MAC GEO PAINT

Mac Paint to Geo Paint conversions by Peter and Paul Hughes

FAST LASER PRINTING
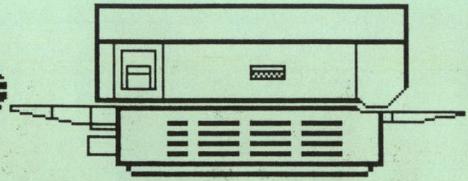
FAST Laser Printing means:

* GEOS documents once received will be printed & in the mail back to you within 24-hours!!!
* Or else you don't pay!

FRIENDLY Laser Printing means:

* If you're not using GEOS we'll convert your file so you can obtain Near-Typeset-Quality! (Conversion charges apply-see flyer.)
* We can even ad graphics if you like!
* We can print your document on various papers!

3 Ways for More Information: *Send for Flyer!*

* E-Mail via Q-Link to SkipG1.
* Mail us your request.
* Telephone.

Or, If You Can't Wait:

* Mail your disk. (Include payment.)
* Modem transfer. Up-load to our *LaserDirect* BBS. 10pm-7am CDT.

Rates:

* $2.00 first page, $0.50 second & consecutive pages.
* $0.25/page additional copy.

Where:

Pro-Mark associates
POB 20913
Milwaukee, Wisconsin 53220-0913
(414) 543-9923
(Above # is the *LaserDirect* BBS # from 10pm-7am CDT)
9-5 daily (Generally here weekends)

All details and rates are contained within current flyer.
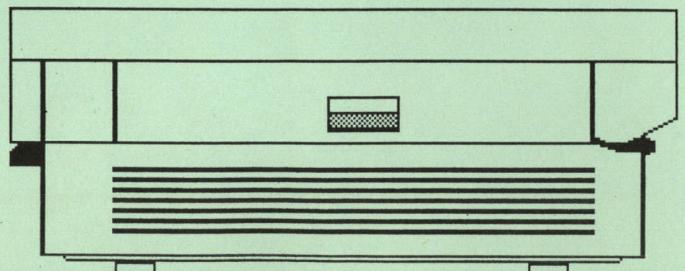
This Ad was created using GEOS GeoWrite only. It contains no mechanical paste-up of any kind.

GEOWORLD

May 1987

As the world GEOS by...

Hello Everyone out there in GEOWORLD! I hope You are all well and enjoying spring. We were a slow getting to press again,but things are looking better as we try to get publication done earlier in the month.Special thanks go to Skip Goetzinger for providing the BBS for uploading GEOWORLD articles and laserprinting them.

There have been some exciting break throughs with GEOS since the last issue, Terry Mills has modified the Epson FX-80 print driver so that it will print two passes with a 1/216 inch line feed! What this means is that your fonts are now going to be NLQ, darker with twice the amount of dot density.I hope that by publishing Terrys article we will see a whole new generation of print drivers that will make use of the NLQ along with quad density found in most printers. The Keyboard shortcuts insert this month was done with the Epson dbl prt driver, reduced to 65% on a copy machine and then offset printed. On another front, there has been alot fine work being done on MACpaint to GEOpaint conversion. It has been possible in the past to convert, but the process is very tricky.Soon, with the help of a single conversion You will be able to use alot of really great MAC graphics in Your GEOS documents.In the center spread this month is some of the MACpaint files that have been converted to date. Expect to see many more coming as there is alot of MAC clip art in the public domain.

Thanks so much for all the nice comments on this publication. I must give credit to our contributers as they are responsible for bringing this GEO information to You. I would like to publish more articles in future issues so please consider if you can share somthing with us.Until next month,

Roger Ledbetter

test printout
test printout

A Printer Driver that Features Double Strike Printing
By Terry R. Mills

GEOS printouts on my Epson FX-80 compatible Smith-Corona D200 have always looked nice, with crisp and clear graphics and text. However, at 80 dots per inch, the individual dots that make up the images on the printed page are still quite apparent. Not that I was disappointed with GEOS, far from it, but I wondered if there were not some way to produce a denser looking image on my printer by modifying the printer driver. Maybe if I could get the printer to print two passes per line, just like using the double strike mode of the printer when printing regular text...

These thoughts came to me last fall. The idea stuck with me, even though my early attempts to figure out how a printer driver was put together, let alone how to modify one, met with much frustration and I gave up trying almost on a weekly basis. Then The Official GEOS Programmer's Reference Guide came out and luck was with me, as the sample driver they used, the one for an Epson FX-80, was the one I used with my printer. Despite leaving out some routines referred to in various places, such as OpenPrint, OpenFile, Strout, and some others, the book gave me enough information to start making sense of a disassembled driver.

I found that by inserting some code into the PrintBuffer routine illustrated on page 353 of the Programmer's Reference Guide I could get the driver to reprint the same graphics line it had just printed. My first working modified driver merely set the appropriate pseudoregisters and did a carriage return, but, as might be expected, the dots printed in the second pass just darkened the dots made in the first pass. The dots themselves were still quite apparent. Though it would be more work, I would have to get the printer to do a tiny line feed between the first and second passes, and then another line feed of a different length after the second pass so the next line would appear just below the one just printed. On Epson compatibles, "tiny" ends up being 1/3rd of a dot, or 1/216th of an inch. However, this much of a line feed causes the dots in the first and second passes to be offset enough so that the gaps between dots are filled in. The effect this little modification has on the quality of my printouts is truly significant. At the end of this article you'll find the routine I inserted into the Epson FX-80 printer driver to get my printer to print each line twice. The actual modified driver has been uploaded into the printer driver section of the GEOS software library on QuantumLink, under the name EPSON DBL.PRT.

Perusing the GEOS section on QuantumLink, one finds many people with questions about printer drivers and how they are written, even from people with the Programmer's Reference Guide. Having agonized over them myself, I'd like to share a BASIC program with those who would like to examine the machine language code in their own printer drivers. You will also need the CONVERT program available on QuantumLink to convert your printer driver into a Commodore sequential file. The steps in using the program follow.

1. Copy the driver onto a practice disk.

2. Rename the driver so that only capital letters appear in the name when viewed from GEOS.

3. Convert the driver into a Commodore sequential file using the CONVERT program available on QuantumLink.

4. In BASIC, enter and save the accompanying program. After saving a copy, insert the disk with the converted printer driver and RUN the program. It will take the sequential file, strip away all of the header information and create a loadable machine language program of the driver. The name of this file will be the name of the driver + ".ml".

5. If all has gone well so far, take the disk out, turn the computer off and back on, and type **POKE 56,121:NEW** . This will lower the top of BASIC so we can load the printer driver into a safe area. All printer drivers in GEOS start loading at $7900 (30976 decimal).

6. Insert the disk with the newly created driver file and LOAD it. Be sure to use **LOAD"filename",8,1** so it will load in the proper location. After it is done loading, type **NEW**.

7. Load and activate a monitor program. Be sure it doesn't take up memory between $7900 and $7FFF (30976-32767). I've used MICROMON with some success. Now, simply disassemble $7900-. This is what your driver looks like. Note that ASCII characters, such as the driver name which appears early in the driver itself, will disassemble as so much gibberish.

Just a few notes before I wrap up here. In the January 1986 issue of The Transactor there was a program called the Un-Assembler by J. Lothian. This program takes a machine language program on disk, such as created by the BASIC program included here, and creates a sequential file of the source code in Commodore 64 Macro Development System format. After un-assembling my Epson FX-80 driver, inserting my routine, re-assembling the program, and reattaching the original header info was relatively easy. Without the Un-Assembler, the project would have taken considerably longer.

I hope this information helps those trying to write and/or modify their own printer drivers. While getting a driver to work with your printer or do something new might not be the most glamourous activity, I've found it to be very satisfying. GOOD LUCK!

From Asteroid 7

```
PrintBuffer
                lda     #PRINTADDR          ;4
                jsr     SetDevice           ;$C2B0
                jsr     InitForIO           ;$C25C
                jsr     OpenPrint           ;has calls to Listen &Second
                lda     $03                 ;macro Move r0,r3
                sta     $09                 ;  move pseudoregister r0 ($02-$03) to
                lda     $02                 ;  to r3 ($08-$09)
                sta     $08
                jsr     PrintPrintBuffer    ;see page 355 of PRG for this routine

;
;Following is the routine that performs the special line feeds and
; reprints the line
;
                lda     #<setlf1            ;set r3 to point to control codes
                sta     $09                 ;  that set 1/216 inch line feed
                lda     #>setlf1
                sta     $08
                lda     #$03                ;load A with number of codes
                jsr     Strout              ;send codes (uses Ciout)
                jsr     Greturn             ;send return and line feed
                lda     $03                 ;reset r3 to equal r0 as above, so
                sta     $09                 ;  you can reprint line before
                lda     $02                 ;  application updates where r0
                sta     $08                 ;  points
                jsr     PrintPrintBuffer    ;reprint the line!
                lda     #<setlf2            ;set r3 to point to control codes
                sta     $09                 ;  that set 23/216 inch line feed
                lda     #>setlf2
                sta     $08
                lda     #$03                ;load A with number of codes
                jsr     Strout              ;send codes
;
;Pick up with rest of PrintBuffer routine
;
                jsr     Greturn             ;send return and line feed
                jsr     ClosePrint          ;call to Unlsn
                jsr     DoneWithIO          ;$C25F
                rts
;
setlf1          .byte $01,$33,$1B           ;1,51,27 (codes in reverse order of way sent)
;
setlf2          .byte $23,$33,$1B           ;23,51,27
```

Program to Strip Header from Converted Printer Driver

```
100    input "driver name"; f$
110    i=0
120    open8,8,8,"0:"+f$+",s,r"
130    open9,8,9,"0:"+f$+".ml,p,w"
140    print#9, chr$(0);chr$(121);: rem prg load addr $7900
150    print chr$(17) "reading bytes"
160    print "the first 509 bytes is header info"
170    print: print
180    get#8, c$: if asc(c$+chr$(0))=0 then c$=chr$(0)
190    i=i+1: print chr$(145) i: if i<509 then 180
200    if st = 64 then 230
210    print#9, c$;
220    goto 180
230    print#9, c$;
240    close8
250    close9
260    end
```

Desk-Top Publishing
by Skip Guerzncer

Commonly asked questions after last months article appeared.

Within days after the release of the April issue of GEOWORLD it became apparent that this months article would be devoted to answering your questions on "how I did it" in the April issue. Hope these tips help you.

Q: "... how did you do the middle line between the two columns. What character did you use (in which font point?). I experimented around and could not figure it out. Also, why did it take two additional pages (5,6)? Couldn't one have sufficed? *JohnW78*

A: This was the most popular question received last month. This technique was discovered by the Pro-Mark staff, by releasing it, no doubt we're giving away thousands in royalties, but what the heck! The middle line is created within GeoWrite by holding down the C= key and pressing the ^ (up arrow) key. I have chosen to create my verticals using the LW-Roma font, bold, 10-point. While this "vertical" line will work in any font, it's just easier for me to remember this combination of Roma, 10-point, bold. I have also found that 10-point verticals create the most pleasing appearance. This vertical line, when stacked upon each other, will create a vertical dashed line of a length determined by you. On a second page you create another set of vertical dashed lines, but this time you offset or toggle down the first line by an additional 9-point return. This combination, when printed using the overlay option will create a solid vertical line. Vertical page two is offset enough to cover the spaces created between the dashes on vertical page one.

This is not an easy task, but once set up to your liking it can be duplicated and re-used over and over again. Experiment! If this sounds like too much work, we have made available on disk, various forms and flyers to be used as "templates." All you have to do is fill-in your own text.

Q: "How did you get your pictures positioned left/right and how did you get your text to print next to it?

A: Please see the next question.

Q: "... how did you get your GEOpaint and GEOwrite items next to one another? I have to cut and paste or use Newsroom. *DeborahC2*

A: As mentioned in the April issue of Geoworld, please refer to "Positioning Pictures."

Q: "Why, when I create a page for laser printing (using your service) do my tab positions come out in a different position than where I expected them to? Also, why does the laser printed page print a longer text area than what appeared on my screen? *Anonymous*

A: The reason that What-You-See Is NOT What-You-Get is due to the printer driver that is on your disk. Dot-matrix drivers tell GeoWrite what parameters it can create your document in. All of these drivers that I have experienced will cause your doc to appear narrower and shorter than they actually will when laser printed. To avoid this inconvenience you can do two things: 1) Install the NEW LaserWriter driver on your disk and activate it before creating your file. 2) Continue to use GeoWrite as you always have, but when forwarding your file to us for laser printing, simply state in your info page that you authorize us to go into your file and make any formatting corrections that we feel you want. We will modify your file to give you the output that we assumed that you wanted. The normal charge for this "design assistance/file modification" is $2 for minor changes; $5-plus for major changes.

In regards to tab locations appearing in a different position than you expected, there is no easy answer. We have available a "Desk-Top" kit that shows the difference between a tab page printed on the LaserWriter and the Panasonic KX-P1091. This comparison print-out will help you in anticipating what your laser printed file will look like. The basic difference to remember is that the Laser will print a page wider and longer than you are used to with your dot-matrix printer.
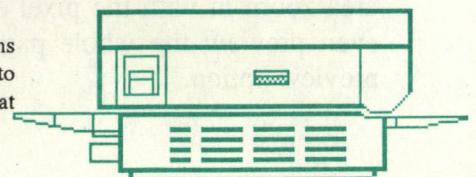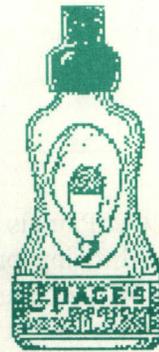
Working With GeoPaint
by Peter and Paul Hughes

GeoPaint is a full-featured high-resolution graphics drawing program. It has many features that help in the creation of any number of graphic images that you can imagine.

Working with Geopaint is easy if you know how to use its features to their fullest. This article will cover what other programs and utilities you will need for using GeoPaint. The features of GeoPaint will be explained and hints and tips or shortcuts will be revealed. Recommended hardware will be mentioned such as input devices, RAM expanders and printers.

Before working with GeoPaint you have to make a work disk to save your documents on. If you are using a single disk drive you need GeoPaint, a photo manager, a printer driver and up to seven fonts that you want to use on the same disk.Your document will be written on the the same disk.If you have two disk drives have a GeoPaint, photo manager, printer driver, the fonts you need on one disk and a printer driver on the second disk which your document will be created on.With two drives more documents can be stored on one disk.

GeoPaint has many standard graphics tools for drawing and manipulating areas of your paint document. You can draw freehand with the pencil. Spray paint or brush with any of 32 brush shapes in any of 32 patterns.Easily draw straight lines with the line feature. Make hollow or pattern-filled boxes or circles.Type text in different fonts, sizes and styles which can be reformatted. You can move or copy any sized area in the work area. Those areas can be flipped horizontally and vertically, rotated 90 degrees, inverted and cleared. You can erase your mistakes with the eraser or have them undone with the Undo option. You can scroll around the page slowly and see the page move with the 4-way scroll arrows or jump to another part of your document by moving the page indicator. You can measure areas of the screen with the tape measure in pixels or printed inches. If you want to do detailed work in a small area zoom in with the pixel edit option.You can even preview the whole page at once with the preview option.

GeoPaint has many features but accessing them quickly and easily makes working with GeoPaint even better.There are a few shortcuts that come in handy when you are doing a great deal of work which can take a great deal of time.

You can select some options from the menu but you can save time if you know the "double-click" tricks. To get into zoom mode you can select pixel edit under the options menu or double click the pencil icon. To exit the zoom also double click the pencil icon. To move to another area to zoom in on without double clicking the pencil to exit and enter that mode click the 4-way scroll arrows and position the zoom brackets.

You can get to the brush selection mode from the option menu or double click the brush icon. Double clicking the eraser icon with erase or clear the whole paint work area.Be careful you don't do this when you don't want to. The dotted box icon is for getting into the edit mode for manipulating areas of the screen.You can stretch the dotted box around any area of the screen. If you wanted to capture the whole work area to cut or copy to a photo scrap it is hard to get close to the edge of the work area to get every pixel into the edit box. By selecting the edit box and then double clicking it will put a dotted box around the whole work area.

To enter text you can select the T icon then select a font or just select a font and automatically enter the text box mode.These shortcuts can save time by cutting out wasted movements and keep your train of thought moving along smoothly until you finish your work.

When moving or copying an area of the screen there are two modes - grid or pixel movements. If the color mode is on movements will be made in 8 x 8 pixel card or character positions.To capture and move areas with pixel precision turn the color mode off.Grid mode is automatically selected when an area of the screen is cut or copied to disk as a photo scrap. Grid mode is good

sometimes for making sure pieces that are cut line up again easily.

The photo manager is a desk accessory than can be called up any time within any application such as the GeoPaint or GeoWrite program.A photo scrap can be overwritten if another part of a paint document is cut or copied. To permanently store that scrap it must be pasted into a photo album so that it can be used later.This is a good way to collect clip art that you want to use often or to move parts of one paint document to another.

GeoPaint uses the highest resolution on the Commodore 64 for fine detail in an area and for sharp printouts. GeoPaint is used mainly for fine black and white prinouts. The resolution of a paint document is 640 across by 720 pixels down the page.Most dot matrix printers are only able to print in black and white but some printers can print in color also.

The Commodore 64 has a memory limitation in the high resolution mode by allowing only 2 colors in a 8 x 8 pixel card. They are foreground or paint/ink color and background or paper/canvas color.You can pixel edit paint colors but canvas colors must cover a 8 x 8 character block area.Only multicolor mode allows 4 colors in a character block area because the pixel is double wide and the horizontal resolution is cut in half. You must sacrifice color detail for higher resolution with GeoPaint.

There are a few hardware items that you need to have to use GeoPaint to its fullest potential.They are input devices, printers and RAM expanders. There are many input devices which can be used with GeoPaint - joystick, trackball, mouse, light pen and a touch tablet.The best input device for quick but precise movements and for drawing smooth curves is the 1351 mouse.

The best printer for GeoPaint is a 80 dot per inch dot matrix printer for the best proportioned output. Any Epson RX/FX 80 compatible printer is good. The Star NX-10 or Panasonic 1080i are recommended for quality of output, near-letter quality text modes and price.The C.Itoh Prowriter 8510 produces very dense printouts. These are black and white printers. The Epson JX-80,Canon PJ 1080A color inkjet and Okimate 20 are recommended color printers.

The newest hardware for use with Geos for the Commodore 64 and 128 are the 1764 256K and 1750 512K RAM expanders. The 1750 RAM expander will work on the 128 in 64 mode with the 64 version of Geos.

The RAM expander can be used as a second super fast disk drive. With a RAM expander things happen instantly instead of taking many seconds. Scrolling around a Paint document is very fast and smooth.Cutting or copying an area as a photo scrap, opening a photo album and pasting the scrap into the album and closing the albums happens very quickly. Even entering and exiting GeoPaint is instantaneous. Double-click a paint document from the desktop and enter Geopaint in less than a second. With a RAM expander things happen extremely fast.

GeoPaint is a great graphics drawing program. You can edit very detailed images on a full 8 1/2 x 11 inch page. This program has many powerful tools. With GeoPaint you can create any printed matter that you can imagine - pictures, diagrams, signs, newsletters, forms and stationary. By using the 1351 mouse and the RAM expander with GeoPaint and knowing the shortcuts for selecting options you can do things with GeoPaint faster than you can think. GeoPaint can be a very powerful graphics editing package combined with the use of the mouse, ram expander and a good printer. Happy GeoPainting! :)
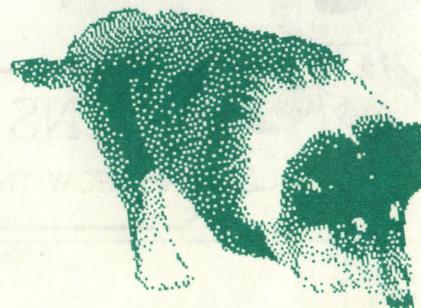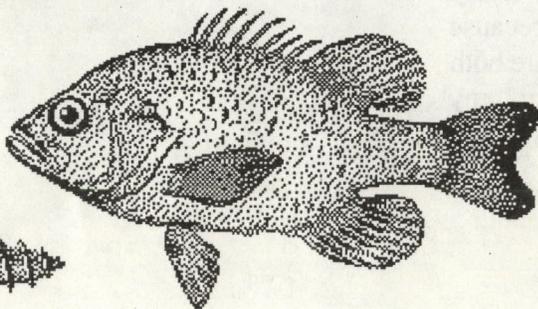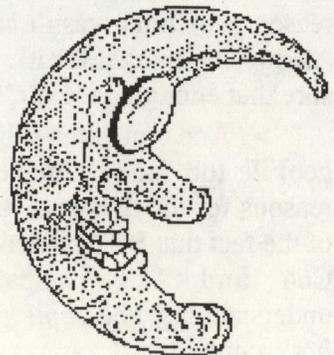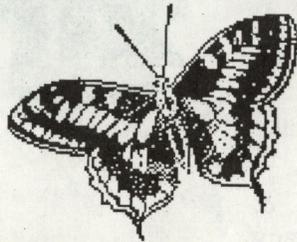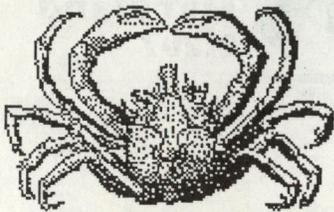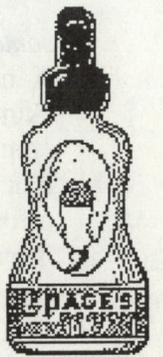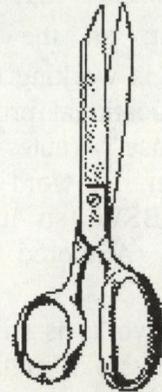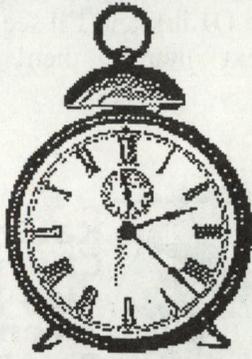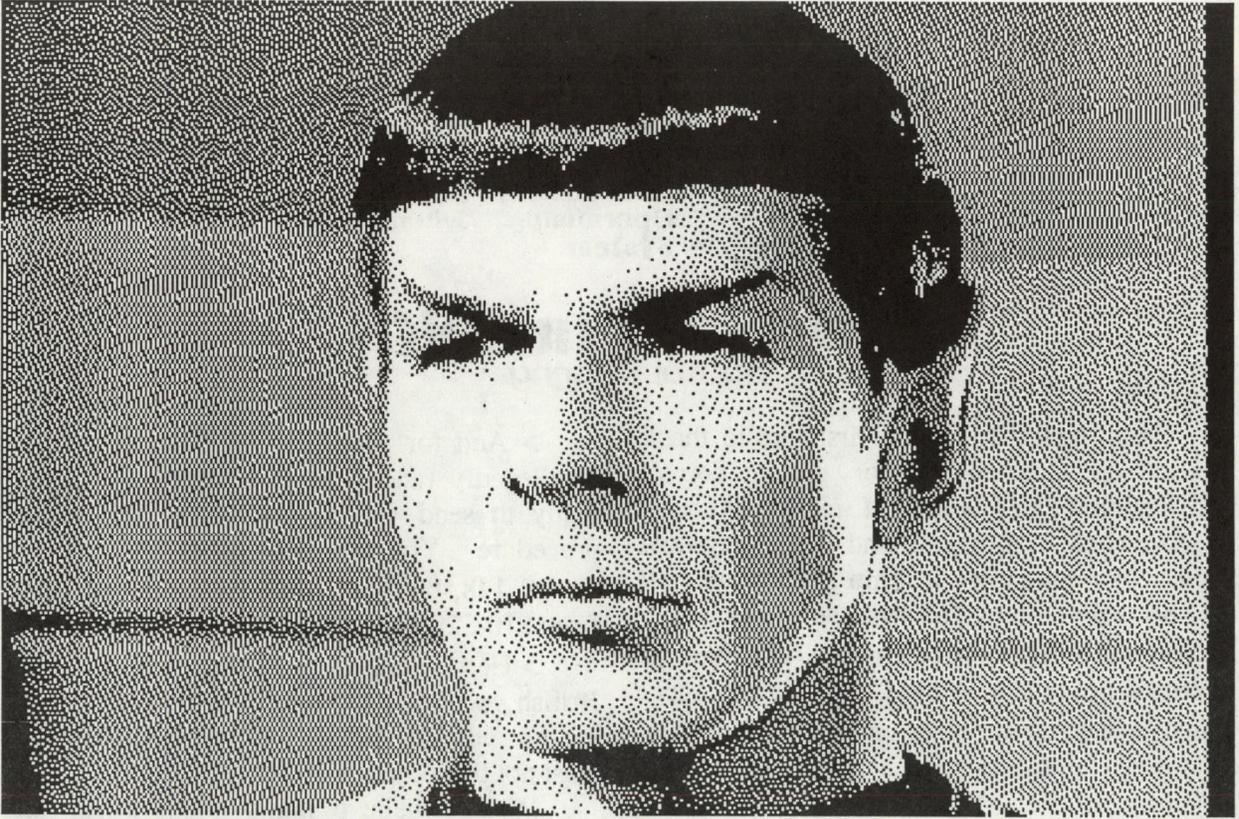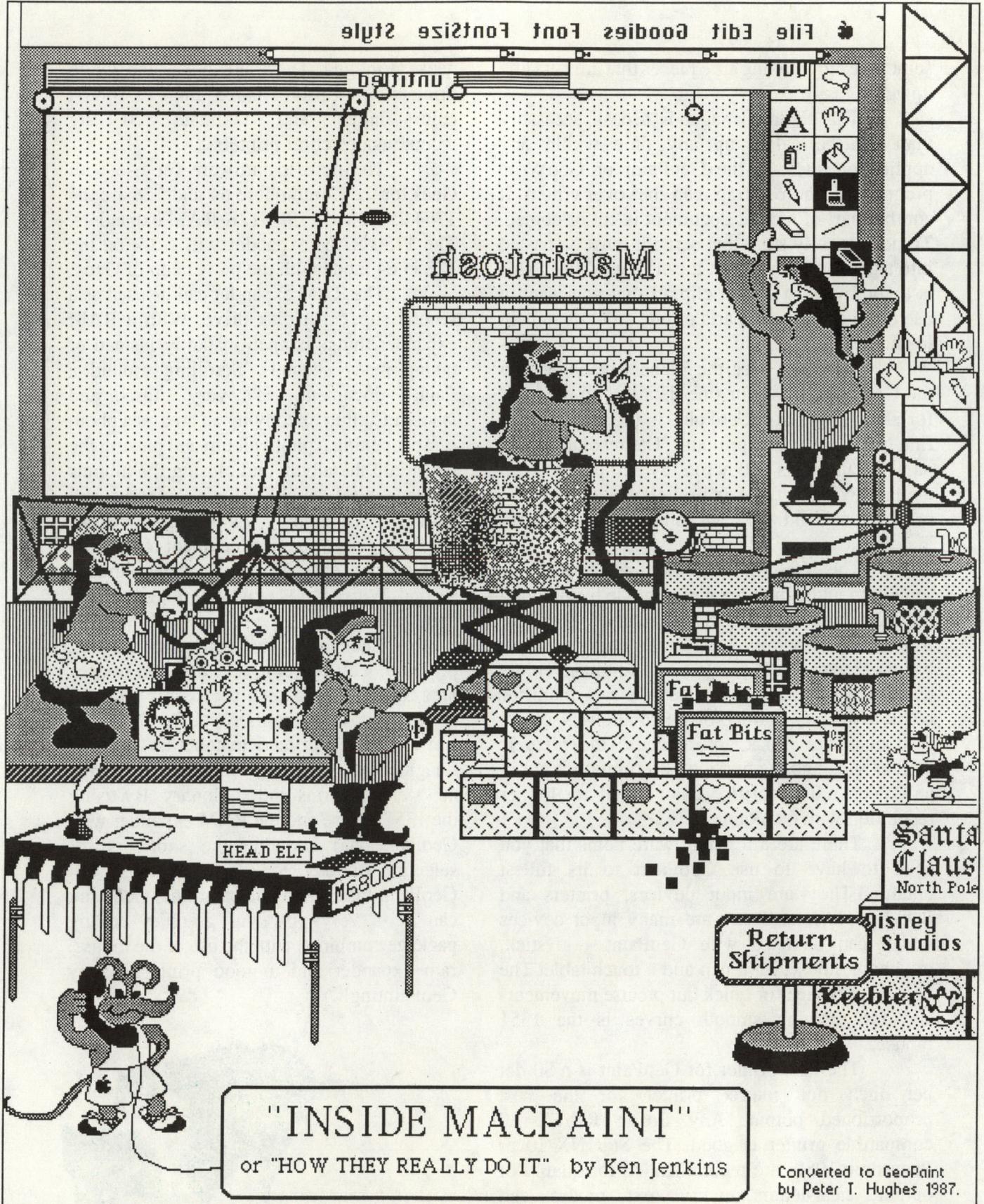
"INSIDE MACPAINT"
or "HOW THEY REALLY DO IT"   by Ken Jenkins

Converted to GeoPaint
by Peter T. Hughes 1987.

GEOS

Graphic Environment Operating System

A Whole New Universe for the Commodore 64 Computer System

Universal Rumbles
by Kai Cherry

Hello Again! I would first like to thank Yvonda at Commodore for giving correct information! The **1764 RAM** *is* out, although at press time I could not find it for less than $159. Now remember, if it **ain't true** then well uh....no really, though, on with the "news".

> Well, first the bad news. I talked to Accolade out in Cupertino, California about any plans for writing software under GEOS. Well, according to a big guy in R&D, they have absolutly **no** plans for realeasing software for GEOS, but were working on software for the Apple "flop" GS! Tsk, Tsk....

> But, on the other hand, at least *somebody* is working on software for GEOS. A new educational program tenatively called "kinderMouse" (cute or what?) is near compleation. No word on release date or price. Not by BSW, so it should be great and affordable. Authored by Terry Mullet, a.k.a. **TerryM10**.

>Timeworks is still "considering" writing GEOS software...I'm not holding my breath, though.

> More on **geoChart**: I was told that the reason **geoChart** wasn't being released because "there is no market for it", ie. they want to make sure that enough **geoCalc**'s are sold.

> And on the subject of **geoCalc** & **geoFile** too for that matter, one of they many reasons for the delays in their release is because of the fact that BSW is making the software both C64 **and** 128 compatable! From my understanding, the *same program* working on *both* computers!!

> And for you 128 GEOS owners, BSW is allegedly (and I mean **allegedly**!!) getting ready to send you all notices of the update procedure. You're not going to have to buy GEOS 128, but you'll just have to send BSW from $10-$20 for it. We'll see, we'll see...

> Hers's something I *know* is true! In the British version of **Commodore** magazine there are *no* ads for Berkeley Softworks! Well, at least not this month's issue!

Well, I believe that's about it for this month. If there is anyone out there that would like me to try to find out anything in particular, drop me a line on **QLink** and I'll see what I can do. Until next month, then! Keep on GEOSing! **KC**

**Kai P. Cherry
4105 Maine Avenue
Baltimore, Maryland
21207**

Artwork © Kai Cherry

Perhaps the thing that is made most evident by **geoWorld** is that the Commodore 64 computer has finally come of age in today's home computer market. The power of this computer has always been there, it just took a little time and effort to expose (well, a lot acutally!). The proof is right before your very eyes, as this whole magazine was done with the 64 and **GEOS.** When you consider the price of the computer and the software, you feel like laughing at your friends who bought more expensive graphic interface computers!

At Berkeley Softworks, it has been our commitment to bring highly capable software at a low price to the consumer. We think that publications such as this are amongst the best ways to help the user get the most out of **GEOS** and truly unlock the many features that the program has. Our main commitment has been to provide support through continued software releases and customer service through mediums such as Q-Link. If publications like this can help bring more enhancements to the **GEOS** universe, then Berkeley Softworks is all for it! It is a great thing when a publication such as this can arise from some of the customer support we provide on Quantum Link and the users can actually expand on our services and help themselves get the most from **GEOS.**

As far as Berkeley Softworks is concerned, our next set of products is headlined by **geoFile**, which is possibly the easiest to use data-base that was ever made. *You* can choose the size of the fields you use, *you* can choose the number of fields per record, *you* can choose how many records you want per page, etc. What more could a person ask for? You can sort by names, dates, numbers--whatever you choose. The product will either be on the shelves, or on the way there by they time you read this, so check it out. We think you will agree with our enthusiasm for the product.

Also on its way to the stores is **geoCalc**, an easy to use spreadsheet. **geoCalc** gives you dimensions of 112 rows by 256 columns to allow you to figure your home finances, prepare your taxes, or any other spreadsheet function that you might want to do. Got a complex trig function? No problem. Want to set the spreadsheet to give all numbers in exponential form? No problem. Want to widen a particular column? No problem, just point and click! Being that it is graphically based, **geoCalc** is different than anything that you have ever seen for the Commodore.

The 128 version of **GEOS** will be shipping by June 1, and if you have never seen **geoWrite** or **geoPaint** in 80 columns, you are in for a big surprise! Being able to see the whole screen at once, as well as the higher resolution of the 128, makes **GEOS** look absolutely mah-volous. If you own the 64 version, you will be able to upgrade to the 128 version for a nominal fee, and this will be the same policy for all of the rest of our software (except for the Fontpack, which will not need an 80 column version).

In the future, keep an eye out for **geoPublish**, a deskTop publishing program that will give incredible versatility for positioning graphics and text. **geoProgrammer** will be a combination assmbler-debugger for **GEOS.** Finally, if you don't know Assembly language, there will be **geoBasic** for your programming needs.

And of course, we don't want to forget **geoMouse**, the battery-backed clock that happens to be attached to a one button proportional mouse! The date and time of your files can be updated automatically, without having to go to the preference manager every time you boot the system.

In closing, I would just like to say thank you to all of our users who have given us their support over the past year. We appreciate your ideas, comments, and suggestions, and I hope that this next year can be as productive as this past one for everyone involved with **GEOS.** Take care, and see you on the boards!
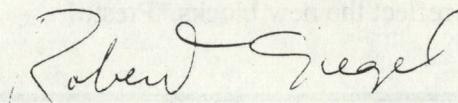
Robert Siegel (A.K.A. GEOS Rob)
Berkeley Softworks

I had intended to start on programming this time but there's one more topic I need to cover. Last time we learned how to compile a leading header block and split it apart with a 'splitter' program. Now we need to learn how to make a file convert itself. If you're planning on transfering your files over the modem this will make it easier for the person receiving the file to convert it.

Assume for a moment that you compiled a file with a leading header block. In order to make the file self-convert it is necessary to tack some code on the front that will convert the file on the disk when it is ran. The simplest way to do this is with a short basic program. FIG. 1 is the basic program that will do this. Type it in and save it with the name 'exe.auto con'. It is exactly three blocks long and every byte counts so double check your typing carefully. FIG. 2 is another program called 'auto convet'. It will hook the exe. program to your file.

This is how it works: on the disk you need your file and a copy of exe.auto con. Don7t use the original because it will be destroyed during conversion. To make a copy enter:
OPEN15,8,15,"C0:bak.auto con=exe.auto con"
this will make a copy called 'bak.auto con' (you can add add a line like this to auto convert). Now load and run auto convert. You will be asked for the name of the file to be converted, once you enter it the program will go to work. First it will find exe.auto con in the directory and store it's starting track and sector. Next it will delete the directory entry (but it won't de-allocate it's blocks). Then it finds the entry for your file and points it at the track and sector of exe.that it saved. Then it chains to the end of exe. and points that sector at the first sector of your file. Also the directory entry is increased by three to reflect the new blocks. Presto!

Now if you load in the converted file and list it you should see the exe. file. Your code is there but you can't see it -- it doesn't matter, it's only along for the ride. An asute reader might be wondering how exe. can know what the filename of the file is. The answer is in the first line of the program. Take a look at FIG. 1. That first line looks a bit strange, doesn't it? When auto convert is linking the files together it plugs the filename plus a trailing quote mark where all those colons are. Now when exe. runs V$ will be equal to the filename. Which brings up another point -- don't rename a file once you convert like this; exe. won't be able to find the file on the disk. If you upload a file converted like this mention that in the file description.

When exe. runs it will find the directory entry and chain to the forth sector of the file; this is where your main file (actually its header block) starts. From this point on it behaves just like the GeoSplitter program that we discussed last time. One other point,: while the directory is modified to show the decreased number of blocks (the exe. blocks are detached from the file) the blocks themselves are not de-allocated because I was trying to keep the program as short as possible. If it bothers you just do a Geos validate on the disk to regain the blocks.

Well that about wraps it up for this time. I promise that next time we'll start learning how to program with Geos. By the way, I realise that the programs may be hard to type in. If you wish you can send $5 to me at:

Bill Coleman
1431 Pacetti Rd.
Green Cove Springs, Fl
32043

I'll send you a disk containing these programs plus some others I've written and the source code for them. Until next time have a fine one.

```
0 GOTO16
2 HI=INT(A/256):LO=A-HI*256:PRINT#15,"M-R"
CHR$(LO)CHR$(HI):GET#15,A$:A=ASC(A$+CHR$(.)):
RETURN
4 PRINT#15,"U1:"2;0;TR;SC:RETURN
6 PRINT#15,"U2:"2;0;TR;SC:RETURN
8 PRINT#15,"B-P:"2;PS:RETURN
10 GET#2,A$:A$=LEFT$(A$+CHR$(.),1):AA=ASC(A$):
RETURN
12 PRINT#2,CHR$(A);:RETURN
16 DIMDI$(29),TY$(14):POKE808,234
18
POKE53280,.:POKE53281,.:PRINTCHR$(14)"[clr,green]
--- GEOS AUTO-CONVERT UTILITY ---
54 PRINT[INPUT"NAME OF FILE";NM$:
IFLEN(NM$)<1ORLEN(NM$)>16THEN88
56 FORI=1TOLEN(NM$):A=ASC(MID$(NM$,I,1)):
IFA<128THENNEXT:GOTO62
58 NM$=LEFT$(NM$,I-1)+CHR$(A-96)+MID$(NM$,I+1):
NEXT
62 PRINT"[down]iNSERT dISK AND HIT ANY KEY":
WAIT198,3:GETA$
64 A$="EXE.AUTO CON,P,R":GOSUB80:GT$=DI$(1):
GS$=DI$(2):DI$(.)=CHR$(.):GOSUB90
66 CLOSE2:A$=NM$:GOSUB80:T$=DI$(1):
DI$(1)=GT$:S$=DI$(2):DI$(2)=GS$
68 DI$(.)=CHR$(130):DI$(28)=CHR$(ASC(DI$(28))+3):
GOSUB90
70 TR=ASC(GT$):SC=ASC(GS$):GOSUB4:PS=12:
GOSUB8:NM$=NM$+",P"+CHR$(34)
72 FORI=1TOLEN(NM$):A=ASC(MID$(NM$,I,1)):
GOSUB12:NEXT:GOSUB6:GOSUB4
74 FORI=1TO2:GOSUB10:TR=ASC(A$):GOSUB10:
SC=ASC(A$):GOSUB4:NEXT
76 A=ASC(T$):GOSUB12:A=ASC(S$):GOSUB12:
GOSUB6:PRINT"[down]dONE!!!":GOTO88
80 CLOSE15:OPEN15,8,15,"I0:":OPEN2,8,2,"#":
OPEN3,8,3,A$:CLOSE3:INPUT#15,E1$,E2$
82 IFE1$>"19"THENPRINTE2$:GOTO88
84 A=656:GOSUB2:DS=A:A=660:GOSUB2:DO=A:
TR=18:SC=DS
86 GOSUB4:PS=DO:GOSUB8:FORI=.TO29:GOSUB10:
DI$(I)=A$:NEXT:RETURN
88 CLOSE2:CLOSE15:POKE808,237:END
90 TR=18:SC=DS:GOSUB4:PS=DO:GOSUB8:
FORI=.TO29:PRINT#2,LEFT$(DI$(I),1);:NEXT
92 GOSUB6:RETURN
```

FIG. 2: 'AUTO CONVERT'

```
0 V$="":::::::::::::::::::::::GOTO7
1 H=INT(A/256):L=A-H*256:
PRINT#15,"M-R"CHR$(L),CHR$(H):GET#15,A$:
A=ASC(A$+CHR$(.)):RETURN
2 PRINT#15,"U1:"2;0;T;S:RETURN
3 PRINT#15,"U2:"2;0;T;S:RETURN
4 PRINT#15,"B-P:"2;PS:RETURN
5 GET#2,A$:A$=LEFT$(A$+CHR$(.),1):AA=ASC(A$):
RETURN
6 PRINT#2,CHR$(A);:RETURN
7 DIMD$(29):POKE808,234:PRINT"[clr]WAIT":
GOSUB13
8 T=ASC(D$(1)):S=ASC(D$(2)):FORI=1TO3:GOSUB2:
GOSUB5:T=AA:GOSUB5:S=AA:NEXT
9 GOSUB2:GOSUB5:P1=AA:GOSUB5:P2=AA:
GOSUB2: A=.:GOSUB6:A=255:GOSUB6:GOSUB3
10 D$(.)=CHR$(131):D$(1)=CHR$(P1):
D$(2)=CHR$(P2)
11
D$(19)=CHR$(T):D$(20)=CHR$(S):D$(21)=CHR$(.):
D$(22)=CHR$(6)
12 D$(23)=CHR$(87):D$(28)=CHR$(ASC(D$(28))-3):
FORI=24TO26:D$(I)="A":NEXT:GOTO18
13 OPEN15,8,15,"I0:":OPEN2,8,2,"#":OPEN3,8,3,V$:
CLOSE3
14 INPUT#15,P$,Q$:IFP$>"19"THEN20
15 A=656:GOSUB1:DS=A:A=660:GOSUB1:DO=A:
T=18: S=DS
16 GOSUB2:PS=DO:GOSUB4:FORI=.TO29:GOSUB5:
D$(I)=A$:NEXT:RETURN
18 T=18:S=DS:GOSUB2:PS=DO:GOSUB4:
FORI=.TO29: PRINT#2,LEFT$(D$(I),1);:NEXT
19 GOSUB3:Q$="DONE
20 PRINTQ$:CLOSE2:CLOSE15:POKE808,237
```

FIG. 1: 'EXE.AUTO CON'

We've made some changes in the way we offer our shareware disks, to cut costs and delays, so we can serve you more efficiently.

We now offer six disks, with plans for others. Their contents will not be changed once they're full, and no programs will be moved or deleted. Disk#1 is now the update disk: any programs added to the other disks will also be on disk#1, and on the BBS for downloading, so users can add the new programs to their own disks. Shareware members can get new update disks at any time. Disk#2 is final, containing all of the programs previously found on disks#1 and #2. Since, in the past, the back side of disk#2 has been the updated disks#1, the new disk#2 is almost unchanged from the old one. The tech manual that used to be on the back of disk#1 is now on disk#4; the programmer's disk. The contents of the other disks can be seen in the Shareware Updates.

In the past, anyone could get any or all of our disks simply by requesting them, and pay whatever they think the disks are worth to them. This policy is very expensive, and somewhat unfair to those who generously contribute to our work. We want all of our programs to be available to anyone who wants them, but sending all of our stuff to persons who don't find them useful enough to make a contribution is hurting us badly: we can't keep sending several disks to persons who don't find them useful.

We will continue to send disk#2, which contains most of our utilities, to anyone who asks for it. If, after trying the programs, the user finds them useful, and makes a contribution, no matter how small, we'll be glad to send whatever other disks are requested.

Our Shareware BBS is up and running. Right now, it's a bare-bones operation, and long-distance phone costs to the user can be high; so it's best to use it only requesting new disks, or leaving feedback.

Our GEO-Autoterm program is a GEOS application which will allow very fast, automatic transmission of text and files, in a new way. Since it may be a while before GEO-Autoterm is operational, we're asking our friends to help us by putting up our bulletin boards across the country. If you think you might like to do that for us, leave feedback on our board, or E-Mail PRI MYSTIC on Q-Link, and we'll send you information.

We've added two working handles on Q-Link to improve communications. A lot of you have sent messages that didn't get answered, or were delayed; I'm very sorry about that, and I hope the new handle will help. Please resend your messages to the new names. If you need help or information, E-Mail MYSTIC AID; to order disks, use MYSTIC JIM.

With your continuing patience and help, we hope to have the very best shareware program ever! It's your contributions, help and support that make this possible, and we're grateful. I've said it before, and it's truer than ever: you're the
BEST.

MYSTIC JIM'S SHAREWARE UPDATE

MAY 1987   Issue 2, Volume 1, No. 2

DISK # 1: New Proargm Updates
DISK # 2: 'Straps, inputs, misc.
  Bootstrap: bootdisk maker.
  Bootstrap1.3: for v1.3
  'Strap 1.3: improved version.
  SN Editor: edit serial number
*GEOStrip: strip CP from add-ons.
INPUT DRIVERS
  Sketchpad   1
  Lightpen: for pens with clickers   X
  Penjoy: litepen/joystick hybrid.   7
  Anypen: switchless litepen.   7
  Inkwell: for Flexidraw litepens.
  KoalaPad: BSW's awful driver.
  KoalaPad2: for port#2.   7
  KoalaPadII: Cosmac's great one.   3
  KoalaPadII2: for port#2.   3/7
  KoalaPadIII: Cosmac's best.   3
* KoalaPadIII2: for port#2.   3/7
  KoalaPad 1: new proportional.   8
  Mouse1351: proportional.
  Mouse2: for port#2.   7
  Comm Mouse: for 1350 mouse.
*PowerPad: still not ready.
*Keyboard:
ACCESSORIES
  GEODump: print any screen.   3
  Change Input: from application.   3
  Change Printer: 3
  GEOFormat1.3: fast 1.3 formatter.   3
  Note Printer: print notepad.   3
  Auto Preference: at boot.   3
  Watchset: easy time/dateset   2
  GEOIcon: for programmers.   2
  Quick Dateset: 4
  Icon Maker/Sprite Magic   7
  Icon Edit 2.1: very good prg.   11
  O'Clock: permanent time display   7
*O'Clock 1.3:
  Quick Dateset: from desktop.   4
  Convert1.4: for ALL GEOS files.   9
  GEOTab: add tabs to GEOWrite.   1
  Grabber Upgrade: these patches
  GEODex Upgrade   actually work,
  Merge Upgrade: now.
  Runner: watch out!   1

*Textvert: with modules for most
  word-processors.

Programmers: (semi-alphabetic)
1 Alex Boyce   7 Mystic Jim
2 Bill Coleman   8 W. Bruce Moore
3 Art Dahm   9 Ben Taylor
4 Jeff Fox   10 Tony Reynolds
5 Don Mosedale   11 Terry Mullett
6 R. Winchester 12 Mitch Romm

DISK#2, cont.
  GRAPHICS.
  Imagecon: hi-res/multi-color
    image converter.   7
*Revcon: GEOS to hi-res convert.
  Piconvert: Doodle to GEOS.   PD
  PS-GEOS: convert all Print Shop
    pics to GEOS   7
  ComputerEyes: run 'eyes from
    GEOPaint, even BETTER!   PD
  GEOPaint help files:
    GreyGrid, ColorGrid, CrossGrid
    MetricGrid, Grid Cards, Okicolor7

DISK # 3: Fonts, keyboards.
  Fonts are designed using Cosmac's
  GEOFont, by Cosmac, P. Hughes, MJ
  or transferred from other sources.
  GEOFont is available from Cosmac
  at: Myth Conceptions, 111 New
  Canaan Ave, Norwalk CT 06850
FONTS:
  Balloon: 24pt.
  Banner: 36pt.
  Dvorak: 18pt.
  Esperanto: 6,10,12,14,18,24pt.
  Greek: 12pt.
  IBM: 10pt.
  Fill 48: 48pt.
  MegaBanner: 200pt. horizontal.
  Mystic: 18pt.
  Oxford: 12,24pt.
  Paintbrush: 36pt.
  Script: 24pt.
  Writing: 14,18pt.
  Star Trek: 48pt * 24pt. 12pt.
  Zapf: 14pt.
* Sixteen additional fonts will be
  added at two per week until the
  disk is filled.
Keyboards.
  Dvorak2: keyboard patch.
  C128: numeric keypad patch.

DISK # 4: Programming Utilities:
  Convert.ml: ML-GEOS convert.   5
  Launch: load & run asm code   12
  GEOStart: convert ML to GEOS   1

  GEOThreader: single-step
    disassembler.
  GEOLinker: link prg/header   3
  GeoSplitter: split prg/header   3
  GEOIcon: programmers icons   3
  Spelunker: view opcodes   10
* GEODisker: disk editor.
* GEOMon: ML monitor.
  GEOCross: Tech cross-ref
  Programmer's Reference Guide
    By Alex Boyce.
DISK # 5: Bulletin Board Utilities
  Terminal programs for BBS use:
    MasterBlasterm, Multiterm
    Fasterm, CG Term.
  Library, conversion utilities:
    SQ v2, USQ v2, Lynx 9, Arcaid
    Word Writer Modverter.
* GEO-Autoterm

DISK #6: Printer Drivers:
  All GEOS printer drivers, for
  GEOS User Group libraries.

** DISK # 7: GRAPHICS
  Graphics conversion pak;
  KoalaPad, Flexidraw, Doodle,
  Supersketch, Blazing Paddles,
  ComputerEyes, Print Shop,
  Newsroom, Print Master,
  Font Master, GEOPaint.
  each to the other and back!

*GEOMetry: new GEOPaint tools,
  geometric shapes, angles,zoom,
  color swap, etc.

MYSTIC JIM ENCHANTS THE EAGLE

* unfinished program
** unreleased disk
GEOS is a tradename of Berkeley SoftWorks
GEOFont is a tradenam of Muth Conceptions

Keyboard = Shortcuts
For GEOwrite 2.0

EDIT
- C= X Cut
- C= C Copy
- C= T Paste (text)
- C= W Paste (photo)

OPTIONS
- C= S Search
- C= N Find Next
- C= Y Change, then find
- C= H Open Header
- C= F Open Footer
- C= V Select Page

STYLE
- C= P Plain text
- C= B Bold text
- C= I Italic text
- C= O Outline text

PAGE
- C= ← Previous Page
- C= + Next Page
- C= G Go to Page
- C= L Page Break

RULER
- C= A Left Justify
- C= E Center Justify
- C= R Right Justify
- C= J Full Justify
- C= K Single space
- C= M 1 1/2 space
- C= D Double space

- C= U Underline
- C= > Superscript
- C= < Subscript

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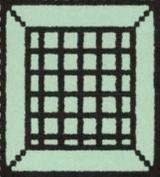
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