no sessions and everyone had to evacuate the dormitory to make room for the attendees of another conference. Still, there was a "swap meet" in one of the Avila buildings where vendors (like *GS+* Magazine) could show and sell their goods. Frankly I didn't expect much out of this swap meet, but to my amazement, we did almost as much business there as we used to do at the old Apple-Central EXPO! (Proving, once again, that there's still some good money to be made in this market!)

All good things however, must come to an end. After a few hours, the swap meet began to wind down, and people began drifting away to their cars and/or the airport. Soon, we too had to bid farewell to Kansas City... So, we climbed into the minivan and headed east towards the closest White Castle restaurant, and then, a restroom, and then, finally, home.

Much like this article, KansasFest 1995 ended all too soon. *GS+*

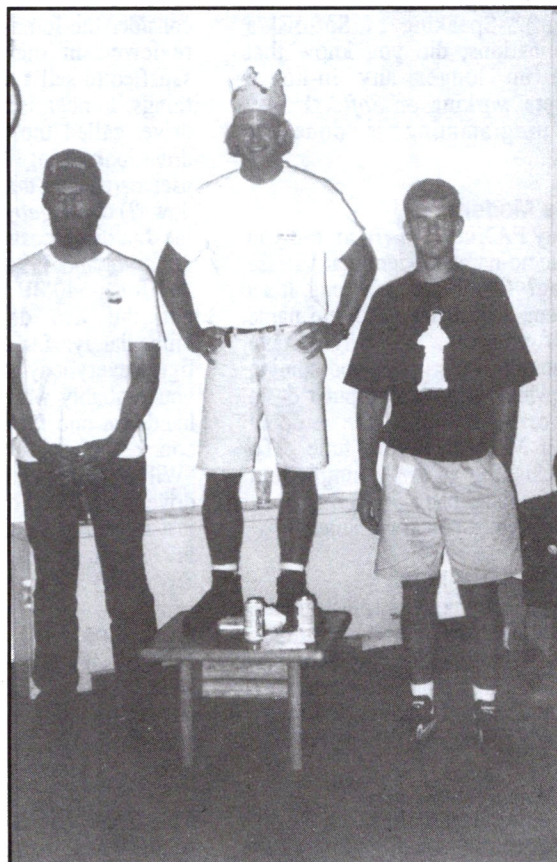
Fabulous Ridgway Hall,
where most of the festivities were held.





Fashion Editor Joe Wanker! after his KansasFest Makeover

The winners of the Bite the Bag Contest!
3rd Place - Paul Zaleski (far right)
2nd Place - Scott Johnson (far left)
First Place - Russ Nielson



Thanks!

Lest I forget, I just wanted to thank a few people for making this KansasFest such a great time. First and foremost, of course, I need to thank Cindy Adams and the entire KansasFest committee for putting on such a great show in such a short period of time! Those committee members are: Cindy Adams, Paul Parkhurst, Gina Saikin, and Tim Tobin. Even if you didn't go to the show, thank these folks when you see them online! They did a great job and they need all the thanks and encouragement we can give them!

And, finally, I need to thank Doug Gum for letting us ride to the show with him, and for putting up with Noreen's "books on tape" during the ride.

The Ghost of KansasFests Past

In the past, KansasFest was put together by a little company called Resource Central (which later became ICON). Under the guidance of Resource Central, KansasFest started out as a get-together for programmers and other technically-oriented Apple II users. (Commonly referred to as "geeks," "nerds," and "wireheads" by the public at large.) KansasFest was something of a nirvana for these people, because it gave them an opportunity to corner technical guys from Apple, and yell at them. (Or more likely, you'd *be* cornered and yelled at . . . at least if you had ticked off the big fellow with the hat.)

As the years passed and the Apple II market changed, the types of individuals attending KansasFest slowly changed. Instead of pure techno-weenies (like Joe and myself), normal, everyday users began showing up. As the makeup of the audience changed, the content of KansasFest changed. The all-day programming "colleges" and all-night programming marathons slowly vanished, eventually being replaced with celebrity roasts and marathon games of bite the bag.

I'm not saying that I don't enjoy these things—I do! (Heck, the celebrity roasts are actually *my* fault!) But, being a geek myself, I really do miss the technical focus of the KansasFests gone by. These days, KansasFest is sort of like a summer retreat . . . It's a place where those of us determined to hang in there just a little bit longer can go to recharge our batteries for the coming year, and schmooze with our fellow hangers-on.

Please don't get me wrong, I really had a great time at this year's show! Cindy Adams and the rest of the KansasFest committee did a *great* job . . . but, I really do miss the technical edge that KansasFest has had in the past. Of course, since the 1996 KansasFest is already in the works, there's always next year!

Rumors, Wishes & Blatant Lies

By Prof. G. S. Gumby

Original Softdisk Is no More

Softdisk publishing has decided to pull the plug on its oldest title, *Softdisk* for the Apple II. Issue number 166 will be the last ever for the venerable disk-based publication. However *Softdisk G-S* and all of Softdisk's other publications will continue to be produced. (And, unless I'm mistaken, the end of *Softdisk* for the Apple II will make *GS+ Magazine* the oldest remaining Apple II-oriented publication.) Speaking of Softdisk's other publications, did you know that there are no longer any in-house programmers working on *Softdisk G-S*? All the programming is done by freelancers...

Whistler's Modem

Did you buy FAXination? If so, did you also buy the no-name modem that Vitesse was offering? (Don't get me wrong, it's a great modem, it just has no brand name on it.) If you did, you might have noticed a strange whistling sound coming from somewhere on your computer desk. Not to worry, it's just the modem humming a Michael Bolton tune. To make the whistling go away, simply turn the modem off and back on again. (Just be sure to wait until you are off-line!)

Use a #2 Pencil Please

This is old news by now, but, just in case you haven't heard, Quality Computers was recently bought by the Scantron corporation. At this point, no one knows how this will affect Quality's already slipping Apple II support.

If Alive, for now...

In related news, just before they were bought by Scantron, Quality Computers

announced that only six more issues of *Alive* magazine would be produced, and that no new subscriptions or renewals would be accepted. However, at this point, it's been a while since subscribers have seen a new issue...

Jaz It up

"Hot today, outdated tomorrow" pretty much sums up how the computer marketplace works. As an example, consider the Iomega Zip drive which we reviewed in our last issue... Not satisfied to sell a million-bazillion of the things, Iomega is about to release a new drive, called the "Jaz drive." The Jaz drive looks a lot like the Zip drive, but it uses cartridges that hold (are you sitting down?) one *gigabyte* of data! Of course, the Jaz drive costs a bit more (\$499 for the drive and \$99 for a 1GB cartridge or \$69 for a 540MB cartridge), so it won't put the Zip drive out to pasture immediately. Even at that higher price, I figure everybody is going to want one, so you probably won't be able to get your hands on one for a few months... Of course, we are still left with the question, "Will it work on the IIGS?" Well, the Jaz drive is a SCSI-2 drive, so it should work just as well as the Zip drive. (See review in *GS+ V6.N6* for complete details on the Zip drive.)

More Lies

At KansasFest, Mike Westerfield of the Byte Works stated that the one thing he wanted to see more of in *GS+ Magazine* was "lies, lies, and more lies." OK, Mike, you asked for it...

New From the Byte Works, No!

As he slept at the Avila College in Kansas

City, I asked Mike Westerfield about new products that were coming from the Byte Works.

"Is it true," I asked, "that ORCA/C++ is almost done and will soon be shipping, with a retail price of just \$25?" "ZZZZZ" was Mike's reply, which I took to mean, "Yes."

"Is it also true," I pressed, "that you've recently completed an ADA compiler for the IIGS which is being used by the A.T.F. to simulate the outcome of armed raids?" "Znnugh, zzzzz!" was the reply this time, which, of course, means, "You bet."

"Finally," I queried, "what is the status of Quick Click Word? Is it true that it will read and write files in Microsoft Word v6.0 format?" "Znnngffh! Huh? Hey! What the hell are you doing in my room? Get out!" was the only answer I could get to this question.

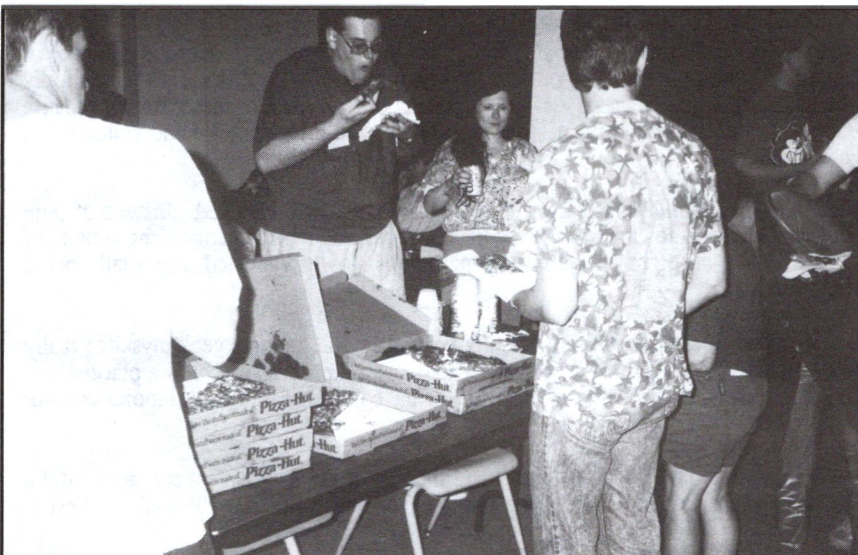
So, as you can see, there's lots of new stuff coming from the Byte Works. Watch for it.

Caught in the Net

Did you know that a prominent IIGS programmer was an extra in the new movie, "The Net?" Neither did I till he told me about it.

Win-doze, Lose-deze

According to some IIGS owners that just also happen to be beta testers for Windows 95, a disk that is *formatted* under Windows 95 can't be read by the MS-DOS FST that comes with System Software v6.0.1. The disk *will* show up



How Does he do it?

At this year's KansasFest, it was finally revealed how Roger Wagner manages to sell so many copies of HyperStudio. He puts mind control drugs (which were developed in secret government laboratories) in the free "pizza" and "pop" he provides each year! (Note the look of sheer ecstasy on each victim's face.) Software entrepreneur, mad scientist, or good capitalist? You decide.

Top 10 Things to do at KansasFest '95

10. Sign your release form! Now! Now! Now! Sign! Sign! Sign!
9. Explain "St. Woz" to the nuns. (Tie)
9. Avoid wrath of God. (Tie)
8. Try to avoid saying "Atari" or "Falcon" to Nate Troast. (Tie)
8. Try to avoid Bill Moore. (Tie)
8. Try to avoid the idiot with the video camera. (Tie)
7. Speak into Joe's lap . . . top computer.
6. Get your hair braided.
5. Visit Salsa-Central.
4. Eat hard disks (salsa optional).
3. Watch for Uncle DOS.
2. Play with that little ball (camera) of Ryan's.
1. Think up things for this bloody stupid list!

on the IIGS, but you can't open it or otherwise work with it. Actually, since Windows 95 isn't really an MS-DOS-based operating system, this makes perfect sense . . .

Goodbye CLI?

The Delphi online service has recently announced that they will soon be releasing new graphic user interfaces for use with their service. Unfortunately, these new interfaces will only be developed for (surprise) the Mac and Windows. The management on Delphi has stated that while the current command line interface (CLI) will be available until the end of this year, they can't guarantee if it will be around too long after that. However, they have indicated that if enough of their subscribers let them know that they want to keep the CLI, it will be supported indefinitely. So, if you are a IIGS (or Amiga or Atari ST or C-64 or . . .) owner that uses Delphi, send e-mail to "Service" on Delphi and let them know (nicely) that you'd hate to get kicked off of another service . . .

Ask Mr. 8-Ball

It's time for more space-filling Q & A with our most reliable source: Mr. 8-Ball!

Gumby: I've heard that, contrary to previous reports, work is in fact proceeding on the various pieces of software that will allow IIGS users to hop onto the Internet without having to go through GEnie or Delphi. Is this true?

8-Ball: Without a doubt.

Gumby: I've heard that although last year's KansasFest crowd was a bit on the rowdy side, this year's festival participants behaved themselves quite well. In fact, I heard that the management at Avila college had no complaints at all about this year's attendees. Is this true?

8-Ball: Yes.

8-Ball: It is certain.

Gumby: Another thing I picked up at KansasFest is that several people are considering creating a new IIGS word processor, but that all of them have cold feet due to the shrinking size of the market. True?

8-Ball: Better not tell you now.

Gumby: During KansasFest, "Burger" Bill was actually showing a beta version of Wolfenstein 3-D. It looked really, really great, but it's still not available! Will Wolfenstein 3-D for the IIGS be available anytime soon?

8-Ball: Outlook not so good.

Gumby: Speaking of stuff that's been delayed, I've heard that our peerless publisher finally got AutoArk v1.1 shipping. I've also heard that there is going to be an ad for it somewhere in this issue and that there might even be some info on it in the **a.Read.Me** file on the **GS+** Disk. Is this true, and if so, is this a case of abusing a captive audience?

8-Ball: Yes it is shipping, and it's great! You should order your copy now! **GS+**

Gumby: Getting back to software, I've heard that there are currently at least 10 different Second Sight-aware programs in the works. In fact most of these should even be shipping before the end of the year! True?

8-Ball: Most likely.

Gumby: One of the neater things at KansasFest was the fact that Uncle DOS allowed folks to take free copies of back issues of Resource Central's old publications (*Open-Apple*, *A2-Central*, etc.). I've heard that an "ad-hoc" group of people is trying to obtain the rights to these publications, so that they can put them all on a single CD-ROM. Is this really true?



Drawers of Doom Ties of Terror

Each year we report on the weird and unusual neck ties that Roger Wagner wears to KansasFest. Well, not this year. This year we tried to bring you a report of the strange and unusual *underwear* that Roger wore. Oddly, Roger wouldn't comment. Maybe next year. Until then, here's a picture of the winner of this year's "Creative Black Tie" contest, Eric Sheppard! For his prize, Eric got, um, his picture published in **GS+** Magazine! Yeah, that's the ticket!

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 (423) 332-2087. If your disk is damaged, let us know, and we'll get a new one to you as soon as possible.

Before you attempt to use your backup GS+ Disk, please take a few minutes to read the a.Read.Me file on it for any last minute corrections or information. If you do not already have our EGOed lite text editor installed in your system, you can use the Teach application supplied with System Software v6.0.1 to read this file.

Installing the Software

To install the software on this issue's GS+ Disk, start up your computer using System Software v6.0.1 or later. (Note that all of the programs on this issue's disk [except EGOed lite] require System 6.0.1!) 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.

Installing EGOed lite

The following is a detailed example of how to install EGOed lite. The other programs are installed in a similar manner.

- Start up your IIGS with System Software v6.0 or later—the version of EGOed lite 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 "EGOed lite." (If EGOed lite 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 EGOed lite item, click the mouse on it so that it becomes highlighted.
- Click the mouse on the Install button in the middle of the Installer window. The Installer will then install EGOed lite 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 has finished, click on the Quit button in the middle of the Installer window. This should cause your IIGS to restart.
- When your IIGS finishes restarting, pull down the Apple menu and select EGOed lite (note that you have to be in a

desktop program like the Finder to have access to the Apple menu).

- When it finishes loading, notice that EGOed lite has its own menu bar. Select Open from the EGOed lite File menu and then put your GS+ Disk in a drive. You should see a list of the files and folders on the GS+ Disk.
- Open the Documentation folder on your backup GS+ Disk and then open the file EGOed.lite.Docs. This file contains complete documentation on how to use EGOed lite. Please take a few minutes to read this documentation.

Making Room

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

Towards that end, we have prepared the following list of "expendable" files that you can "safely" remove from your System Software v6.0.1 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 v6.0.1

If you use the System 6.0.1 :Install disk to create a minimal, 800K, System 6.0.1 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 all of 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 will not be running AppleSoft BASIC programs, you can remove the file BASIC.System (11K) from the root directory of the disk. If you will not 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 (10K)

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 (42K)

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 18K file:

*:System:Desk.Accts:ControlPanel

Removing some or all of these files will give you ample room (up to 138K on a ROM 01 IIGS and up to 133K on a ROM 03 IIGS) on your startup disk to install EGOed lite or any of the other system utilities from your backup GS+ Disk.

What is EGOed lite?

EGOed lite is a new desk accessory (NDA) text editor that we provide in each issue of GS+ Magazine.

When you install EGOed lite on your startup disk, you can use it to edit and print ASCII text, Teach, AppleWorks Classic and AppleWorks GS word processor files from inside any desktop program that properly supports NDAs.

To use EGOed lite, you must install it on a IIGS System Software v6.0 (or later) startup disk with at least 40K of free space.

Note: You will *not* be able to print from EGOed lite or any other desktop program when using an 800K, System 6.0 boot disk. (There isn't enough room for all of the required drivers and control panels.)

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 6.0.1 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.

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.V7.N1.SEA program on your backup GS+ Disk. *You do not need to have a copy of GS-ShrinkIt in order to use the programs or other materials on this GS+ Disk!*

DISKLESS?

If you did not receive the disk with this magazine and have decided you would like to have it, just send a check or money order for \$6.50 to:

GS+ V7.N1 Disk Offer
P. O. Box 15366
Chattanooga, TN 37415-0366

Or call us at 1-800-662-3634, Monday through Friday between 9 a.m. and 5 p.m. Eastern Time, to bill it to your MasterCard or VISA.

Tennessee residents please remember to add 7.75% sales tax. (\$7.00 Total)

Price includes First-Class delivery to the U.S., air mail to Canada and Mexico, or surface mail to all other countries. Add an extra \$3 (\$9.50 total) for air mail to all other foreign countries.

IMPORTANT!

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

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 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?

There are eight items in the root directory of this disk:

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 out about it in this file. Please read this file before using your GS+ Disk.

Documentation

Due to a lack of space, this folder only contains the EGOed lite documentation file. The other files normally found in this folder (like the complete GS+ Glossary and the complete GS+ FAQ File) are in the self-extracting archive.

GSP.V7.N1.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 sample source code for the Extensions plug-in module for IPC Spy v2.0, the Miscellaneous Library, a sample movie

created with Quick Click Morph, and the complete text of the GS+ FAQ File and the GS+ Glossary.

Technical information, such as the updated Miscellaneous Library documentation is supplied in the archive as well. To extract the files from the archive, simply double-click on this file from the Finder. You will then be presented with a dialog asking you where you want the files extracted to. 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 icons used by the various programs on the GS+ Disk. This folder also contains the FType.GSPlus file type descriptors file, which contains all the file type assignments for GS+ Magazine programs.

Installer

This is the Apple IIGS Installer. The installer requires System Software v6.0 or later. Run it to install the other programs on this issue's disk. For more information on using the Installer, be sure to read the example on the previous pages.

Programs

This folder contains the BootTime, Dr. Bazyar, and EGOed lite programs, as well as the HyperReporter stack. Use the Installer provided on your GS+ Disk to

automate the installation of these files. EGOed lite requires System 6 to operate. All the other programs on this disk require System 6.0.1. HyperReporter requires HyperCard IIGS.

Scripts

This folder contains the scripts used by the Installer to install the files from this GS+ Disk.

Talk.To.GSPlus

This folder contains our feedback form, a troubleshooting guide, a problem form, and our writer's guide.

The feedback form is a plain ASCII text file. Fill it out and send it in to let us know what you thought of this issue.

The troubleshooting guide contains tips on how to resolve some of the more common problems you may experience while trying to use the programs on your GS+ Disk. If you are having a problem, *please* read this file before you go to all the trouble of filling out a problem form! If the troubleshooting tips don't help, *please* fill out the problem form and send it to us! These are Teach files, you may use EGOed lite or Teach to view them.

The writer's guide is a Teach file that explains what you need to know to write for GS+ Magazine—you may view it with EGOed lite or the Teach application. GS+

How to Get System 6.0.1

Everyone should have a copy of System 6.0.1. 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 6.0.1 takes up to every magazine-and-disk subscriber. However, we still want to make it easy for you to get System 6.0.1. So, if you are a subscriber to GS+ Magazine with the companion GS+ Disk (sorry, but we can *not* distribute System 6.0.1 to our magazine-only subscribers), send us the following items and we will send you System 6.0.1:

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 can't afford 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 four 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 It?

If you are a magazine-only subscriber, here are some other ways to get System 6.0.1.

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. 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.

The Byte Works. You won't have to bug them, they have it in stock and ready to ship. The item number is "APDA-47" and the price is \$24.95. To order, give the Byte Works a call at (505) 898-8183.

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 at 2,400bps.

Important Note! Before you get System 6.0.1, you should make sure that you have the appropriate hardware to run it. To run System 6.0.1, you will need at least 2MB of RAM and a ROM 01 or ROM 03 IIGS. A hard drive is also *very strongly* recommended! GS+

Reviews in This Issue

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DeskJet 310 Portable Inkjet Printer

List price: \$379 with optional sheet feeder, \$329 without.

Typical street price: \$279 with optional sheet feeder, \$219 without.

Requires parallel interface and Harmonie printer driver for HP 500C. Model discontinued in late 1994, but still generally available at electronics superstores and through mail-order outlets.

Hewlett-Packard Company
1150 Depot Road
Singapore 0410

Customer Support Center: 208-323-2551
Customer Info Center: 800-752-0900
Internet WWW site: <http://www.hp.com>

Reviewed by Ryan M. Suenaga

The Never Ending Search . . .

Long time IIGS users will agree that the ImageWriter II printer has served us well. Unfortunately, dot-matrix printing is no longer state of the art. Many a IIGS owner has walked into a computer store over the past few years to see a collection of inexpensive inkjet printers that promise high-resolution, color, and laser-like quality for both Windows and Mac computers. These inkjet printers are different from dot-matrix printers in that instead of a pin impacting a ribbon and paper, an inkjet shoots ink at the paper, with much finer resolution. Is it possible we can use these same printers on the Apple IIGS?

Of course we can! In fact, with the help of a special printer driver and an appropriate cable, the Hewlett-Packard DeskJet 310 is busy printing high-quality documents and color graphic images from my trusty old IIGS.

What is it?

The Hewlett-Packard DeskJet 310 is a portable inkjet printer based on Hewlett-Packard's highly successful 500 series of desktop printers. The difference is that this model was designed to be portable,

and go along with you and a notebook computer. Hewlett-Packard has been around for a long time and is famous for its inkjet and laser printers. The Hewlett-Packard brand name is known for high quality, good service, and being an industry standard.

The DeskJet 310 uses standard Hewlett-Packard print cartridges. Both black and color cartridges are available. Print cartridge life is estimated at 1,000 pages for the black cartridges. (There's no estimate for the color cartridges.) There are also refill kits on the market which can save you money by allowing you to refill your cartridges instead of buying completely new ones.

This printer is able to output 300 x 300 dots per inch (d.p.i.) in either black or full color. Compare this with the ImageWriter's 144 x 144 d.p.i., and you get a difference you can really see.

Actually, the difference is even more than the "2.083 to 1" ratio that you get from dividing 300 by 144. Because a printer prints both horizontally and vertically, a more accurate way of judging resolution is by the amount of dots per *square* inch instead of dots per *linear* inch. For a printer that is capable of 300 x 300 d.p.i. printing, this is 90,000 dots per square inch. Compare this to the ImageWriter's 20,736 dots per square inch (144 x 144 d.p.i.), and you'll see that the DeskJet has more than *four times* the resolution that the ImageWriter has!

The DeskJet 310 is smaller than most printers, although it's on the large size for a portable printer. Its dimensions are 12 inches by 2.5 inches by 5.75 inches, and it weighs 4.3 pounds. Call it a "luggable" printer.

There is a "control panel" on the printer, a series of buttons and lights (This is Hewlett-Packard's technical term; a section in the manual is titled "Printer buttons and lights."), which controls such things as setting the printer online or offline, sending line feeds or form feeds, changing the printer cartridge, and turning

the power on or off. There's also a standard parallel interface that attaches your IIGS to the printer; so you'll need a parallel interface card (such as a Grappler) for this.

The printer comes with a power brick (a very small, flat one) on a cord, and two plastic pieces which attach to the ends of the printer and function as a low-tech printer stand. It also comes with some very well-written manuals and a black print cartridge. There are a ton of options available for this printer, including color print cartridges (about \$29), battery packs (\$39), carrying cases (\$69), and a sheet feeder (\$69).

Can it be Used on an Apple IIGS?

There are "bad news," "worse news," "good news," and "great news" answers to this question. The bad news is that Hewlett-Packard doesn't know a IIGS from a can of refried beans. The worse news is that no IIGS driver exists for this *specific* printer. The good news is that it doesn't matter, and the great news is that this printer will still work fabulously with your Apple IIGS, simply by using a driver for another Hewlett-Packard printer model! Here's an example . . .

After hooking the printer up to the parallel interface on my Apple IIGS, I was almost ready to roll. The next step involved choosing a printer driver, and while Hewlett-Packard doesn't know anything about an Apple IIGS, they sure do know a lot about documentation. In their Quick Start manual, they provide a list of possible printer drivers to use with the DeskJet 310. Since one of those is the DeskJet 500C, I simply used the Harmonie DeskJet 500C driver that comes in Vitesse's Harmonie Printer Drivers package (Vitesse: 818-813-1270) and I was off! (Seven Hills Software also has a printer drivers package, called Independence, which includes Hewlett-Packard printer drivers for the IIGS, but they won't let you print in color.)

Printing in black and white was quite straight-forward. In a desktop application like AppleWorks GS, I simply chose Page

Setup and set up everything accordingly. Then, I just chose the Print menu item. The output from the printer was truly stunning, blowing away anything an ImageWriter could produce!

The DeskJet and the Harmonie drivers (as well as the Independence drivers) work well with Pointless, WestCode's TrueType font interpreter. Pointless and the IIGS Font Manager come up with a font that's the perfect size for printing on the DeskJet. What this means is that you get beautiful text without any of the "jaggies" associated with dot-matrix printers or weirdly-sized fonts.

Printing in color was the real test. After changing from a black cartridge to a color one, I started up SuperConvert, loaded in a GIF file, set everything up to print in color, and WOW! Amazing color pictures were coming out of my Apple IIGS! (Hint: if you want to save a few bucks, just buy a color cartridge instead of a color kit, and store the cartridge that's not being used in the "sardine can" the color cartridge comes in. The only difference between the color "kit" and a color "cartridge" is that the color kit comes with a plastic container to hold a print cartridge in, presumably the cartridge that's not in the printer)

The DeskJet is the first color printer I've used where the pictures it produces are as nice as what's on the screen. Colors come out bright and vivid, and can be improved by using higher quality paper.

Neat-o Features

Some of the really great features of this printer are:

1) High quality printing. *Really* high quality printing. It's the best thing short of a laser printer.

2) Color. Very nice color for the price. There are nicer color printers, but at considerably higher cost than this one.

3) Size. If space on your desktop is a high priority (like it is for me), then this printer can fit easily. In fact, it sits atop a loudspeaker in my computer room.

4) Cross-platform capability. If you're so lucky as to be forced to use a MS-DOS/Windows or Macintosh box, this printer can be used with those machines (assuming you have the proper drivers for each machine).

5) Expandability. This printer can use both color and black print cartridges, batteries, sheet feeders, rapid battery chargers . . . you name it and it's got it.

6) The Hewlett-Packard name. Hewlett-Packard is a well-known, well-respected name in the world of computing. Hewlett-Packard printers are well-built and can handle the test of time. Portable printers need to be especially rugged, due to the nature of hauling one around. Hewlett-Packard's done themselves proud with the sturdiness of this printer.

What's the Catch?

Well, there are a few things that might bother people about the DeskJet 310:

The biggest problem with this printer is that it is discontinued. Hewlett-Packard has replaced it with the DeskJet 320, which is very similar to the 310. (The 320 will print at 600 x 300 d.p.i. in black and white mode and print 300 x 300 d.p.i. in color, and sells for about \$300.) However, when I stopped to consider that the computer I was using it with was also discontinued, this was no problem for me at all! In fact, it was an advantage because I got the printer at a closeout price!

The second problem is that there is no serial port on the printer. A serial interface is standard in the Apple II world, and unfortunately, this DeskJet just doesn't have one (some other DeskJets do). Even worse, my IIGS is so full that I didn't have room for a parallel card. Fortunately, I had access to a serial-to-parallel converter (a special "black box" that includes the electronics necessary to convert serial output to parallel output), so this was no problem for me. There are several models of these on the market; mine came from JDR MicroDevices (800-538-5000 or 408-494-1400, item code "CV-UNIV") for \$69.95.

The third problem I had with this printer involved color printing in 640 mode. Most graphic printing on a IIGS is done in 320 mode, which comes out beautifully. Unfortunately, there appears to be a problem in Quickdraw II which causes "color shifting," when you print in 640 mode. The result is that the colors which are supposed to be printed out aren't the ones that are printed out. Vitesse has mentioned several possible workarounds for this problem, and it's really not the fault of Vitesse or Hewlett-Packard. Fortunately, I've run into this problem only one or two times because most of my graphic work on the IIGS is done in 320 mode.

The final problem I had with this printer is speed. I own a Hewlett-Packard LaserJet 4ML printer in addition to this one, and compared to the speed of the LaserJet, the DeskJet prints at a *very* leisurely pace. Printing the first page of this review, for example, took about 4 minutes with the DeskJet. Printing a color graphic was much slower, however; it took almost fifteen minutes to print one page! However, the color is something that I just can't do on the LaserJet, and people moving up from an ImageWriter will probably think the printing speed is actually an improvement.

So, Should You Get One?

If you've been dreaming about a printer with high resolution and color capability; if you want one that doesn't take much space or that you plan to move between your home and office; if you like Hewlett-Packard quality; if you go to a computer superstore and see one on a close out special; or you're just dissatisfied with your ancient ImageWriter, grab a DeskJet 310 today. If you can't find one because it's discontinued, a DeskJet 320 is still a good choice, and is an even better choice if it's priced around \$200. With the help of some special printer drivers and a parallel card or converter, you'll remember what the "G" in IIGS stands for! GS+

DeskJet 310 Print Samples

The quick brown fox likes 18 point Times.

The quick brown fox likes 18 point

The quick brown fox likes 18 point Futurist.

The quick brown fox likes 18 point

The quick brown fox likes 18 point Lapland.

~~The quick brown fox likes 18 point London.~~

The quick brown fox likes 18 point

~~THE QUICK BROWN FOX LIKES 18 POINT~~

The quick brown fox likes 18

MPW IIGS ORCA/C

By Mike Westerfield

Price: \$175

Requires a Macintosh (68030 or better) and MPW (Macintosh Programmer's Workshop) v3.1 or later. Complete installation requires about 2MB of disk space. Linking requires the MPW IIGS Tools package, which costs \$50, and is also available from the Byte Works.

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Reviewed by Josef W. Wankerl

Requires a Macintosh??!?!?

That's right, you're not hard of seeing—the product I'm reviewing now, MPW IIGS ORCA/C, runs on a Macintosh. MPW IIGS ORCA/C is a direct port of ORCA/C v2.0.3 that runs under APW or the ORCA/Shell on your IIGS, except that it runs under the MPW shell on a Macintosh. So why am I reviewing a Macintosh product? Well, you see, the code that MPW IIGS ORCA/C produces is the same 65816 output that our native ORCA/C generates. This means you can use the fastest Macintosh on the planet to compile programs for your IIGS. (From here on out, I'm going to refer to MPW IIGS ORCA/C as "cciiigs" because that's the command you issue in MPW to invoke the MPW IIGS ORCA/C compiler . . . and "cciiigs" is a lot shorter and easier to type than "MPW IIGS ORCA/C".)

What is it?

As I said before, the cciigs compiler is a direct port of the ORCA/C compiler for the IIGS. If you give both compilers the same source code file, they should generate exactly the same object code. The cciigs compiler does have a few changes from the native ORCA/C compiler, however. First off, single line C++ style comments designated by the double slash (//) are allowed! I love the // comments, so that change alone made me one very happy camper. The inline directive has been extended to allow calling functions that follow the C-style calling conventions. Multi-byte character constants are now accepted, so you can say `x = 'ABCD'` to set the value of `x` to \$44434241. One of the neatest changes in the cciigs compiler is that it allows the extended character set to be used for identifiers, math operators, and

comparison operators. This means you can have expressions such as:

```
if ((mīçhâël ≠ 2) || (ñøßÿ ≥ 5))  
    mīkë = mīçhâël ÷ ñøßÿ;
```

The cciigs compiler also ignores tokens after `#endif` preprocessor directives. Error messages now use line numbers set by the `#line` directive instead of using the physical line number in the file. And finally, most of this functionality can be turned on and off with the `#pragma ignore` directive. If you like the changes you see here, and you wish your native ORCA/C had them too, then don't worry. All these changes should be rolled into the next native version of ORCA/C.

Batter up!

The thing you're probably wondering most about is, "How much more speed can I expect using cciigs?" The answer depends on which Macintosh you're using, of course. However, in all test cases, the cciigs compiler outperformed the native ORCA/C compiler running on my IIGS with an 8MHz, 16K cache ZipGS installed . . . but sometimes just barely! (I didn't even bother to run tests for an unaccelerated IIGS system.) The source code I used to test compiles was the Balloon v2.0 source code. The Balloon source code consists of three C files: `Access.CC` which is the new desk accessory interface code, `Support.CC` which contains a lot of support routines, and `Balloon.CC` which is the main code. Balloon also has some Rez and assembly code to compile, but since this isn't a review of how the MPW-based Rez compiler and assembler compare against their native IIGS counterparts, I didn't compare them. For a list of how the C compiles stacked up, see Table 1.

Is the Speed Worth It?

Since the code that cciigs generates is exactly the same as that the native ORCA/C compiler generates, the only real advantage of using cciigs is speed. However, you're also using MPW on the Macintosh, and that presents its own list of advantages. The make facilities with MPW are a little more advanced than on the IIGS . . . and also a little more complicated to figure out. Personally, I'm more comfortable in the ORCA/Shell environment on my IIGS even though a lot of the same commands are available in MPW. I just don't think that the Macintosh was ever meant to have a command line interface . . .

But It Doesn't Work?

My first experience with cciigs was a rather painful one. I installed the compiler, loaded up MPW, and attempted to compile my Balloon source code to see if the thing actually worked. Crash. It didn't. I then moved down to something simpler, my Copy Icon Finder extension code, from GS+ V6.N2. Crash. It didn't work either. I simply couldn't get *anything* to compile without cciigs crashing the system. After talking with Mike Westerfield a bit, the problem was narrowed down to the optimization code in the compiler. Everything I had tried to compile had optimizations turned on. When I turned optimizations off and tried another compile, everything worked great. Now, you may be thinking that having a compiler that crashes when you turn on optimizations is rather silly, and I agree. However, Mike said he would have it fixed after he got back from KansasFest and finished up another project he's got at the top of the queue. Hopefully the fixed cciigs should be out by the time you read this.

Table 1 - ORCA/C Speed Comparisons For Compiling Balloon
(Times are in minutes and seconds. Note that MPW IIGS ORCA/C is not a PowerPC-native application, so all times from Power Macs were taken with the Power Mac running in 68040 emulation mode.)

Computer	Code File	Time w/o SYM	Time w/SYM
Apple IIGS (8MHz 65816)	Access.CC	1:47	0:54
	Support.CC	2:46	1:43
	Balloon.CC	2:49	1:42
PowerBook 160 (25MHz 68030)	Access.CC	1:45	0:53
	Support.CC	2:05	1:16
	Balloon.CC	2:03	1:13
Performa 6115 (60MHz PPC 601)	Access.CC	1:34	0:42
	Support.CC	1:51	1:01
	Balloon.CC	1:50	1:00
Power Macintosh 9500 (120MHz PPC 604) (Times are in seconds)	Access.CC	31.90	22.51
	Support.CC	38.16	29.17
	Balloon.CC	38.22	29.25

Other Problems

The crashing bug is the one really bad problem I found with cciigs. But, I did find some cosmetic stuff I didn't particularly like. First off, when you install cciigs, you have to put two folders in the same directory as MPW for the C headers and library. While that was the way to do things with MPW from E.T.O. 13, the latest version of MPW is a bit more organized. ("E.T.O." is "Essential Tools and Objects," and it's Apple's complete development environment which includes MPW and a whole host of other Macintosh development tools . . . and comes at a big price tag, too!) With the older MPW, every single installed compiler would have a library and header folder in the same folder as MPW, which cluttered up the MPW folder. The latest MPW has an **Interfaces** folder where the headers folder should go, and a **Libraries** folder where libraries should go. (Note that you *can* organize your cciigs system in the later fashion, but you have to use a `#pragma path {MPW} Libraries:ORCACDefs` directive in your source code before cciigs will see where you moved the headers to.)

Something else I didn't like was the fact that the `-p` compiler flag, which generates progress information as the compiler works, doesn't display the progress information immediately. All the other MPW tools with progress flags show the progress in the worksheet as it happens. The cciigs compiler, however, lets the worksheet buffer all the progress information, and then displays it to you *after* everything is done. While this gets you a report of what happened, progress information is usually more useful when it's showing you what's *currently* happening.

There are two ways to tell cciigs the name of the file to save object code in. The first way is to put a `#pragma keep` directive in your source code. The second way is to issue the cciigs command in MPW, and cciigs will take the name of your source code file and append a ".o" suffix for use as the keep name. What's lacking is a way to specify a keep name on the command line.

Finally, I'd like to take some time and mention the manual that you get with cciigs. If you're a previous user of ORCA/C for the IIGS, you should find the manual very familiar. Most of the chapters in the cciigs manual are direct copies of the native ORCA/C manual. In copying those chapters, however, you'll notice references to the "small memory model compiler." With the native ORCA/C, you get two compilers: a full-featured compiler, and a small memory model compiler designed to work on systems without much memory and without hard drives. The small memory model compiler doesn't exist with cciigs.

The Fine Print

What you get with the cciigs package is a good, fast IIGS cross compiler. However, what you *don't* get in the cciigs package is also worth mentioning. First off, you don't get MPW. You have to acquire MPW from other channels, like APDA. MPW is not cheap—it runs about \$495. (If you get MPW with E.T.O., expect to shell out over \$1,000.) If you don't need manuals, you can get MPW off of the Metrowerks CodeWarrior Bronze CD for only \$99. Another important piece of the puzzle that you don't get with the cciigs package is . . . a *linker*!!! That's right, while you can compile your code just fine, don't even think about linking it. To get a linker, you have to shell out another \$50 for the MPW LinkIIGS tool. But, for that \$50, you also get a bunch of other great utilities like Rez and Derez along with the LinkIIGS tool. The Byte Works also recommends that you get the \$100 MPW IIGS Assembler as well, so you can write assembly language routines, and so you can make changes to the library code if you so desire. The assembler purchase is optional, and you don't need it to write programs using the cciigs compiler. If you have a copy of the System 6 Golden Master CD-ROM (which is no longer available), you can squeak by without getting the assembler or the linker, because contained on the CD-ROM is a complete set of MPW IIGS programming tools. You get the LinkIIGS linker, Rez, Derez, the IIGS assembler, the IIGS Pascal compiler, the IIGS C compiler (the one from Apple, not

the cciigs compiler from the Byte Works), and a suite of other helpful tools.

So what does it all add up to? $MPW + cciigs + linker = 495 + 175 + 50 = \720 . If you go the cheap route with Metrowerks CodeWarrior, you get $99 + 175 + 50 = \$324$. If you don't get the linker, that's \$50 off of each of those prices. Also, if you get the assembler, add in an extra \$100. Note that by taking the cheap route, you don't get something very important: manuals. The CodeWarrior CD and the System 6 CD don't come with any documentation on how to use MPW or any of the MPW IIGS development tools. The complete MPW package, the IIGS tools, and the IIGS assembler all come with extensive documentation. If you're lucky, you might be able to find third party books that describe how to use MPW, such as the two volume set of *Programmer's Guide to MPW* by Addison-Wesley, on discount racks at your local bookstores. However, the only place you'll ever find documentation for LinkIIGS is by buying the tools package from the Byte Works.

Should You Get It?

If you're dying for faster compile times than your IIGS can deliver, or you want to be able to write IIGS programs on the go (on a PowerBook), and don't care what the cost is, then MPW IIGS ORCA/C is for you. I personally think I'll be sticking with my native development environment, simply because I'm more comfortable there, and the speed increase is barely measurable on my PowerBook 160. I have access to a lot of programming aids on the IIGS (specifically Nifty List) that really speed along my development time, too. Development time isn't all spent compiling, you know. It's also spent scratching your head, looking in books, whining, and typing in source code, which neither the IIGS or a Mac can help with. If long compile times ever get me down, though, I might try slowly switching to the MPW environment.

GS+

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Quick Click Morph

By Mike Westerfield

Price: \$60

Requires System Software v6.0.1, 1.125MB of RAM, and a single 3.5-inch floppy drive. An accelerator, more RAM, and a hard drive are all *very* strongly recommended. Installation on a hard drive takes up about 291K.

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Reviewed by Steven W. Disbrow

Quick Click Morph is an application program that lets you use your trusty IIGS to generate one of those newfangled *morphs* that everyone in Hollywood is so excited about. You say you don't know what a morph is, eh? Well, basically, a morph is an animation showing one object transforming (or "morphing") into another. But this isn't an instantaneous transformation, you get to actually see the first object "flow" and/or "ooze" into the shape of the second. So, for example, if you had pictures of say, the moon, an eye, and a pizza, you could create a morph that shows the moon changing into the eye and then the eye turning into the pizza. So, when the moon turns into an eye, then a big pizza pie, *that's* a morph, eh? (Did anyone out there get that joke? No? Drat.)

How it Works

If morphing sounds like a fairly complex and time-consuming process, it is. That's why computers are so well-suited for it. (If you want an in-depth description of how morphing is actually accomplished, you should have gone to KansasFest! Mike Westerfield gave a very good presentation on this topic... he even gave out some source code!) Fortunately, Quick Click Morph puts a very friendly face on this complex process and makes it rather painless to get your morphs up and running.

The first step in creating a morph is to decide exactly what it is you want to morph. A popular type of morph is one showing a parent turning into a child or a person turning into a family pet. However, the beauty of morphing is that you can literally turn *anything* into anything else. But, morphs of related objects are usually more interesting and/or revealing (or at least not as weird looking).

Next you have to come up with IIGS-compatible pictures of the things you want to morph. Quick Click Morph loads both raw screen dumps (file type \$C1, auxiliary type \$0000) and Apple Preferred graphic files (file type \$C0, auxiliary type \$0002), so if you have a digitizer (like the Quickie from Vitesse or the VisionPlus from Alltech) that can save in either of these formats, you can use the pictures it creates for your morphs. If you don't have any good pictures in either of these IIGS formats, Quick Click Morph can also use graphics created on other computers and stored in non-compressed RGB TIFF format. (TIFF stands for "Tagged Image File Format.") The TIFF format is *very* popular on the Macintosh which means that if you have access to a Macintosh or an online service with a Macintosh file area, you should be able to get *hundreds* of high-quality pictures to morph. (And, yes, just in case you were wondering, Quick Click Morph *can* work with color images containing up to 256 colors.)

Once you have your pictures, you load the pictures into Quick Click Morph as "key frames." Key frames represent the start and end points for a morph. For example, if you wanted to create a morph showing your brother turning into yourself, the first key frame would be a picture of your brother and the last key frame would be a picture of you. Quick Click Morph makes this step easy by providing specific menu items for loading in key frames, updating (i.e. loading a new picture into an established key frame), and deleting key frames. The only problem that you might run into here is that while Quick Click Morph *does* allow you to load in some TIFF files (specifically, non-compressed RGB TIFFs), the TIFF specification allows for a lot of variation in the way a picture is stored, and Quick

Click Morph simply won't handle them all. So, when you try to load a TIFF file for use as a key frame, you might find that you can't. About the only sure cure for this is to have a Macintosh handy with a graphics conversion program that you *know* will save TIFF files in a format that Quick Click Morph can handle. (One such Mac program is a shareware utility called GIF Converter.) [Note that as we go to press, the Byte Works is working on a separate program, TIFF Reader, which may be able to read more TIFF formats and allow you to use them for Quick Click Morph. At this time however, no firm release date has been set for this program.]

The next step in creating your morph is to set up your *morph control points*. These points tell Quick Click Morph exactly what in the first key frame should end up where in the second key frame. For example, when morphing your brother into yourself, you don't want his eyes to turn into your ears! In fact, you'll probably want the centers of his eyes to end up where the centers of your eyes are. So, you would go to the key frame showing your brother and put a morph control point (by clicking the mouse) in the center of each of his eyes. Then, you would move to the key frame showing yourself. The two morph points you just placed on you brother's eyes will show up on this key frame too, but unless the two key frames were *exactly* on top of each other, those control points won't be over *your* eyes. So, you simply click on each point and drag it on top of your eyes. (This doesn't change the position of the morph control point on the first key frame, it simply tells Quick Click Morph where you want that morph control point to end up at.) Basically, this tells Quick Click Morph "I want the graphic data around these points on the first key frame





to be transformed so that it moves towards and looks like the graphic data around these points on the second key frame."

The more morph control points you specify, the smoother the morph will be. So, for an extremely smooth morph, you could put morph points on and around the eyes, the ears, the nostrils and the head. However, each morph control point that you add linearly increases the amount of time that it takes for Quick Click Morph to create the final morph.

The last step is to determine how many "in-between" pictures you want Quick Click Morph to generate for the morph. The more frames that Quick Click Morph generates, the smoother the morph will be. Again however, more frames means that it will take more time to generate the final morph.

Once you have all these things done, you can tell Quick Click Morph to begin the process of creating your morph for you. During this process Quick Click Morph figures out what each of the frames in-between the key frames should look like in order to smoothly transform the image in the first key frame into the image in the second key frame. Once this process is completed you will have a series of pictures showing the transformation from the first key frame to the second. At this point, you can save all of these frames in a "morph file." If you save the pictures this way, you can later use Quick Click Morph to reopen the morph file to change and/or recreate the morph. You can also have Quick Click Morph output all of the frames to a standard PaintWorks animation. You can then play this movie back with any software (like HyperStudio or FINDERVIEW or PLATINUM PAINT) that can play a PaintWorks animation.

That might *seem* like a lot to do, but after you've done it once or twice, you'll find that the process of creating a morph with Quick Click Morph is really very simple. Now that we've got a good overview of the Quick Click Morph software, let's take a closer look at some of its neater features, and some of its problems.

Nice Touch

After you've created your first morph, you'll probably find yourself wishing for a couple of capabilities that, at first glance, Quick Click Morph seems to be missing. Fortunately a quick read of the manual will reveal that, for the most part, Quick Click Morph contains all of the features you'll need for making morphing easy.

For example, if you've forgotten where a morph control point on the first key frame is supposed to end up, you can have Quick Click Morph display the first and second key frames side by side so that you can see all of the morph control points in each key frame. This is a very useful feature, especially if you have defined a *lot* of morph control points.

If you load a key frame and it isn't the right size or it's in the wrong position on the screen, you can easily resize or move the picture. Moving a picture allows you to make sure your key frames are more closely aligned, which can help you generate smoother morphs. And, resizing your pictures can help reduce the time it takes to generate a morph.

Some of Quick Click Morph's nicest features are those that you can use to actually generate a morph. Namely, you can generate a morph one frame at a time, and you can stop and restart the generation of a morph. This first option is nice because, after you've specified your morph

control points, you can generate only the "middle" frame of a morph and use it as an indication of how well you've chosen your morph control points. If the single frame looks good, it's a pretty good indication that the whole morph will look good too. The advantage of the second option should be obvious—morphs can take a *long* time to generate on the IIGS, and being able to stop, save and restart a morph lets you generate your morphs when you've got the time to spare.

The last neat feature of Quick Click Morph is its ability to save out any frame of a morph as a standard IIGS picture file. So, if say, the third frame of that morph of you and your brother is *really* cool, you can save it out all by itself and use it for whatever nefarious purpose you desire. This is a very, very cool feature.

Problems?

Quick Click Morph is an ambitious program, but for all that it accomplishes, it does have a few problems.

The first of these problems, and the most annoying, is that while you can save a morph as a PaintWorks animation (i.e. a "movie"), you can't load a PaintWorks animation into Quick Click Morph and replay it. To see what a morph looks like in movie format, you have to load the morph file (which is *not* the same as a PaintWorks animation file) and use the Quick Click Morph "Play" command, which will recreate the movie in memory and play it. This takes time, and in my experience, almost always generates an out of memory error. (Of course, I've got a fairly full system, so that might just be a problem with *my* IIGS setup. And in fact, if I shift-boot to free up some memory, the Play command works just fine.)

To get around this limitation, Quick Click Morph ships with a separate program, called Quick Click Movie Player. Quick Click Movie Player allows you to create and save "scripts" of PaintWorks animations that you want to play back. So, for example, you could create a script that played back your morph of your brother and yourself, then the morph of the moon, the eye and the pizza, and then some other movie. Actually, Quick Click Movie Player is a really nice program (and the Byte Works might do well to sell it separately), but it's a pain that you have to quit Quick Click Morph to easily play back the morph movies you create.

The next problem is that Quick Click Morph doesn't have any Undo capability. So, if you resize a picture and decide that you don't like what it looks like

now—tough luck, buddy. You'll have to re-load that picture and try again.

The only really major problem with Quick Click Morph is something that truly isn't its fault. Namely, Quick Click Morph is very, very slow. This isn't really that big a surprise—any sort of intense graphics operations on the IIGS are going to be slow. Besides, the stuff that Quick Click Morph is doing is one of the most complex graphic manipulations yet dreamed up by man. But, Quick Click Morph isn't just slow during the generation of a morph. It also bogs down if you resize or reposition a key frame that was originally a TIFF file. There's a simple work-around for this though: After you import your TIFF file into your key frame, save it back out as a simple IIGS screen shot and then re-import that screen shot and work with it—not the TIFF file. You'll lose some detail, but this will speed up all of the operations that Quick Click Morph performs with that key frame. The bottom line here is, be patient while you create your morphs because it's going to take a while!

The only other problems that I had with Quick Click Morph were really just minor annoyances. First of all, if you have Twilight II installed, Quick Click Morph doesn't bother to tell it not to blank the screen while it's generating a morph. It can be very frustrating to walk away from a morph and return 15 minutes later, only to find a Twilight II blanking effect filling your screen, and your morph stopped dead

in its tracks. That's a big waste of time that could easily be avoided by Quick Click Morph.

Second, the morph and movie files that Quick Click Morph generates are, in a word, *huge!* Because of this, its a good idea to keep your key frames small (i.e. don't try to morph a graphic that fills the whole screen) and it's a *really* good idea to have a hard drive to save your morphs on! (As an example, Quick Click Morph comes with three sample morphs, each on its own 800K disk!)

Wish List

Of course, the one thing that I would absolutely *love* to see in Quick Click Morph is support for the new Second Sight video board. (See review in GS+ V6.N6.) Unfortunately, the Second Sight board is just too new for that to happen for a while. (But, we can always hope for an update!)

Another nice addition would be to have some way to "align" key frames with each other based on the morph control points you have placed. To explain what I mean by this, let's go back to the example morph of you and your brother. Let's suppose that the image of your brother shows up on the far left side of the screen and the image of yourself shows up on the far right side of the screen. To create as smooth a morph as possible, it would be good to have those images overlap as much as possible. So, it would be neat if you could place a morph control point on

your brother's right eye and your right eye and then have Quick Click Morph move the second key frame image so that those two morph control points are *exactly* on top of each other.

Finally, it would be nice if Quick Click Morph gave some indication of exactly which frame you are working with at any given time. As it is, there is no way to tell which frame you're looking at.

Conclusions

Quick Click Morph does exactly what it says it will do: It lets you create really cool morph animations on your IIGS. Furthermore, it does it in a simple and intuitive manner. The only real problem with the program is that it is on the slow side (even with an accelerator)—but if you're committed to your IIGS, you can probably live with that.

Quick Click Morph is a good program, but it's definitely not for everyone. If you don't have a need for this kind of program, you'll probably play with it once or twice and then forget about it. Sadly, it's just too slow for "casual" use.

On the other hand, if you are a "graphics nut," I'd recommend that you snatch up Quick Click Morph as quickly as you can. It's a really neat program and another great example of the IIGS being taught a new trick that no one ever expected it to be able to do. GS+

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Reviewed by Steven W. Disbrow

For the past couple of years, there's been this guy who calls himself "Sheppy," that's been putting out all this really great freeware and shareware software for the Apple IIGS. The only problem is, the guy puts out too much stuff! In fact, he's put out so much stuff that it's been almost impossible to keep track of it all!

So, in an effort to make sure that *everyone* has the latest versions of his programs (which, he calls "SheppyWare" to set them

apart from all the other stuff out there), Sheppy set out to create the ultimate guide book for his software. The result is *The Complete Guide to SheppyWare*.

What it be?

The Complete Guide to SheppyWare is a 104-page "comb-bound" booklet that contains complete documentation for each and every product that Sheppy has ever released. By my count, that's thirty-two IIGS-specific programs, four "generic" Apple II programs, and one Macintosh program. The disk that comes with *The Complete Guide to SheppyWare* contains all of these programs except for the ones that were published by *Softdisk G-S*. But, that still leaves you with twenty-eight IIGS programs (and the others) that you'll get. (Sheppy tells you how to contact *Softdisk G-S* in case you want to order one of these other programs.)

What Kind of Programs?

On the IIGS side of things, the SheppyWare disk contains such gems as Font Redirectory (which tells the system to load your fonts from a disk other than your boot disk), ProBOOT (which gives you an obscene number of options for rebooting your computer), SysFail Plus (which can give you a better idea of exactly why your IIGS just crashed), and ErrorStrings Installer (which does away with error dialogs that only contain a

number). If those four utilities don't grab your attention, there are over twenty more IIGS programs here, and you'll probably find at least one of them that will be worth the price of admission.

On the "normal" Apple II side, you get a program that will keep the contents of your PC Transporter RAM disk intact while you use MS-DOS, as well as a program that can split text files into multiple chunks, and a game (one of the few that ever used Double-Hi-Res graphics) called TrailBlazers.

On the Macintosh side, there's only one program, but we don't review Mac software anyway, so I won't talk about it here. (It's pretty cool though! It tells you exactly how much memory a Mac program is using and how much it's got left in its memory partition. Ooops! I told you about it! Sorry.)

Bad Stuff?

Hmmm, let's see. There are some typos in *The Complete Guide to SheppyWare*, but nothing that will keep you from being able to use any of the software. About the only real problem I had with *The Complete Guide to SheppyWare* is that in the contact information that's included for *GS+ Magazine*, our phone number is wrong. (It's the one from before when we moved out of my basement.)

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About the only problem I have with the actual software is that a few of the programs are a bit out of date. For example, the Fix Find File program fixes a problem that existed in the Find File new desk accessory in System 6.0. That problem was fixed in System 6.0.1, so the program really isn't necessary any longer. (Of course, if this program wasn't on the disk, he couldn't very well call it "The Complete Guide to SheppyWare" could he?)

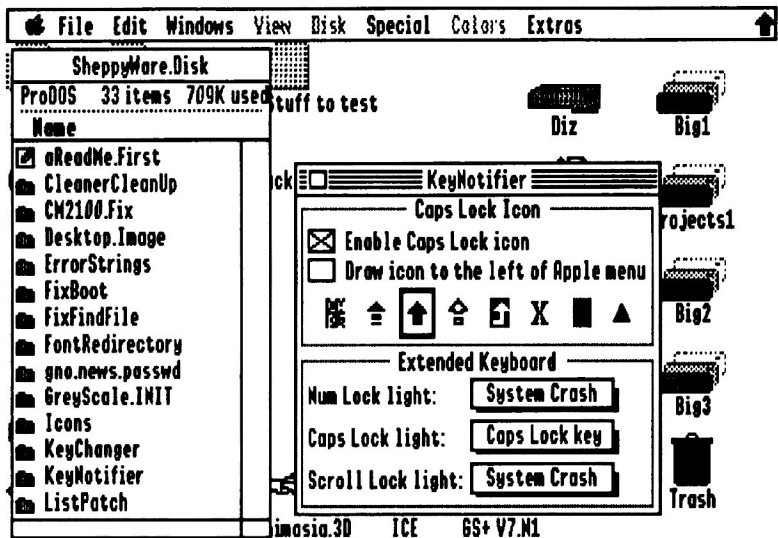
Other Good Stuff

The Complete Guide to SheppyWare also includes an index (Which is more than I can say even for our own products!), and a helpful section that compares and contrasts the differences between freeware, shareware, public domain software, and SheppyWare.

Send Him Your Money Now

OK everyone, this is a no-brainer. The price is reasonable, the software is great, the book is well-done, and the guy that you are giving your cash to really and truly deserves it. He's been supporting the Apple II for a long time now, and if lots of us buy *The Complete Guide to SheppyWare*, he might just keep on supporting it for a long time to come.

GS+



The Best For Your IIGS!

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Pointless is a control panel that will make all of your IIGS documents look better than ever before by allowing you to use TrueType fonts on your IIGS. And, when you combine Pointless, TrueType fonts, and your StyleWriter, DeskJet or LaserJet printer, you get output that looks like it came off of a high-end laser printer! (Pointless also does wonders for ImageWriter printouts!) Pointless makes all of your on-screen text look better too!

System requirements: System 5.0.4 or later and one 3.5-inch drive. (A hard drive and 2MB of RAM are strongly recommended!) Price includes First Class shipping to U.S., Canada, Mexico, and surface mail shipping to the rest of the world. Air Mail shipping is an additional \$3.

TypeWest Volume 1 - \$25

TypeWest is another great companion for Pointless. It's a collection of 40 professionally-designed TrueType fonts that you can use in all of your documents. If you've just bought Pointless, TypeWest is a great way to start your TrueType font collection! If you already have Pointless, the TypeWest fonts will help add a professional touch to all your documents!

System requirements: TypeWest requires Pointless for use on a IIGS. (The fonts in the TypeWest collection are also usable on any Macintosh running System 7.0 or later.) Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$3.

TypeSet - \$25

TypeSet is the perfect companion for Pointless. It helps you manage your TrueType fonts by providing you with three great utilities in one new desk accessory: a What-You-See-is-What-You-Get Font menu (to make sure you always pick the right font), switchable font sets (to make sure you only use the fonts you need), and an extensive set of font reports (to help you easily build a catalog of all your TrueType fonts).

System requirements: System 5.0.4 or later and Pointless. (A hard drive and 2MB of RAM are strongly recommended!) Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$3.

HardPressed - \$35

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System requirements: System Software v6.0 or later, 2MB of RAM (a hard drive is also strongly recommended). Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$3.

Animasia 3-D - \$89

Animasia 3-D is a program that allows IIGS users to create animations of 3-D objects using a variety of shapes and cameras, and then re-play those animations or save them as standard PaintWorks animation files. Once an animation is saved as a PaintWorks animation, it can then be used with any IIGS program (like HyperStudio and HyperCard IIGS) that supports PaintWorks animations!

System requirements: System Software v6.0.1, 2MB of RAM and a 3.5-inch drive. (A hard drive and an accelerator are very strongly recommended.) Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$5.

Balloon - \$25

Balloon is a new desk accessory (NDA) that allows you to easily create and maintain NuFX (ShrinkIt) archives on your IIGS. Since Balloon is a NDA, you no longer have to run GS-ShinkIt to extract files from archives! So, if you use a desktop telecommunications program, like Spectrum from Seven Hills Software, you can manipulate your ShrinkIt archives while still online!

System requirements: System Software v6.0.1, 2MB of RAM and a hard drive. Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$3.

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System requirements: System 6.0 or later, 2MB of RAM and a hard drive. (More RAM is strongly recommended for multitasking!) Price includes First Class shipping to U.S. Surface mail shipping to the rest of the world is an additional \$5. Air Mail shipping to the rest of the world is \$10.

Splat! - \$39.95

Splat! is a *source level* debugger for use with ORCA/C, ORCA/Modula-2, and ORCA/Pascal. With Splat! installed, you can step or trace through your program's source code while your program executes! You can also view and set the values of variables and you can even view complex data structures, like Event records, and watch their contents change as your program executes! If you program the IIGS, you need Splat!

System requirements: System 6.0 or later, 2MB of RAM, a hard drive and either ORCA/C, ORCA/Modula-2 or ORCA/Pascal. Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$4.

Switch-It! - \$39.95

Switch-It! is a program switcher and launcher that allows you to have more than one IIGS application in memory at the same time.

You can switch between these applications instantly, just by picking the application you want to work with from the menu bar at the top of the screen! Switch-It! also comes with several new desk accessories (NDAs), that allow you to easily copy data from one application that you have in memory, and then paste it into another application.

System requirements: System 6.0 or later, 2MB of RAM and a hard drive. Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$4.

Pick 'n' Pile - \$20

Pick 'n' Pile is a great game for your IIGS that would probably remind you of Tetris, if Tetris had walls, flowerpots, wildfires, bombs, and death heads! In Pick 'n' Pile, your job is to clear the screen of various colored balls, by stacking them on top of each other. As you try to accomplish this task, some helpful items appear to make your job easier (like the bombs), and other items appear to make your job more difficult (like the death heads). It's extremely addictive, and a lot of fun!

System requirements: System 5.0.4 or later, 1MB of RAM. Price includes First Class shipping to U.S., Canada, Mexico, and surface mail to rest of the world. Air Mail shipping is an additional \$3.

ZipGS Accelerator - \$189

Are you tired of waiting on your IIGS? Well then, plug in a ZipGS accelerator card and get ready to blow the doors off of your favorite programs! With a ZipGS 8/16 accelerator installed, your IIGS will run at a snappy 8MHz instead of the wimpy 2.6MHz it's running at now. The Finder will run faster, AppleWorks GS will run faster, EGOed will run faster, in fact, just about *everything* that you do with your Apple IIGS will happen faster!

And the ZipGS is simple to install! All you have to do is remove the CPU chip, plug the ZipGS into the CPU socket, plug the ZipGS circuit board into either slot 3 or 4 and then you are ready start computing at ludicrous speed!

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Addressed For Success - \$35

Addressed For Success is the *only* IIGS-specific label design and printing application available! With it, you can quickly and easily create and print labels on any IIGS-compatible printer, using any font that you have. Addressed For Success comes with dozens of pre-made label templates for use with Avery brand labels, or you can easily design your own templates for use with other brands of labels. Addressed For Success also performs bulk sortations for reduced postage costs, prints postal bar codes, and allows you to include up to three different graphics on each label!

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Miscellaneous Library

By Josef W. Wankler

[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, you *must* 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, ORCA/Pascal, ORCA/Modula-2, and yes, even MPW IIGS ORCA/C. 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 *Figures* file. (This file is in the *GSP.V7.N1.SEA* self-extracting archive on your *GS+* Disk.)

Starting with this issue of *GS+*, we are changing the way the Miscellaneous Library is distributed. The library and all the header files will be on the disk, but only the source code and documentation files that have changes will be distributed. (So, if nothing changes, all you'll get is the library and header files, but no source code or documentation.) The idea of having all my great little utility routines in one place is finally catching up to me with the increased size. But, the good side of this new packaging is that by reducing the amount of material distributed with *MiscLib*, we can pack more great new stuff on your *GS+* Disk.

For this installment of the Miscellaneous Library, there is a tremendous amount of new stuff. Apart from the one bug fix and a few new features for existing routines, a couple of new miscellaneous routines have been added, and two entirely new sections of calls have been added! The first new section is the Compression section, which performs LZSS data compression and decompression. The second new section is the Console section, which gives easy access to the *GS/OS* .CONSOLE driver.

Since I have to start somewhere, it might as well be with the little things and then work up to the new ones, so first off on the discussion list is the one bug fix.

MidString

I've put a small change in the *MidString* routine that makes it work correctly. It turned out that the routine was checking for a less-than-or-equal-to condition when it should have been checking for a greater-than-or-equal-to condition. So, if *MidString* has been giving you problems, this version should fix it right up.

Delete, Validate, and Move

In the hopes of one day updating *NoDOS*, I revised the *DeleteFiles*, *ValidateFiles*, and *MoveFiles* routines. All three routines have one common change in that they now take a parameter which lets you tell the routine whether to repeat selecting files until cancelled or not. After years of using *NoDOS* (last seen in *GS+* V4.N4), I've found that I mostly want to delete one file, not one hundred files, so automatically repeating the file selection was a hindrance.

The *DeleteFiles* call has also gotten a face lift to look better in 640 mode and two new brother routines: *DeleteFiles320* and *DeleteFiles640*. The normal *DeleteFiles* routine works in both 640 and 320 modes. If you know in advance that your program will always be in one mode or the other, you can call *DeleteFiles320* or *DeleteFiles640* to cut down on the size of the included routine, since only one Standard File template needs to be included with *DeleteFiles320* or *DeleteFiles640* but both templates are included when you call the plain *DeleteFiles* routine.

HorizontalCenter

In the last few programs I've written for the magazine, I've used a routine called *CenterWindow*. Since I reused it so many times, I figured it'd make more sense included with *MiscLib*, so I renamed it to *HorizontalCenter* and put it in the Miscellaneous section of *MiscLib*. The *HorizontalCenter*

routine takes a window and centers it horizontally on the screen for either 640 or 320 mode. This routine makes it very easy to have pretty window placement when your program has to operate in both 640 and 320 mode.

CalculateCRC

In preparation for the Compression section of calls, I decided it would be a good idea to have some way of checking to see if decompressed data had become corrupted. So I ripped out the *CalculateCRC* routine from *Balloon* and threw it in the Miscellaneous section of *MiscLib*. (It doesn't really make sense in any of the other sections. I considered putting it in the LZSS Compression section, however, CRCs don't have anything to do with compression.) The *CalculateCRC* routine takes a starting CRC value, a pointer to a data buffer, and the length of the data buffer. The CRC value is then updated based on the contents of the data buffer, and a new CRC value is returned.

Compression

The new Compression section of calls provides routines for LZSS data compression and decompression. I wrote the LZSS calls because I wanted some good compression routines, but I didn't want to have to deal with licensing of patented algorithms, namely LZW. The LZSS routines are dictionary based, like LZW, but manage the dictionary in a completely different fashion. If you want to know more about LZSS, LZW, or just data compression in general, there are a number of books on the subject than can give you a far better discussion on the subject than I can here in a 48 page magazine, so I won't even try to discuss how the compression works. (A good book I refer to is *The Data Compression Book* by Mark Nelson, published by M&T Books.) The LZSS algorithm takes a fairly long time to compress data, but decompression is extremely fast. Faster than LZW, even! Well, enough of my generalizations, let's look at the four simple LZSS routines: *CompressLZSS*, *DecompressLZSS*, *LZSSConverter*, and *LZSSConverterRead*.

CompressLZSS

When you want to compress some data, all you need to do is call the *CompressLZSS* routine. You pass the routine pointers to two support routines you must write yourself: a data refresh routine and a data save routine. *CompressLZSS* will call your data

Figure 1 - The New Files Section Calls

Call Name	Description
<i>DeleteFiles320</i>	Presents a 320-mode delete files user interface
<i>DeleteFiles640</i>	Presents a 640-mode delete files user interface

Figure 2 - The New Miscellaneous Section Calls

Call Name	Description
CalculateCRC	Calculates an XModem-style 16-bit CRC on a block of memory
HorizontalCenter	Centers a window horizontally on screen in either 320 or 640 mode

refresh routine when it needs more data to compress. Your data refresh routine then gives the compression routine some more data to compress and the size of that data. If you pass back a zero for the size, the compression routine assumes there is no more data to compress, so it stops compressing. Your data save routine is called after a block of data has been compressed. You can then take that compressed data and save it in any fashion you see fit (e.g. writing it out to a new memory block or saving it out to a file). The CompressLZSS routine returns the size of the compressed data after it has finished compression. For detailed information on how to write data refresh and data save routines, consult the LZSS documentation file on your GS+ Disk.

DecompressLZSS

When you want to decompress some previously compressed data, all you need to do is call the DecompressLZSS routine. Just like the compression routine, you pass the routine pointers to two support routines you must write yourself: a data refresh routine and a data save routine. DecompressLZSS will call your data refresh routine when it needs more data to decompress. Your data refresh routine then gives the compression routine some more previously compressed data to decompress and the size of that data. If you pass back a zero for the size, the decompression routine assumes there is no more data to decompress, so it stops. Your data save routine is called after a block of data has been decompressed. You can then take that decompressed data and save it in any fashion you see fit. For detailed information on how to write data refresh and data save routines, consult the LZSS documentation file on your GS+ Disk.

LZSSConverter

The LZSSConverter routine is not meant to be called by an application. It is actually a *resource converter* that can compress and decompress resources using the CompressLZSS and DecompressLZSS routines. To use this routine, you add it in to the list of resource converters with the ResourceConverter Toolbox call. Once you've logged the converter in, compression and decompression of resources takes place behind the scenes and you don't have to worry about anything else. (Note that you tell the

ResourceConverter routine which resource types to compress and decompress.)

LZSSConverterRead

The LZSSConverterRead routine is very similar to the LZSSConverter routine. The only difference is that the LZSSConverterRead routine will only decompress resources, it won't compress them. The advantage to this is size. The LZSSConverterRead routine is much smaller than the LZSSConverter routine, so if all you need to do is decompress resources, it's much more efficient to use the LZSSConverterRead routine. An example of where you'd use the LZSSConverterRead routine is where you have read-only resources. Perhaps an application you're writing has a lot of rPicture resources—you can compress the pictures beforehand using the LZSSConverter routine, and in your final version, you can just use the LZSSConverterRead routine.

Console

When I was writing IPC Spy (see the "How to Write Plug-In Modules for IPC Spy v2.0" article elsewhere in this issue), I needed a good way to display information on the text screen. I could have used the Text tool set, but that was old and I didn't want to mess with it. I could have written the information directly to screen memory, but that isn't a very enjoyable process. I decided to use the GS/OS .CONSOLE driver to handle all my text I/O. The GS/OS .CONSOLE driver has very advanced text input and output routines, and I figured IPC Spy could take advantage of them quite nicely. The only problem was that to use the driver, parameter blocks have to be set up and the format for a lot of those parameter blocks aren't in a very convenient layout. I ended up writing a bunch of custom I/O routines that took data in a convenient layout and passed it on to the driver. I liked the routines so much, I figured somebody else out there might find them useful too, so I threw them into the MiscLib. There are *seventy four* .CONSOLE routines total. That's way too many to discuss here.

However, the routines are broken up into eight manageable subsections. The **DStatus Call Helpers** subsection simplifies making DStatus calls to the .CONSOLE driver. The **DControl Call Helpers** subsection simplifies making DControl calls to the .CONSOLE driver. The **Vector I/O Helpers** subsection makes calling the .CONSOLE driver single character I/O vectors easy. The **Open/Close Helpers** subsection manages opening and closing of the .CONSOLE driver. The **Global Dev/Ref Methods** subsection doesn't provide any access to the .CONSOLE driver, but instead sets up a global device number and reference number for the .CONSOLE driver for the remainder of the subsections to use. This simplifies calling the routines because you don't have to pass a driver number or reference number to every single call. The **Control Code Helpers** subsection sends various control codes to the .CONSOLE driver. The **Normal I/O Helpers** subsection makes non-vector I/O with the .CONSOLE driver easy. And finally, the **Box Helpers** subsection makes managing rectangular ports on the text screen easy.

cnslFindConsole

The cnslFindConsole routine is the only one that doesn't fit well into any other subsection. It searches the GS/OS device drivers and returns the device number of the .CONSOLE driver. The driver is searched for by device ID, not by name. If you need to find the .CONSOLE driver, this is an easy way to do it. A lot of the console section routines require the driver device number to operate.

Figures 1 through 3 show the new MiscLib calls (excluding the Console section calls) and gives a brief description of what each one does. For the specifics on how to use any of the Miscellaneous Library routines in your programs (including the Console section calls), break out the MiscLib.Docs and related files located in the GSP.V7.N1.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 3 - The New Compression Section Calls

Call Name	Description
CompressLZSS	Compresses data using the LZSS algorithm
DecompressLZSS	Decompresses data using the LZSS algorithm

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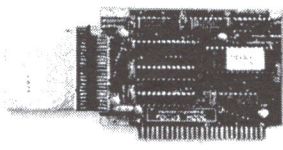
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How to Write Plug-In Modules for IPC Spy v2.0

By Josef W. Wanklerl

[Note: This article is intended for programmers who are interested in writing plug-in modules for IPC Spy v2.0. If you don't care at all about programming, you probably won't be too interested in reading through this. But, if you've ever written a program that used the SendRequest tool call, you'll almost certainly want to continue reading!]

I'm a big fan of the SendRequest tool call that was introduced in System 6. Debugging programs that use the SendRequest call can get a bit tricky at times, though. Of course, when things look difficult, some enterprising programmer comes along and throws a program at it to save the world. In the case of SendRequest, that programmer was Richard Bennett [a hell of a nice guy -Ed.], and his program was called IPC Spy. IPC stands for "Inter-process communication," which is simply another way of saying what the SendRequest tool call does—it lets one process (program) in the computer talk to another. The classic example of IPC is the Finder talking to all the programs that have items in the Finder's Extras menu.

I've written a lot of programs that use SendRequest. I've also used Richard's IPC Spy program to help debug my programs. However, there were a few features missing from IPC Spy that I wanted. I talked to Richard about them, and he said he didn't have enough time to put them all in. After a while of bugging him, he finally got fed up with me, gave me the source code, and told me to add the

features in myself. So what did I do then? I completely ignored the source code and wrote a new version of IPC Spy, version 2.0, from the ground up. (Well, that's not completely true—I used Richard's code for reference in a few places, but for the most part, IPC Spy v2.0 is completely original code.) IPC Spy v2.0 is a freeware package, and is available on GENie and wherever else fine shareware and freeware is uploaded.

One of the features I wanted most in IPC Spy was the ability for it to recognize new request codes when new products come out. With older IPC Spy versions, the entire IPC Spy program had to be updated and recompiled when a new product using IPC was to be recognized. With IPC Spy v2.0, all requests are now explained by external plug-in modules. When a new product accepting requests becomes available, IPC Spy no longer has to be updated to support it. Instead, a simple plug-in module can be written that IPC Spy can immediately take advantage of to explain the new requests. This article explains how to write IPC Spy plug-in modules. (Throughout this article, I use the terms "module," "plug-in module," and "IPC Spy plug-in module" interchangeably.)

IPC Spy plug-in modules are OMF load files with a file type of \$BC (188) and an auxiliary type of \$4082. IPC Spy looks for plug-in modules at boot time in the `*:System:Desk.Accs:IPC.Spy.Modules` folder. Bit 15 of the auxiliary type can be set to "deactivate" a plug-in module so that

IPC Spy will not load it (i.e. the auxiliary type becomes \$C082).

Plug-in modules for IPC Spy must be written in assembly language. You can probably get away with an assembly language header which calls support routines written in high level languages, but since request calls are issued on a very frequent basis, you're going to need all the speed you can muster to keep the system from crawling along when spying is turned on. Assembly language is the best route for this. Besides, you really don't have to do anything too complicated from the plug-in modules. Most of the hard work is done for you by IPC Spy itself.

Module Header

A plug-in module starts with a standard header. There are only three fields currently defined in the header. The header definition is shown in Figure 1.

The module header contains pointers to important information inside the plug-in module that IPC Spy needs to know. The first pointer is to an action routine which must return control to IPC Spy with an RTL instruction. The second pointer is to a names table defining the names of the request procedures that the plug-in module supports. IPC Spy v2.0 only uses the first two fields of the module header, and ignores the header terminator. However, you should include the header terminator in case future versions of IPC Spy decide to use an expanded module header format.

Names Table

If the pointer to the names table in the module header is NULL, the module is assumed to be a system module and it alone will receive any system requests (i.e. requests codes numbered below \$8000). There can only be one system module installed at a time. If more than one system module is loaded, the last one loaded is the one used by IPC Spy. Any previously loaded system modules are kept in memory and never unloaded; therefore, you should only have one active system module in the `IPC.Spy.Modules` folder at a time. All non-system requests are handled by matching the name of the request procedure the request is sent to against the entries in the names table. The names table format is shown in Figure 2.

There must be at least one request name pointer in the names table. (The only exception is for a system module which

Figure 1 — Module Header

```
ModuleHeader anop
    dc i4'Action'          ;pointer to action routine (should RTL)
    dc i4'NamesTable'     ;pointer to request names table
    dc i4'$00000000'      ;NULL terminator for the header
```

Figure 2 — The Names Table Format

```
NamesTable anop
    dc i4'RequestName1'   ;pointer to first request name
    dc i4'RequestName2'   ;pointer to second request name
    ...                   ;additional pointers to request names
    dc i4'$00000000'      ;NULL terminator for the names table
```

```
RequestName1 str 'EGO Systems~Request Proc 1~'
RequestName2 str 'EGO Systems~Request Proc 2~'
```

Figure 3 — Stack Diagram for the Action procedure

```
actionDataPtr (4 bytes) pointer to important data
actionResultPtr (4 bytes) pointer to IPC Spy result buffer
indexNumber (2 bytes) index into the names table
actionCode (2 bytes) code to tell module what to do
ReturnAddr (3 bytes) return address back to IPC Spy
SP-> -----
```

Figure 4 — The `actionDataPtr` Fields For `actStartUp`

(+000) `variablesPtr` (4 bytes)
(+004) `moduleRecPtr` (4 bytes)

Figure 5 — The `variablesPtr` Fields

(+000) `spyID` (2 bytes) ;Memory ID of IPC Spy
(+002) `spyVersion` (4 bytes) ;Version of IPC Spy
(+006) `bufferID` (2 bytes) ;Memory ID of IPC buffered info

Figure 6 — The `moduleRecPtr` Fields

(+000) `AddCharacter` pointer to routine to add a character
(+004) `AddString` pointer to routine to add a pascal string
(+008) `AddCString` pointer to routine to add a C string
(+012) `AddInputString` pointer to routine to add an input string
(+016) `AddText` pointer to routine to add a text block
(+020) `MakeHandle` pointer to routine to make a handle from a pointer
(+024) `FindPathname` pointer to routine to get a pathname from a user ID

doesn't contain a names table at all.) The names table contains a list of all the named request procedures that a plug-in module can explain requests for. The names table specifies target names to match when a request is sent with the `sendToName` flag set. When a request is sent with the `sendToName` flag set, all known names are searched to find a match. Matches are case sensitive, so a request sent to "EGO Systems~Request Procl~" will match a table name of "EGO Systems~Request Procl~" but not "Ego Systems~Request Procl~". Partial name matches are also supported, so a request sent to "EGO Systems~Request Procl~" will also match a table name of "EGO Systems~".

Action Routine

The Action routine is called by IPC Spy whenever any work needs to be done by the module. The Action routine is called with a number of parameters on the stack, all of which must be removed before RTing back to IPC Spy. The stack when the module's Action routine gets control is formatted as shown in Figure 3.

Before the plug-in module RTs back to IPC Spy, it should make sure the accumulator is set correctly for a given `actionCode`. The following sections define all the `actionCode` values and what should happen when a plug-in module receives each code.

The `actionCode` parameter tells the plug-in module what kind of work to perform. The `indexNumber` parameter is an index into the names table for the request procedure name to act upon. The index starts at zero. Plug-in modules with only one name in the names table (or a system module) can safely ignore the `indexNumber` parameter since it will always be zero. Plug-in modules with more than one name in the names table should always check to see which request name is being referenced. The `actionDataPtr` and `actionResultPtr` parameters are different

depending on the `actionCode` parameter.

`actStartUp` (\$0000)

The `actStartUp` code is sent to a plug-in module only once, immediately after the module is loaded. The `indexNumber` parameter is always zero. The `actionResultPtr` is reserved and will be NULL. The `actionDataPtr` points to the information shown in Figure 4.

The `variablesPtr` is a pointer to the IPC Spy variables area. Everything in the variables area is read-only by plug-in modules. Do not change any variables. Only IPC Spy has the right to change its variables. The `variablesPtr` points to the information shown in Figure 5.

The `spyID` and `spyVersion` variables will never change during execution. You can look at the `spyVersion` variable to make sure your module has a version of IPC Spy that it can properly work with. If new versions of IPC Spy are released, new features may be added that new plug-in modules would require for operation. By being able to determine the IPC Spy version, a module can tell older versions of IPC Spy not to use it.

You will need to access the variables area to obtain the memory ID (`bufferID`) to assign to your memory blocks you allocate for caching `dataIn` and `dataOut`. **IMPORTANT NOTE:** Do not make a copy of `bufferID` at `actStartUp` time and then use the copy. You must check `bufferID` every time you want to cache some data. Future versions of IPC Spy may change the value of `bufferID` for certain action codes. (The IPC Spy `MakeHandle` callback accesses the `bufferID` variable correctly. You can use that callback to do a lot of work for your plug-in module.)

The `moduleRecPtr` is a pointer to a block of pointers to IPC Spy callback routines. Of course a request procedure would be best for callbacks, but since IPC

Spy is tracking requests, they can't be used internally. To use a callback routine, you should push any needed parameters on the stack and then JSL to the address pointed to by the callback pointer. An elegant way to do this is to push any parameters on the stack first, then JSL to a procedure in your code that finds the address of the callback you want, pushes it on the stack, and then does an RTL. When the callback is done, it will RTL, and control will return to the original calling procedure. (The sample code included with this article uses this method to use the callback routines.) The `moduleRecPtr` points to the information shown in Figure 6.

The first five callback routines available are ones that add text to the capture buffer. They should only be called from the Action routine with action codes of `actExplainDataIn` and `actExplainDataOut`. For the `AddCharacter` routine, the accumulator should contain the character to add to the buffer. For the `AddString`, `AddCString`, and `AddInputString` routines, you should push a pointer to the string on the stack before you call the callback. For the `AddText` routine, push a pointer to the text and then the length of the text (a word, 2 bytes) on the stack before you call the callback.

The `MakeHandle` callback routine is useful from within the `actCacheDataIn` and `actCacheDataOut` action codes. You should push a pointer to a buffer and a word specifying how large the buffer is before you call the callback. The callback will then make an unlocked handle from the given data using `bufferID` as the memory ID for the handle. The freshly made handle will be in the accumulator and X register upon return from the callback.

The `FindPathname` callback routine is useful when you need to find a pathname and you only know a user ID. `FindPathname` returns an unlocked handle, with memory ID of `bufferID`, containing the pathname of the load file which belongs to the given user ID. If no pathname was found, NULL is returned. You should push the user ID word on the stack before you call the callback. The pathname handle will be in the accumulator and X register upon return from the callback.

When a module receives the `actStartUp` code, it should save any `variablesPtr` and `moduleRecPtr` information which it may need for future reference. The accumulator should be set to zero upon exit if the module is to be kept in memory. If the module should be

unloaded from memory, the accumulator should be non-zero. Modules can request to be unloaded, for example, if a version of IPC Spy is found that the module cannot support.

actTestIgnore (\$0001)

The `actTestIgnore` code is sent to a plug-in module when a request is received and IPC Spy's ignore idle requests setting is turned on. The module should test the request code to see if it's an idle request. If the request is not an idle request, the accumulator should be set to zero before returning. If the request is an idle request, the accumulator should be non-zero. The `actionResultPtr` is reserved and will be NULL. The `actionDataPtr` points to the information in Figure 7. The information in the fields is the same as that passed with a `SendRequest` tool call.

actCacheDataIn (\$0002)

The `actCacheDataIn` code is sent to a plug-in module when a request is received and IPC Spy's explain dataIn setting is turned on. The module should make a copy of all relevant dataIn information and store that reference in the 4 byte buffer pointed to by the `actionResultPtr`. The buffer is zeroed before the plug-in module is called to cache dataIn. (If all you need to store is 4 bytes or less, just stuff the information in the buffer directly. If you need to store more than 4 bytes of information, create a new unlocked handle which contains the information and place the handle in the buffer. You should use the `bufferID` as the memory ID for the memory allocation.) The `actionDataPtr` points to the same information as in the `actTestIgnore` `actionCode`. The accumulator is ignored upon return.

Saving all relevant information includes more than just making a copy of the dataIn (or dataOut, in the case of `actCacheDataOut`) value. If dataIn is a pointer to a data block, you should save that data block. (The `MakeHandle` callback is useful for this purpose.) If data in the data block makes a reference to something outside the data block, for example a pointer to a pathname or a rectangle, you should also make a copy of the referenced data as well. This is because the captured data might (and most likely will) be viewed when the reference is invalid.

actCacheDataOut (\$0003)

The `actCacheDataOut` code is sent to a plug-in module when a request is received and IPC Spy's explain dataOut setting is turned on. The module should make a copy of all relevant dataOut information and store that reference in the 4

byte buffer pointed to by the `actionResultPtr`. The buffer is zeroed before the plug-in module is called to cache dataOut. (If all you need to store is 4 bytes or less, just stuff the information in the buffer directly. If you need to store more than 4 bytes of information, create a new unlocked handle which contains the information and place the handle in the buffer. You should use the `bufferID` as the memory ID for the memory allocation.) The `actionDataPtr` points to the same information as in the `actTestIgnore` `actionCode`. The accumulator is ignored upon return.

actExplainRequest (\$0004)

The `actExplainRequest` code is sent to a plug-in module when basic information is needed to be displayed for a request. The `actionDataPtr` points to the information in Figure 8. The `actResultPtr` is a pointer to the information shown in Figure 9.

When a plug-in module receives the `actExplainRequest` code, it should examine the `reqCode` to determine which request is being made. The fields pointed to by `actResultPtr` should then be filled in with appropriate information. The fields are initially NULL when the plug-in module is called. Any NULL fields on return are ignored. Any non-null fields are assumed to be pointers to Pascal strings which explain the request code, the dataIn value, and the dataOut value respectively. The accumulator is ignored upon return.

actExplainDataIn (\$0005)

The `actExplainDataIn` code is sent to a plug-in module when any cached dataIn information is needed to be displayed for a request. The `actionResultPtr` is reserved and will be NULL. The `actionDataPtr` points to the information in Figure 10.

When a plug-in module receives the `actExplainDataIn` code, the cached

information should be expanded to text form and placed in the buffer by using callback routines defined with the `actStartUp` code. The accumulator is ignored upon return.

actExplainDataOut (\$0006)

The `actExplainDataOut` code is sent to a plug-in module when any cached dataOut information is needed to be displayed for a request. The `actionResultPtr` is reserved and will be NULL. The `actionDataPtr` points to the information in Figure 11.

When a plug-in module receives the `actExplainDataOut` code, the cached information should be expanded to text form and placed in the buffer by using callback routines defined with the `actStartUp` code. The accumulator is ignored upon return.

Other Codes

Any other `actionCode` value is currently illegal, however do not write your plug-in modules to assume that only `actionCode` values \$0000 to \$0006 will be passed! If an illegal code value is seen, simply remove the input parameters from the stack, zero the accumulator, and RTL.

Sample Code

While this documentation is a good reference for what needs to happen inside an IPC Spy plug-in module, nothing beats a good concrete example. Be sure to browse through the sample source code to get a good feel for how a fully functioning plug-in module works. You can find the sample source code for the "Extensions" plug-in module in the self-extracting archive on your GS+ Disk.

Request Layouts

When your module receives the `actExplainRequest`, `actExplainDataIn`, and `actExplainDataOut` requests, it has to return textual information to IPC Spy which is then placed in the spy buffer. It's a good idea

Figure 7 — The actionDataPtr Fields For actTestIgnore

(+000)	dataOut	(4 bytes)
(+004)	dataIn	(4 bytes)
(+008)	target	(4 bytes)
(+012)	sendHow	(2 bytes)
(+014)	reqCode	(2 bytes)

Figure 8 — The actionDataPtr Fields For actExplainRequest

(+000)	reqCode	(2 bytes)
(+002)	dataInCache	(4 bytes)
(+006)	dataOutCache	(4 bytes)

Figure 9 — The actionResultPtr Fields For actExplainRequest

(+000)	requestStrPtr	(4 bytes)
(+004)	dataInStrPtr	(4 bytes)
(+008)	dataOutStrPtr	(4 bytes)

Figure 10 — The actionDataPtr Fields For actExplainDataIn

(+000)	reqCode	(2 bytes)
(+002)	dataInCache	(4 bytes)
(+006)	dataOutCache	(4 bytes)

Figure 11 — The actionDataPtr Fields For actExplainDataOut

(+000)	reqCode	(2 bytes)
(+002)	dataInCache	(4 bytes)
(+006)	dataOutCache	(4 bytes)

Figure 12 — Sample Formatting Template

requestName [In/Out] {Ptr}:	
wordFieldOne: \$0000	value
longFieldTwo: \$00000000	value
wordFieldThree: \$0000	(meaning)

to follow some formatting conventions established by already existing modules.

For the `actExplainRequest` code, the `requestStrPtr` field should point to a string with the name of the request that has been sent. The `dataInStrPtr` field should point to a string describing the information contained in the `dataIn` field only. If the `dataIn` value is completely self-contained (e.g. it's a flag or a pointer to a string) then the string should describe the `dataIn` value itself (e.g. "printFlag" or "printNamePtr"). If the `dataIn` value is a pointer to a data block, the string should describe the pointer, usually in the convention of the name of the request, the string "In" to identify it's a `dataIn` value, and the string "Ptr" to identify it's a pointer to a parameter block (e.g. "requestNameInPtr"). If `dataIn` is not used by a request, you should set the `dataInStrPtr` field to point to the string "[reserved]". The `dataOutStrPtr` field should point to a string describing the `dataOut` field. Since `dataOut` is always a pointer to a parameter block, the string should usually be in the convention of the name of the request, the string "Out" to identify it's a `dataOut` value, and the string "Ptr" to identify it's a pointer to a parameter block (e.g. "requestNameOutPtr"). If `dataOut`

is not used by a request, you should set the `dataOutStrPtr` field to point to the string "[reserved]".

For the `actExplainDataIn` and `actExplainDataOut` request codes, the plug-in module has complete control over the formatting of the explanations. However, it's best to explain the information using the formatting template shown in Figure 12.

Better explaining the template—the first line is the same string used with the `actExplainRequest` code followed by a colon and a return character. Following the first line is a definition of all the fields to be explained. For each field, the explanation line is broken up into three distinct sections: the identifier, the native value, and the explanation value. The identifier field should be right justified with all the other identifiers. The identifier ends with a colon and two spaces. The native value is the hexadecimal representation of the value in the field. The value is usually one byte, one word, or one longword. The explanation field gives a larger meaning to the native value. For example, if the field is a pointer to a string, the native value would contain the actual pointer value, but the explanation field would display the string. For defined

constants and flags, the explanation field would display a constant identifier. For example, if the field is `printFlag`, the value would be \$0000 or \$0001, and the explanation field would be "printIt" or "doNotPrintIt". If no available constant identifier is defined for a field, a short explanation of the native value should appear in the explanation field inside parenthesis. After all the fields have been explained, a return character should be added.

You can see concrete examples of how to format the text descriptions of your requests by looking at how both the System and Finder plug-in modules format theirs. (The System and Finder modules are included with the IPC Spy v2.0 package.) Of course, not every plug-in module can follow the above guidelines, but whenever possible, this general layout should be followed.

Extensions

In the self-extracting archive on your GS+ Disk, there's a folder called "Extensions" which contains sample code for an IPC Spy v2.0 plug-in module. The Extensions module is one of the modules included in the IPC Spy plug-in modules volume 1 package, available for \$10. The module gives a real-world example of how to implement a plug-in module and should help to put all of the above reference material in context. The Extensions module explains requests for three different products: the Control Panels new desk accessory, the Sound control panel, and the EasyMount system extension. By using this article as a guide, you should be able to follow your way through the source code pretty easily. Feel free to use the source code as a basis for writing your own plug-in modules. If you have any questions on writing plug-in modules, send them to me and I'll do my best to answer them. **GS+**

Errata

Here's a bug that you should look out for in our icon editing program, ICE (from GS+ V6.N5): If you paste a picture into the ICE icon editing window, and that picture is an *odd* number of pixels wide, the resulting icon will be invalid. The reason? All icons must be an *even* number of pixels wide to be handled correctly by the System Software. Unfortunately, ICE doesn't ensure that the picture you are pasting is an even number of pixels wide. The solution to this problem is simply to make sure the picture you will be pasting is an even number of pixels wide, *before* you try to paste it. Of course, it isn't always easy to tell if a picture is an even number of pixels wide, so what I do is use Platinum Paint to make several copies of the picture I want to paste into ICE and then copy those pictures into our Table Scraps scrapbook new desk accessory (from GS+ V6.N1). I can then paste these pictures from Table Scraps into ICE, and one of them is bound to be an even number of pixels wide.

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Do you have a tip for using the IIGS, one of its peripherals, or a piece of IIGS software? Send it in! If we use it here in *GS+* Magazine, we'll give you a free magazine and disk back issue (just let us know which one you want), or a *GS+* T-Shirt (just let us know what size), or a coupon good for 10% off your next order!

PostScript Troubles?

If you've bought a Level 2 PostScript printer and you just can't get it to work with your IIGS, try reinstalling the old System 6.0 LaserWriter Driver. Don't use the Installer for this! Just get your old System 6 :SystemTools2 disk and copy the file System:Drivers:LaserWriter off of that disk and into the System:Drivers folder on your boot disk. For some reason, the latest LaserWriter Driver just does not like some of the newer PostScript printers out there. But, the old driver works fine!

Morph Speed-up

If you are using TIFF files with Quick

Click Morph, you might have noticed that it slows down considerably when you try to resize or reposition the TIFF image on the screen. To speed things up, simply save the TIFF file out as a standard IIGS picture, then reload the IIGS picture. You'll lose a tiny amount of detail in the final morph, but the speed increase will be well worth it!

A Page of Addresses

If you are using Addressed For Success and you want to print the same address on every label on the page, here's how to do it. Mark the address that you want to appear on every label as the return address. Then, from the Elements menu, pick the Addresses menu item. After you do this, the check mark next to this menu item should disappear. Then, from the Elements menu, pick the Return Address item. After you do this, a check mark should appear next to this menu item.

When you make these changes, Addressed For Success will put the return address on

every label, but it will leave out the rest of the addresses in the list!

HD Disk Tip

Believe it or not, High-Density 3.5-inch disks are now cheaper (in quantity) than Double-Density disks. So, some folks are using them instead of Double-Density disks. And why not? In an 800K drive, they will format and work just fine as an 800K disk. However, if you format a High-Density disk to 800K on a double-density drive and then take that disk and try to use it in a High-Density drive, you'll get an error! The reason? The High-Density drive sees the second hole in the disk case, and so it expects the disk to be formatted at High-Density. This leads it to look for data where there is none, and bang! You've got an error. The solution? Simply put a piece of tape (black electrical tape works great) over the second hole and the High-Density drive will think that it's just a plain old 800K disk! *GS+*

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What's New?

Compiled by Steven W. Disbrow

New From Byte Works

In addition to Quick Click Morph and MPW IIGS ORCA/C (both of which are reviewed in this issue) the Byte Works recently announced another new product and a new service.

The product is an application called TIFF Reader. This program's function is pretty much what the name says: it reads TIFF graphic files that were created by other computers and saves them out in formats that can be used by the IIGS. TIFF Reader should be able to read a wide variety of TIFF files (there are *lots* of different kinds of TIFF files), so it should make a great companion program to Quick Click Morph (which can read only a few types of TIFF files). At this point, the release date for TIFF Reader hasn't been set, but the price should be around \$10.

The service the Byte Works has started is a full-color scanning service. You send a picture to the Byte Works, they scan it using a 24-bit, full-color, flat-bed scanner and they send you back a TIFF file (which is usable with TIFF Reader and Quick Click Morph of course) on a IIGS disk. If you don't have any way to get your favorite photos "into" your IIGS, this service could be just what the doctor ordered. The cost? Well, it's \$10 per scan. Now, if that sounds like a lot, take a walk down to the local Kinko's and ask them how much a full-color scan costs. Then ask them if they can put it on a IIGS disk for you! Oh, yeah, you also get a free copy of TIFF Reader with your order, so its like getting TIFF Reader for free!

For more information on TIFF Reader or their new scanning service contact:

The Byte Works, Inc.
8000 Wagon Mound Dr. NW
Albuquerque, NM 87120
Phone: 505-898-8183
Internet: mikew50@aol.com

Take Another Look

In late July, Sequential Systems announced that a new Second Sight-savvy version of the original discQuest software (see review in *GS+ V5.N5*) is now available. This new version of the discQuest software takes advantage of the Second Sight's superior video capabilities to show the high-quality images that are present on discQuest CD-ROM titles.

The new version of discQuest is available at no charge to existing discQuest owners who purchased a Second Sight video card.

For more information on the new discQuest software, contact Florence Welke at:

Sequential Systems
1200 Diamond Circle
Lafayette, CO 80026
Info and Orders: 800-759-4549
Overseas: 303-666-4549

"Hey Baby . . . uh, huh, huh, huh"

Well, OK, that particular opening line *never* works for Butt-Head, but Opening Line is a new product that *will* work on your IIGS.

Opening Line is a "splash screen customizer." What that means is that Opening Line lets you change the screen that you see when you first start up your IIGS from the boring "Welcome to the IIGS" screen into something a bit more interesting. Among Opening Line's capabilities are the ability to display a 256-color picture of your choice, and the ability to display a random "fortune cookie" quote every time you restart your computer.

You can use any picture you want for your splash screen and you can supply your own quotes if you wish. But, just in case you can't draw, or you can't think of anything interesting to say, Opening Line comes with twelve high-quality graphics and a file containing over 3,000 quotes!

The author of Opening Line admits that it doesn't do a lot, but it doesn't cost a lot either. In fact, it's just \$12, which includes a printed manual and all shipping charges. If you would like more info (or to order) contact:

Bret Victor
19253 Parkview Rd.
Castro Valley, CA 94546
Internet: b.victor1@genie.com

Script-Central II?

When ICON went under earlier this year, they took most of their publications with them. Fortunately, Joe Kohn of *Shareware Solutions II* was able to rescue the back-issue collection of at least one of those publications: Script-Central. (For those of you that don't remember, Script-Central was ICON's disk-based publication that dealt exclusively with HyperCard IIGS.) In all, Joe rescued 22 separate issues filled with great HyperCard IIGS, tips, tricks, and yes—stacks. If you are a HyperCard IIGS fanatic and you never tried Script-Central when it was "alive" you owe it to yourself to check out these back

issues. A single issue is just \$7, any six back issues (you pick the ones you want) are just \$36 (plus \$3 shipping to the U.S. or \$5 to anywhere else), and the entire set of 22 issues is just \$99 (plus \$6 shipping to the U.S. and Canada or \$20 to anywhere else). If you'd like to know more about what's on each issue before you order, check out volume two, issue four of *Shareware Solutions II* or send \$5 for a "best of" demo that includes highlights of Script-Central as well as a catalog of what's in all of the back issues. For more information, contact:

Joe Kohn
Shareware Solutions II
166 Alpine St.
San Rafael, CA 94901-1008
Internet: joko@crl.com

Rocket Ride!

If you've got some IIGS word processing files that you need to get converted into a format that's usable on either the Mac or the PC, you might want to contact a new company called Rocket Press. Rocket Press can take your IIGS files and translate them into the more popular PC and/or Mac file formats. (This can be useful if you want to submit your work to a big name publisher like Random House.) Rocket Press can also scan in your typewritten pages and convert them into word processing files for use on the IIGS, Mac or PC. Finally, Rocket Press offers professional editing services, just in case you think the files you're getting converted might need some professional help. For more information on rates and services, contact:

Rocket Press
P. O. Box 672
Water Mill, NY 11976
Internet: RocketUSA@delphi.com

If you have a new Apple IIGS product or service, *GS+ Magazine* wants to help you get the word out about it! Simply send us your official press release describing your product or service and we'll do our best to get it in the next issue of *GS+ Magazine*. It's that simple!

The deadline for inclusion in the next issue of *GS+ Magazine* is October 20th, 1995. Send your press release to:

What's New?
P. O. Box 15366
Chattanooga, TN 37415-0366
Internet: Diz@genie.com
FAX: 423-332-2634

GS+ Classifieds

Readers can place an ad in the GS+ Classifieds for only \$5. This price buys you 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 7, Number 2) of GS+ Magazine is October 20th, 1995. 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 423-332-2087, Monday through Friday between 9 a.m. and 5 p.m. Eastern Time, to place an ad with your MasterCard or VISA. You can also FAX us your ad by calling 423-332-2634.

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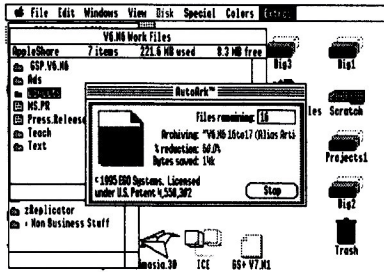
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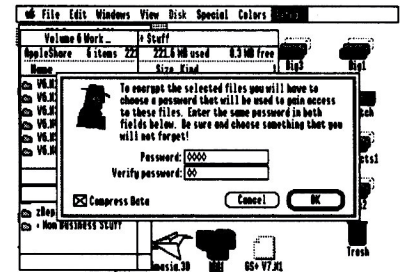
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AutoArk™ v1.1



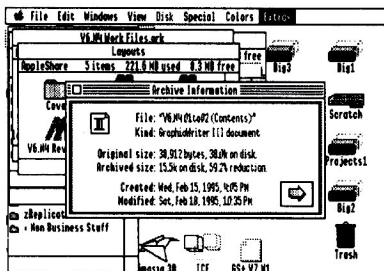
Automatically compresses and expands files to give you up to twice as much storage space!

Allows you to encrypt and password protect sensitive files on your IIGS!



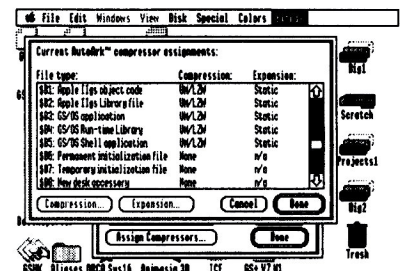
AutoArk™ is the *original* integrated file compression™ program for the Apple IIGS. It lets you compress a file and then, when you need to use it, AutoArk steps in and automatically expands the file for you. Then when you've finished with the file, AutoArk steps in again and automatically recompresses the file for you! AutoArk also lets you encrypt and password protect those files that you want to keep safe from prying eyes!

AutoArk v1.1 also includes a new Finder extension, Smart Names, that lets you compress and expand files simply by changing their names! For example, if you have a file named "UGroup.List" and you change its name to "UGroup.List.ark", Smart Names will see the change, and immediately tell AutoArk to compress the file. When you remove the ".ark" from the end of the file's name, Smart Names will tell AutoArk to expand the file back to its original size. You can also set up folders with names ending in ".ark" and when you copy a file into the folder, Smart Names will tell AutoArk to compress the file!



You get to decide which file types get compressed and which ones don't!

Lets you see exactly how much disk space your compressed files are saving!



AutoArk originally sold for almost \$50, but now it's just \$35! And, as a special introductory offer, if you order AutoArk before October 31st, 1995, you can get it for just \$30! If you want to save even more money, you can order our AutoArk/Balloon bundle, and get both great programs for just \$45! (Balloon is our popular "ShrinkIt in an NDA" program. Balloon normally sells for \$25, so you'll save \$15 by getting both programs at the same time.) But hurry, these special prices expire on October 31st, 1995! (If you are a previous owner of AutoArk, you can upgrade to v1.1 for just \$7.50! You can also get the new AutoArk manual for just \$5 more [\$12.50 total]. Call for details!)

To order AutoArk v1.1, send a check or money order for \$35 (If you order before October 31st 1995, you only pay \$30!) in U.S. funds to: EGO Systems, P. O. Box 15366, Chattanooga, TN 37415-0366. (Price includes first class shipping to North America and surface mail to the rest of the world. For air mail delivery outside North America, add \$3.) If you prefer to order by credit card, you can use your Visa or MasterCard by calling us *toll-free* at 1-800-662-3634. Outside of North America, please call 1-423-332-2087. Or, FAX us at 1-423-332-2634. TN residents add 7.75% sales tax. System Requirements: An Apple IIGS with System 6.0.1 or later, 2MB of RAM and at least one 3.5-inch disk drive. A hard drive and 4MB of RAM are *strongly* recommended! AutoArk was written by D. Proni. Smart Names was written by Josef W. Wankerl. AutoArk, Balloon, and Smart Names are trademarks of EGO Systems. Apple IIGS is a trademark of Apple Computer, Inc.

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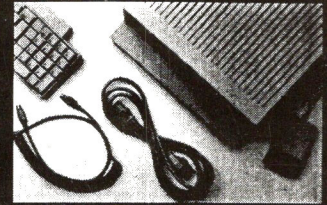
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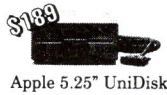
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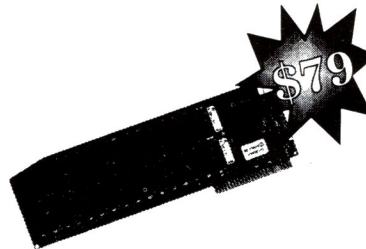
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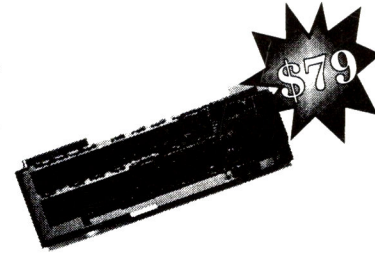
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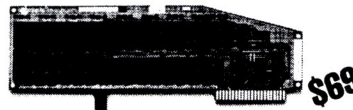
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