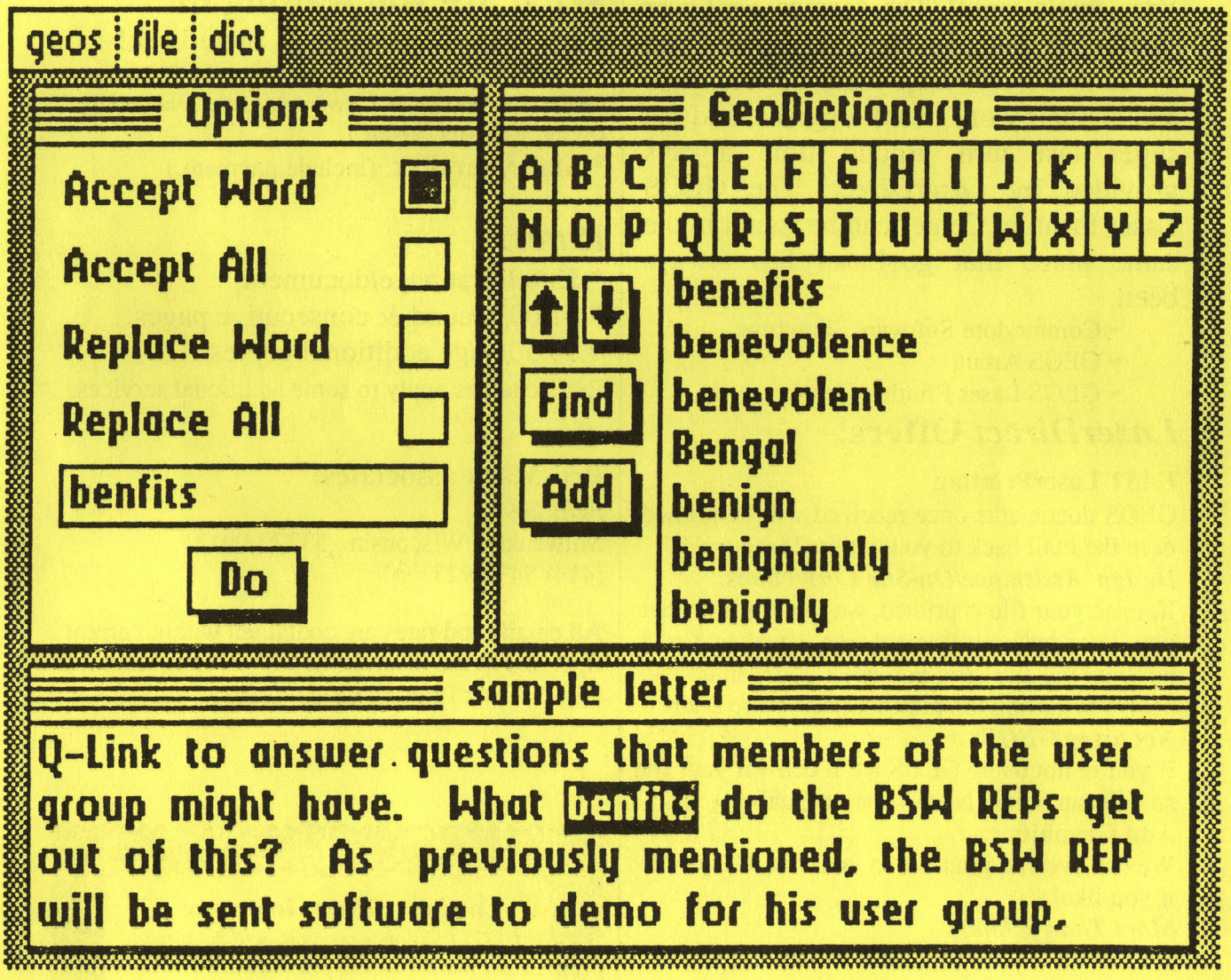
October, 1987 Volume 1 issue 7

GEOWORLD

Published with a Commodore 64/128 using the Graphic Environment Operating System



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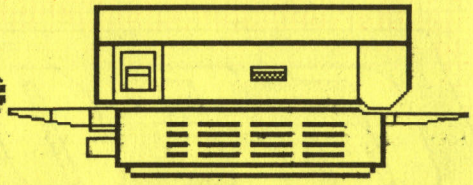

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GEOWORLD

October 1987

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November Deadline is November 10.

As the world GEOS by...

Hello Everyone and welcome to the October issue of GEOWORLD. I attended the Commodore Show this month, and I am sorry to say that the presence of the C64 was small compared to the Amiga but the old 64 is keeping up, especially since We have GEOS to bring it new life. I am speaking mainly about GEO Publish because I have been fortunate enough to be able to use a test version of it and am very impressed. GEO publishers now have a tool that will make desktop publishing much easier. Terms such as Master page, Page layout, Page graphics, and rippling will be used to integrate GEO Write files and photo scraps into a 16 page document that Nobody would ever think possible with the 64/128. I am including my first attempt with GEO publish in this months magazine. Please remember, this is a test version and Your publisher has had very little time at this point to learn all of the many new functions of this tool. Text files and photo scraps have to be on the same disk as they remain separate but become part of the GEO Publish document.You will also be able to edit the GEOwrite text files (any version) because GEO publish converts it to a 2.1 version. Zoom in anywhere on a page and edit text with the functions of writers workshop. GEO publish has long been waited for and I am happy to see it finally become a reality. This is only the begining of a great thing and would I expect to see many enhancements in the future.

Any serious desktop publisher is aware of the fact that not everyone is an artist or has the talent to create professional graphics. Thats why there is a need to have a librarys of fonts and graphics to use. Susan Lamb has spent the past year creating professional GEO paint clip art for the serious user. This month we are publishing 2 of the pages from her first disk which has 2 sides and contains a total of 13 full GEO Paint pages.The disk (2) are $19.95 each or $35 for both from: Lamb Graphics, 1764 Ave. B, Yuma, AZ 85364. On the same note, John Abrahams has started somthing new for GEOS users. It is called GEO Trader and You can trade a disk containing Your GEO Paint files for one in his library or send $1.50 to get one of these gems. This seems like a really good way to share Your work with others and get something for it. The disk I have gotten contains many creative masterpieces. GEO Trader, 35 Cambridge Drive, Smithtown, NY 11787.

Although BSW or Commodore doesn't have plans to put GEOS into a chip, I have seen GEOS on a Eprom and it is impressive, . I have thought about using a separate power source for My Ram expansion and keeping it powered up to retain the GEOS applications. Rumor has it that Tim Corcoran (who brought us the real time clock) is working on putting GEOS into ROM. As I said in the past , the future looks bright for GEOS. I can't imagine using my 64 without it any more. Thats it for now, thanks for Your support and I hope things go well in Your GEOWORLD.

Roger Ledbetter

Bar Graphs with GEOPAINT

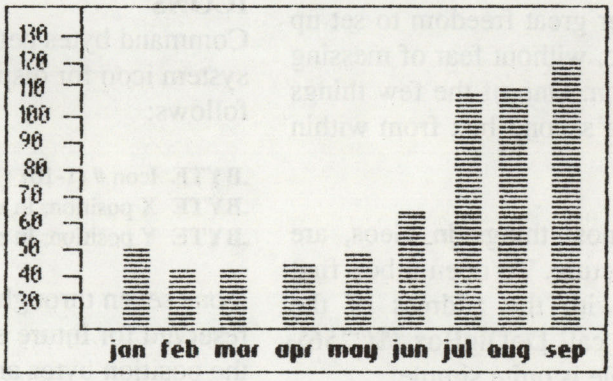
By James Mc Knight

GeoPaint is perfect medium for graphing important data and desgining charts to graphically depict data while awaiting the arrival of Geochart from Berkely Softworks.

In our first example, we will construct a vertical bar graph depicting the amount of money spent on electric bills over a nine month period (3 quarters).

Let us talk for a minute about graphs. The horizontal scale at the bottom of the graph is called the x-axis. The vertical scale going up the side of the graph is called the Y axis. In this instance, our X-axis consists of the 9 months from January through September while the Y-axis are the amount of dollars spent per month. If we draw a line parallel to the x-axis and parallel to the Y-Axis we then have an enclosed graph.

Scaling the X-Axis is relatively easy, we just type in a 3 letter abbreviation for the month and skip 1 space between each month. There is an easy method for scaling the Y-axis which we shall explore.



The first step in making any graph is the collection of data. If you have been recording your utility bills with a database program such as Geofile or Geocalc, you will simply just need to print out the monthly totals. Otherwise, it's time to get out those receipts and statements and put this data on paper! (You have been keeping all paperwork, right?).

Now we are ready to boot Geos and enter Geopaint. Make sure you have ample disk space. It is a good idea to keep all of your graphs on one disk. Once in Geopaint locate the center of the first window and use the BOX tool to draw a clear box in the center of the window.

Make it large enough for details but remember to keep room for all of the labels.

Your box is the basis of the enclosed graph. If you want an open graph, just erase the lines which make up the upper right hand corner.

Label the months on the x-axis. Then move the cursor to the top of the Y-axis. You are now ready to scale the graph. Find the highest and the lowest dollar amounts for the time frame. In our example, the highest was $120 and the lowest was $39.00. Since we want the tallest bar to occupy most of the box, we set the highest Y axis at $130 and counted by 10's until we got to $20.00. This worked the best for us, but it is not all depends on your data. A Zero Y-Axis is ideal but we would have had to step up our increment by 20's in order to get the graph to fit in one window. If you make your increment small, the graph is large and if you make your increment large, the graph is small. It is a trial by error process but after a few graphs it becomes easier for you. Now get the TEXT tool and draw a vertical box beside the graph.

This box will hold your number labels. Do not type dollar signs. Just type in your scale. Hit return after each number and type in the next number. This will give you even distances between numbers. When finished be sure to exit the TEXT mode.

There is a special brush which is ideal for drawing the *incremental* lines. Select the PAINTBRUSH tool and choose change brush from the options menu. Geopaint will display all of the brushes at the bottom of the screen. Pick the thick horizontal brush. Paint this line just to the right of the Y-Axis number. Draw a line beside each incremental number.

The next step is to *plot* the graph. Start at the 2nd letter of each month, the middle of the label, and travel up the Y axis until you approximate the equivalent value. Example, In the month of January you paid forty dollars. You go to the letter "a" in Jan and travel up the Y-axis until you hit the number 40. Make a mark with your pencil. Then continue to plot the other 8 months data. To draw the bars, use the LINE tool, start at the A in Jan and connect it to the dot. Measure the number of pixels. Draw a line from J in Jan and count the number of pixels. The same for the third line, which starts at the N in Jan. You may choose the FACET tool and fill in the bars. You may decide to do a solid bar, or acheive a 3-d graph by just filling in the "JA" bar and leaving the "AN" bar blank. I decided to do a little more work though. I wanted by bars to look like a stack of dollar bills since Money was at the root of this graph. I picked a pattern that resembled vertical lines to fill in my bars, then I erased the border! It looked terrific and really got my point across.

You will find additional help in the Abacus book of of GEOS INSIDE AND OUT.

GEOS - BERKELEY SOFTWORKS

GEOS INSIDE AND OUT - ABACUS

James A. McKnight is a 1972 honors graduate from Point Park College in Pittsburgh, Pa with a B.A. Degree in Journalism and Communications. While he served his internship with the Salvation Army Public Relations Department, he has decided to merge his favorite hobby with his vocation and turn his talents toward computer related articles.

INSIDE GEOS

MASTER BLASTER

Well hello again. In this issue we will be discussing Dialog Boxes; what they are and how they are used. First we will discuss how to set up a box and some of the options involved. Next we'll discuss the various commands available to you when defining the box, how to close the box and, finally, some of the more advanced techniques you can use.

Introduction To Dialog Boxes

One of the most powerful features of Geos is its ability to open Dialog Boxes. A Dialog Box is like a window into another application. In fact they are often called windows. Before the box is opened the state of the machine is saved. When the box is closed this state is restored. This allows the programmer great freedom to set up menus, draw icons, etc. without fear of messing up the main application. One of the few things you can't do is open a second box from within the first.

Dialog Boxes, like most things in Geos, are defined in a table structure. To open a box first load R0 ($02-$03) with the address of the boxes' table and then call DoDlgBox ($C256). the structure of the table is quite simple:

```
.BYTE  Type of box / pattern
       ; if bit 7 is set then use the defaualt box size and
       ; position. The remaining bits set the pattern for
       ; the shadow. If pattern = zero then no shadow.

; The following position bytes are only used if you are
; not defining a default box, i.e. high bit of type byte is
; clear otherwise omit them.
.BYTE  Top,Bottom; In scanlines (0-199)
.WORD  Left side,Right side; In pixels (0-319)

; Next comes the commands for the box. Each command
; is a single byte followed by a variable number of data ;
bytes (depends on the command). You can use as many
; command / data combinations as you wish.
.BYTE  Command
.BYTE(s) or .WORD(s)  Data

.BYTE 0; A command of zero ends the table
```

The Command Byte

Command bytes currently range from zero to nineteen. First we'll list them all in a table and then we'll discuss each one in turn:

0 - End of table
1 - OK icon.
2 - CANCEL Icon.
3 - YES Icon.
4 - NO Icon.
5 - OPEN Icon.
6 - DISK Icon.
7 - 10 Future release icons.

11 - DBTxtStr	Display text string.
12 - DBVarStr	Display variable string.
13 - DBGetString	Get string from user.
14 - DBSysOpv	System OtherPressVector.
15 - DBGrphStr	Draw a Graphic String.
16 - DBGetFiles	Get filenames.
17 - DBOpVec	Custom OtherPressVector.
18 - DBUsrIcon	User defined Icon.
19 - DB_User_Out	Calls a subroutine.

ICONS

Command bytes between one and ten select a system icon for display. The format is as follows:

```
.BYTE  Icon # (1-10)
.BYTE  X position; In bytes from left side of box.
.BYTE  Y position; In scanlines from top of box.
```

Icons seven through ten are undefined. They are reserved for future expansion. Remember that the position bytes are relative to the upper-left corner of the box **not** the screen.

DBTXTSTR - Print a string.

This command will print a string of text in the box. For the most part this string is fixed and doesn't change. The format is as follows:

```
.BYTE 11; command byte
.BYTE X position; In pixeles from left of DB (0 - 256).
.BYTE Y position; In pixels from top of DB (0-256).
.WORD text address; Address of text to display.
```

You can embed any style changes you wish within the string. While it is possible to change the string being printed by modifing the pointer to the string in the table the next command was designed with this in mind.

DBVARSTR - Print a variable text string.

This routine is similar to the previous one except that instead of the address of the string being stored in the table, you store the address in a register (R5, R6, etc.) and place the address of the register in the table. One thing I

might as well mention here: all variables are saved when the Dialog Box is opened except for R0-R4. Therefore use R5 or greater to pass the string address to the box. Since the address is contained in a byte you obviouly must use zero page! Here's the format:

```
.BYTE 12; Command byte
.BYTE X position; In pixels from left of DB (0-255)
.BYTE Y position; In pixels from top of DB (0-255)
.BYTE register address; Address of the register which
        ; contains the address of the string to print.
```

All that you need to do to use this routine is to load, say, R5 with the address of the string you wish to have printed and open the box. The table should contain $0C which is the **address** of R5.

DBGETSTRING - Input a string from user.
This command is used to input a string from the keyboard. The string will be returned in a buffer that you must set up before the box is opened. The string will be terminated with a zero. The maximum numbers of characters to accept is also contained in the table. The buffer must be at least maxchars+1 in order to leave room for the trailing zero.

Like the previous routine the address of a register must be passed which contains an address (in this case to that of the buffer). BSW's reference guide contains an error (so what else is new?) on page 222 in regard to this routine. If you are using R5 you **do not pass a 5!** You must pass its address, i.e. $0C which is R5's address. Ok, here's how the command looks:

```
.BYTE 13; Command byte
.BYTE X position; The usual
.BYTE Y position; Ditto
.BYTE register address; contains the address of the
        ; buffer which will hold the string.
.BYTE maxchars; maximum number of charactors to
        ; accept.
```

This routine will **not** prompt the user for input, use one of the string output commands for that. One last note: if the buffer doesn't start with a zero when this command is executed then the string it contains will be printed and the user can edit it. Did you ever rename a file from the DeskTop?

DBSYSOPV - Default OtherPressVector
This routine is the one exception to the command then data rule -- there are no data bytes. All this command does is cause the box to close if the user clicks the mouse and it's not over a menu or an icon. This is useful if the box only displays text; Info boxes for example.

DBGRPHSTR - Draw a graphic string.
The format for this command is simply the command byte followed by the address of a graphic string. The graphic string is the same as that used by GraphicsString ($C136) and i.GraphicsString ($C1A8). I will be discussing these routines in a future issue so I won't talk about this command any futher. See BSW's Reference Guide for more info (this section seems bugless).

DBGETFILES - The infamous file box.
This is the most powerful DB command. First let's get it's format out of the way :

```
.BYTE 16; Command byte
.BYTE X position; Offset from left side of box in
; bytes (0-39).
.BYTE Y position; Offset from top of box in scanlines.
```

This command is a little different in that several variables must be set prior to opening the box :

R7L - GEOS File type.
R5 - Points to buffer to place the filename in.
R10 - Pointer to name string (optional)

Only one type (Application, Data, Input Driver, etc.) can be displayed at one time as indicated by R7L. Since the buffer used by Geos to hold all the filenames is 256 bytes the maximum number of files that can be displayed at one time is:

256 / 17 (filename size + null) = 15

Note that it's **not** 16 like BSW's RG says it is on page 222. If the seventeen byte buffer pointed to by R5 is non-zero (holds a filename) and if that name exists then that file will be highlighted when the box opens otherwise the first filename on the list will be. When the box closes this buffer will hold the null-terminated filename of the file that the user selected. if the box was empty then the first byte in the buffer will be null (zero).

If R10 is non-zero then Geos will check the permenant name string in each files' header and only display those files that match with the string R10 points to. This allows applications to only display their own data files and ignore all the rest.

Note that this command will only display the filebox itself. The **OK, DISK,** etc. icons and text that are normally also used in the complete box are set up with other DB commands. Also note that the filebox can hold up to 15 files but these don't necessarily have to be the first 15 on the disk, just the first 15 with the Geos filetype contained in R7L(and which match R10, if used).

Here's yet another error in BSW's RG -- on page 222 it says that **DBGETFILES** is command 15 and it doesn't mention **DBGRPHSTR** at all. Wrong. See pages 404 and 405 or this article for more accurate information.

DBOPVEC - User defined OtherPressVector
This command allows you to specify a routine to be executed whenever the user clicks the mouse and it's not over a menu or an icon. The format of this command is simply the command byte followed by the address of the

Continued on page 18 . . .

Desk-Top Publishing

by Skip Goetzinger

This month is a potpourri of tips, tricks and miscellaneous Desk-Top paraphenalia for your GEOS system. If you have any questions or comments, please feel free to leave E-Mail via Q-Link to SkipG1.

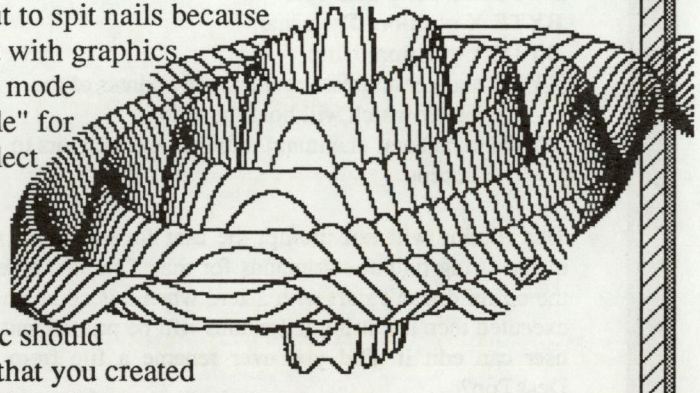
Graphic Conversions to GeoPaint:

Convert from: to GEOS	*Use:*
ComputerEyes Images	ComputerEyes Driver to capture directly
ComputerEyes Files	Grafix-Link : *Captures in reverse video*
Doodle	Piconvert, Piconvert + or Graphic Convert
Koala Files	
Mac Graphics	MacGeoPaint
Newsroom Photos	GEOS Graphics Grabber
Newsroom Panels	Grafix-Link
PartyWare Graphics	
Print Master	GEOS Graphics Grabber
PrintShop Graphics	GEOS Graphics Grabber, Piconvert, Pic +
PrintShop Panels	Piconvert or Piconvert +
RLE Files	Piconvert +
Xetec Graphics	Grafix-Link : *Flexi mode*

Text Conversions:

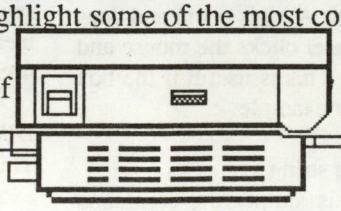
Convert from: to GEOS	*Use:*
ASCII to CBM	Easy Dos It
EasyScript	GEOS Text Grabber
IBM ASCII to CBM	Big Blue Reader (Requires C128 & 1571)
PaperClip	GEOS Text Grabber
Sequential	SEQ->TextScrap v2.0 (R. Winchester)
Speed Script	GEOS Text Grabber
Word Writer	GEOS Text Grabber

Simplified Desk-Top Procedure:



Well, for all of you that are about to spit nails because it seems so difficult to position text with graphics. I believe that the use of the preview mode should help out alot. Create the "hole" for your graphic from the text page. Select "Preview" from the file pull-down menu. Mark the "hole" position on the screen with some masking tape. Now page-break and position your graphic. Select preview. The graphic should appear within the taped-in window that you created within the text. If not, make minor alterations until it is located properly.

Laser Tips:



Since having taken over the Laser Printing service from BSW on Q-Link, I thought it might help to highlight some of the most common problems we see in the hopes that you might avoid the same. First, if you plan on creating alot of work within GEOS, go out and buy the Writer's Workshop disk. The GeoWrite v 2.0 is indespensible for its flexibility. Next, DO NOT use spaces to position your text on the screen. Use tabs, or better use the moveable margins available from the2.0 version. More to follow!

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Radio 20 point

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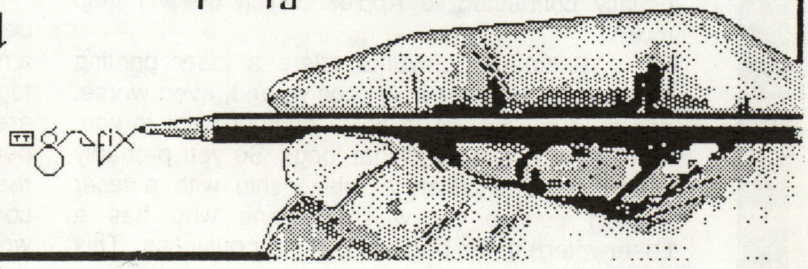
Specify "Fonts 1"



Geos and the Real World

How to Make a Few Bucks Using Geos and Common Sense

by Paul Bishop

Geos can be much more than a new operating system for old Commodore machines. In the right hands, Geos is nothing short of a goldmine. All it takes is a little know-how and some initiative to turn your Commodore into a steady source of income.

The secret of course is that all of a sudden, typeset documents are available at the punch of a few keys, and for only a few dollars. Once you know which keys to punch, you're on your way. One of the easiest ways to market Geos-produced documents is to make flyers and newsletters.

Everybody writes newsletters: churches, law firms, your aunt Clara. These newsletters are almost universally produced on either an office typewriter and a mimeograph machine, or on a $20,000 typesetting system. With Geos, you have something to offer both of these groups: better quality or a much lower price.

The best way to get started is to look around you, and see if anyone you know is doing (or should be doing) something with personal publishing. The next thing to do is to head for the old computer and crank out a demo.

It is important to remember that this demo is going to be your first impression - it should be high-quality, well laid out, and above all should contain no typos. Get some input on this from friends or family members (someone who will tell you what is good and bad, not mom saying "oh honey, it's lovely").

Layout is important. Your demo page should not be cramped, things should line up well, and the page should be balanced. Skip Goetzinger writes a column on Desk-Top Publishing (elsewhere in this issue) that has tips that can help you on page layout.

Once you have a demo, you need to have it printed. Your choice of printers is important, and it is limited. At more than $4,000 apiece, Apple Laserwriters are not common printers, and they are usually connected to Apples, which doesn't help much.

Berkeley Softworks offers a laser printing service, but it is rather expensive and, even worse, can take two weeks to get a printout back to you. Most clients won't wait that long. So you probably will want to establish a relationship with a laser printing service (or with someone who has a Laserwriter!) at the beginning of your business. This will help a great deal when it comes to crunch time.

It is important that you know how long it will take you to get a page back to your client, because this is a subject very near and dear to your client's heart. Everybody wants his work yesterday, and your job, made easier by your handy computer, is to get it to them.

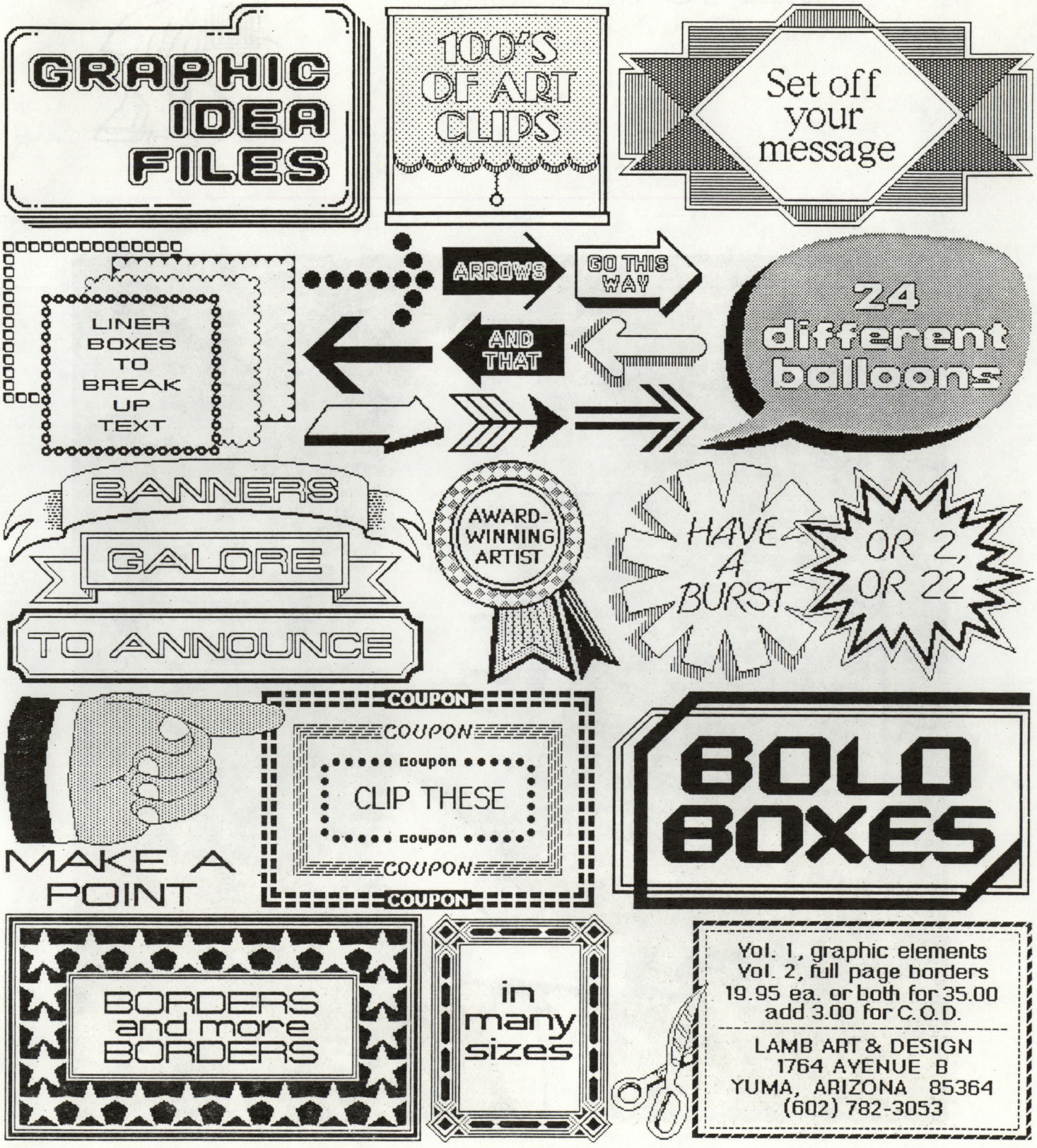
Once you are sure you can deliver your work when promised, you have to decide what to charge. Rates for commercial typesetting and page layout range from $35 per hour to $50 per hour. You will probably want to undercut this as much as you can. Factors to consider when setting your price are (1) what it is costing your potential customer currently, (2) what it will cost you to produce the work (time, printing costs, disks, etc.), and (3) how much profit you will make.

The price you finally decide on must avoid "sticker shock" but must be high enough so that you can make some money on the deal. Don't make the mistake of setting the price too low. It is honestly better not getting a client because of an initially high price than losing it because you have to raise the price to meet expenses.

If your prospective client is someone you already know, then approaching him (or her) shouldn't be difficult. You can level about the ways and means of accomplishing his work, and stress the prompt attention you will give it. If you know your prospective client fairly well, you might be able to work out a deal whereby you can submit drafts of the work on a dot-matrix printer, and only have the final laser-printed. (Be sure to have samples of both types of printing available as examples).

Once you have your first job, you should *really* bust your hump to get the work back fast and, more importantly, as error-free as you can make it. This should become a habit, since small operations are generally able to offer better service than large ones, and service is a strong competitive point. But the first example is a make-or-break proposition.

In the event you have to try to break into personal publishing without knowing anyone who is a ready market for your work, get a couple of demos together (a flyer and a newsletter, or whatever you are trying to sell) and visit a business or two in person. I think you will be surprised at the response. As long as you stress quick, cost-competitive and quality work, you can hardly go wrong. Once you have a customer or two, things will tend to grow on their own.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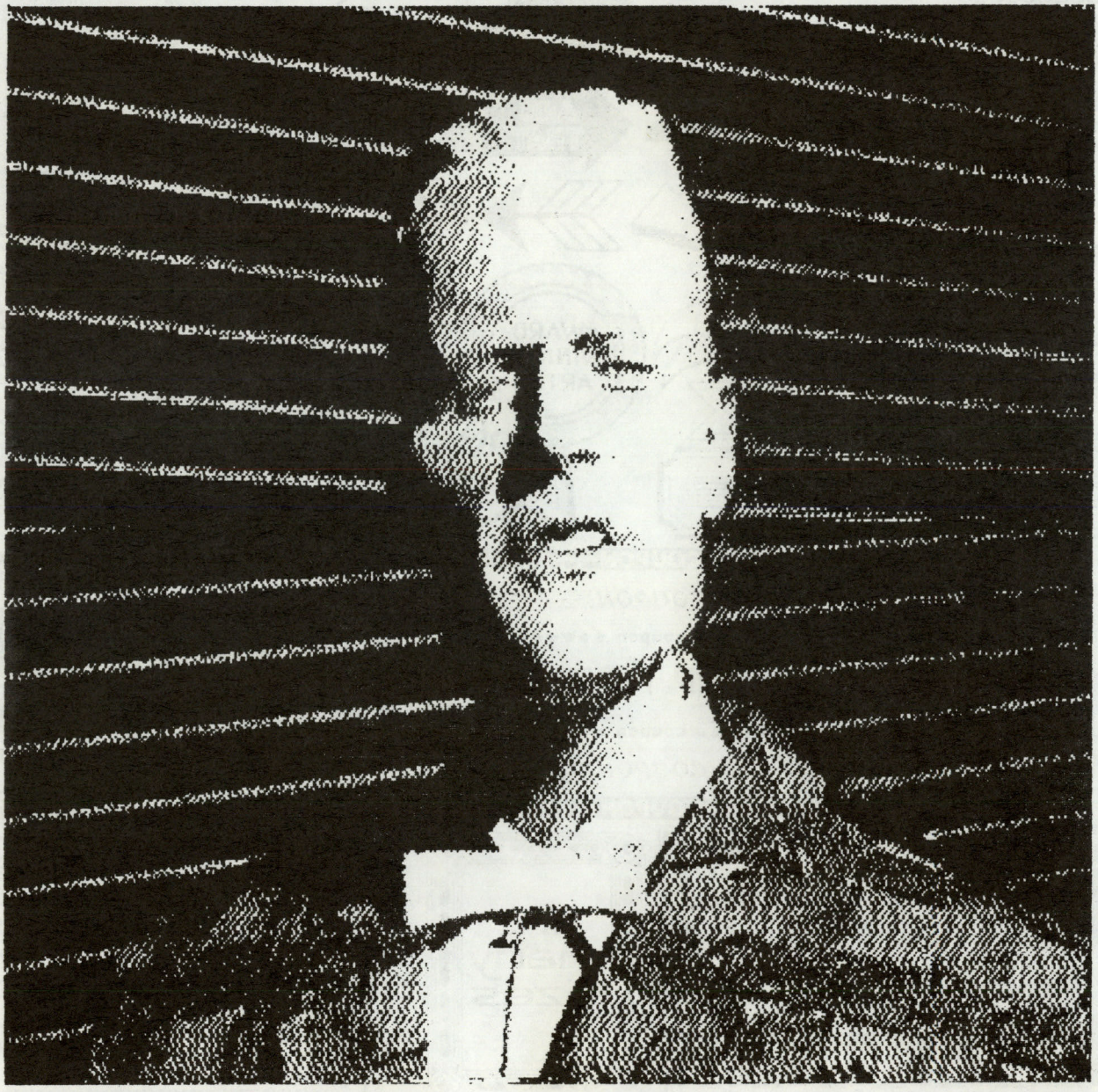
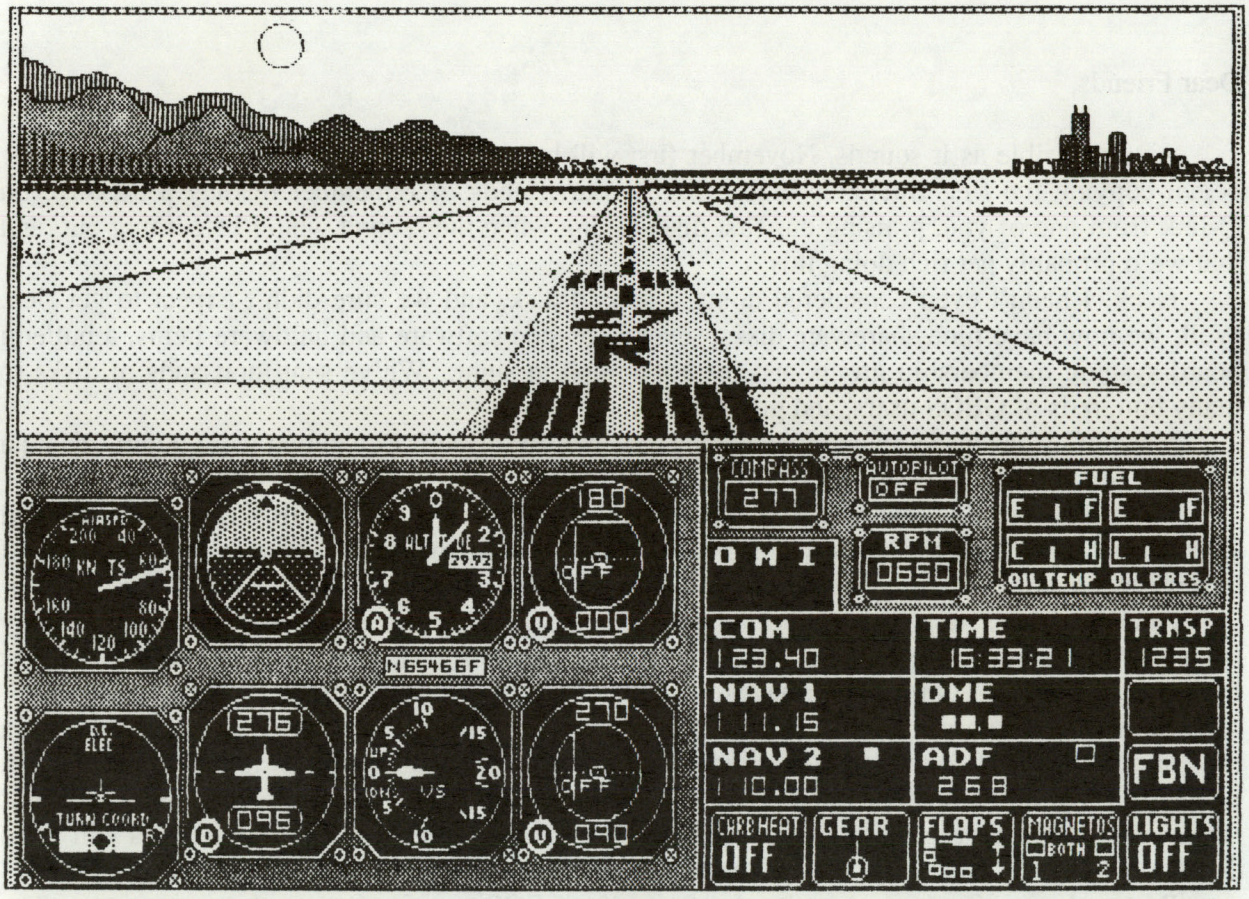
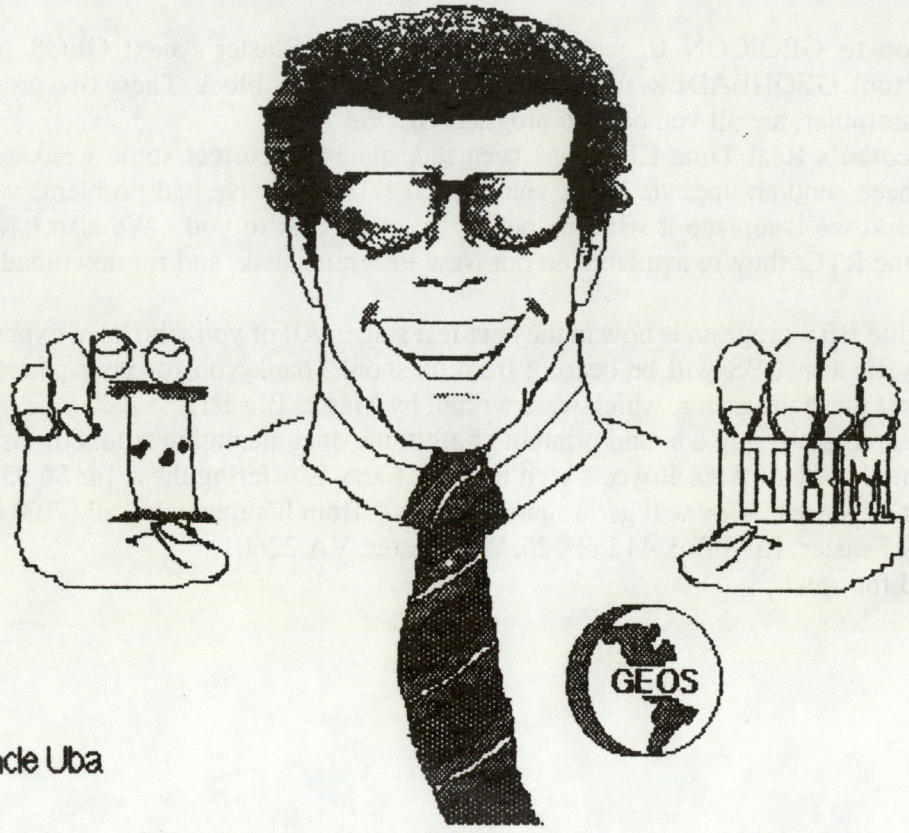


GEOTRACER disk art

(sorry, these files are not





by John Abrhams and Uncle Uba

on the GEOWORLD disk)

Mystic Jim
2388 Grape
Denver CO 80207

Dear Friends,

As impossible as it sounds, November first will be our first anniversary: just a year ago, we began copying the first Bootstrap onto disks for our friends. I remember reading a message on Q-link from one of you, praising our first disk, asking when the second would be coming out, and that we'd probably get rich doing this.

Heck, I hadn't even considered doing a second disk, and we sure didn't expect to get rich. Well, we now have nine shareware disks, several for-sale software and hardware items, a bulletin board system, membership group, and there's no end in sight. We've sent thousands of disks to many hundreds of GEOS users, and growing fast!

None of us has made much money doing this, but, for myself, I've gotten more out of this than I'd trade for all the money in the world:

The best thing I've received is you, my friends: I've made more friends through this than I'd ever imagined, and, while there have been occasional problems, mistakes and disagreements, I haven't met a single one of you that I wouldn't call a friend.

Another thing I've gotten has been the satisfaction in doing something useful, and helping my friends. When someone tells me that they appreciate something we've done for them, it's the best feeling in the world: I hope I never have to give that up.

Before I got involved in this, I was pretty isolated, being hooked-up to an oxygen tank though a tube in my neck, so I couldn't get out much. This business has taught me how to make contact with people through a computer, modem, a phone, and the mail. I know that there are many folks out there who are in situations even more isolating than my own: one of our next objectives will be to develop ways to help these people get some of the rewards I've gotten through my computer.

We're also getting into educational software for GEOS, and for Commodore computers. The first item is GEOKids, which is a fun learning and memorization package for kids three to seven years of age.

In addition to GEOICON II, we'll soon have Master Blaster's next GEOS programming developement tool, GEOHEADER, for building the GEOS header block. These two programs, along with a good assembler, are all you need to program GEOS.

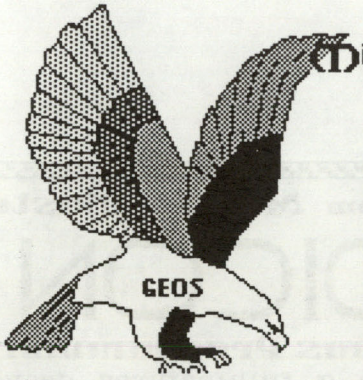
Tim Corcoran's Real Time Clock has been redesigned to correct some weaknesses, and all owners have been send an upgrade kit. If you own an RTC and have had problems with it, please send it back, and we'll replace it with the new type, at no cost to you. We also have some new programs for the RTC: they're available on our New Programs disk, and for downloading from our BBS.

Our satellite BBS program is now in the beta-test stage. All of you who have expressed interest in doing a Mystic Jim BBS will be hearing from us soon. Thank you for your patience. We also intend to market these programs, which were written by Master Blaster.

Larry Feaster is offering a bound printout of all of the documentation from our disks. You may also get a printed copy of Alex Boyce's tech manual. Larry is offering these for $6.95 each, which will just cover expenses; Alex will get a share of income from his manual. Call (703) 667-3997, or write to: Larry Feaster, Rt. 8 Box 44 Lot 126, Winchester, VA 22601.

That's all for now!

Best.



MYSTIC JIM's SHAREWARE UPDATE

October, 1987 volume 1, number 6

DISK#1 New Program Updates.
If you've received disks 4,6 and "R" after Sept 1, you have all of our programs. Programs added after Sept. 1 will be on disk#1 and on the BBS for downloading.

DISK#2: INTRODUCTORY DISK
This is the first disk we send to new friends on their first request. If they like this disk, they can request others, or join our shareware group.

Bootstraps 1.2, 1.3U, 1.3D
(bootdisk makers) (7)
Input drivers:
KoalaPad: eight kinds (3,7)
Lightpens: ALL kinds (7)
SketchPad. (1)
Mouse 1351
Mouse1351, port#2. (7)
Mouse1350.
ACCESSORIES
GEODump: screen printer (3)
Change Input (3)
Change Printer (3)
GEOFormat1.3: fast format(3)
Note Printer (3)
Auto Preference1.2, 1.3 (3)
Watchset. (2)
Quick Dateset (4)
Icon Maker (7)
Sprite Magic (x)
Icon Edit2.1 (11)
O'Clock: display time (7)
Convert1.4: ALL types (9)
GEOTab: for GEOWrite. (1)
TextGrab1.3 (6)
GrafGrab,Dex,Merge Patches.
GRAPHICS.
Imagecon. (7)
Piconvert: Doodle-GEOS (x)
Computer Eyes: for GEOS
GEOPaint Help Files (7)

DISK#3 FONTS
Balloon 24pt
Banner 36pt.
Dvorak10pt
Esperanto6,10,12,14,18,24pt
Greek 12pt.
IBM 10pt.
Fill-48 48pt.
MegaBanner 280pt.
Mystic 18pt.
Oxford 12,24pt.
Paintbrush 36pt.
Zapf 14pt.
Andrea's Calligraphy
Star Trek 48pt.
Additional fonts added regularly. Fonts designed by Cosmac, P. Hughes MysticJim Andrea Needham and others.

DISK#4 Programming Tools
(members only)
Convert,ml.: ML to GEOS (5)
GEOStart. (1)
DISPMEM: display memory. (15)
GEOThreader. Single Step Sim.
GEOLinker: header linker. (2)
GEOSplitter: header splitter (2)
Disk Editors 64 and 128
Micromon 64
Spelunker: display memory. (10)
Techman Updates: fixes OGPRG

Alex Boyce's Tech Manual!!
GEOHACKER: Strips copy- protection from ALL GEOS versions and add-on programs, and edits serial#: EVEN GEOS128!

DISK# 5: Terms and utilities for Mystic Jim's BBS (members only)

DISK#6: Graphics Convertors
PS-GEOS: all Print Shops(7)
PS/NewsRoom/PrintMaster
Imagecon: hi-res/multi-GEOS(7)
Piconvert: Doodle-GEOS
GEOVERT: Converts GEOS to hi-res/multicolor and back (7)

DISK #7: Printer Drivers
(of interest to user groups)
All GEOS printer drivers, including laserwriters, GEOCable, and Mill's double/quad drivers.

RANDY'S ROUNDUP: A disk full of Randy Winchester's best stuff

TIM'S TIMER: Operating system and utilities for Tim Corcoran's Real Time Clock for Commodore64, Commodore128, GEOS, time and date. Now GEOS128 compatible!!
Auto-Read : Reads RTC at boot.
RTC-Write: Set time and date.
Show Time 1.2 Display time
Show Time All: for 1.0, 1.2, 1.3
Reminder: reminds of special times or dates. Never forget another anniversary.

Programmers: semi-alphabetic
1. Alex Boyce 2. Bill Coleman
3. Art Dahm. 4. Jeff Fox
5 Don Mosedale
6. Randy Winchester
7. Mystic Jim 8. Bruce Moore
9. Ben Taylor 10.Tony Reynolds
11. Terry Mullett 12. Mitch Romm
13. Tim Corcoran 14.Terry Mills
15. Lynn Kerby. 17.Andrea Needham

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GEOS is a tradename of Berkeley Softworks. Tim's Timer is a tradename of MJ

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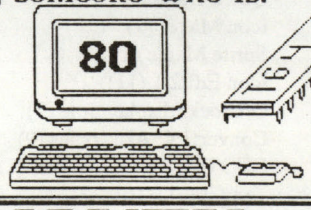

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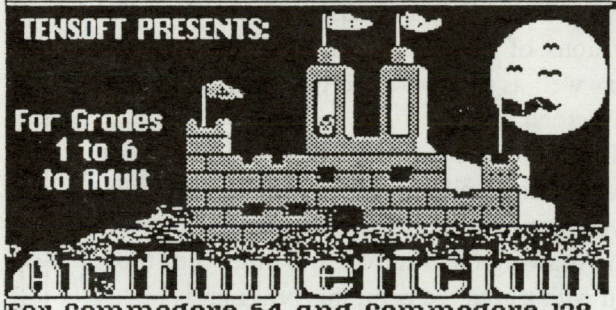

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Berkeley Softworks

For those of you who, like myself, have problems spelling things correctly, **geoSpell** is going to be a big help! In fact, if you check some of my previous columns, you may find a slip-up or two (completely accidental, of course).

But now I no longer have to worry about misspelling words. I can check all of my **geoWrite** documents (no matter what version) using the new **geoSpell** package. The way **geoSpell** works is quite ingenious. The program reads a **geoWrite** file, and counts the number of unique words. Once a total is found, these words are checked with the **geoDictionary** to see how many words are possibly misspelled. Then **geoSpell** checks through the file and shows the words that do not appear in the **geoDictionary**.

A common problem with some spell-check programs is that they do not let the user add words not found in the resident dictionary. This is not the case with the **geoDictionary**. Using **geoSpell**, you have the ability to create personal dictionaries that can be checked when you spell-check a document. For example, I often use the phrase "BSW" (for Berkeley Softworks) in letters and articles. Since "BSW" is not in most dictionaries, I can add the phrase to my personal dictionary where it will remain as long as I desire.

The manner with which **geoSpell** allows the user to add words to a personal dictionary is very useful. When it runs across a word that it does not recognize, the program gives the user the opportunity to add the word to the personal dictionary. The program also allows the user to add variations of the word, with various prefixes or endings. For example, the word Festus is not in the **geoDictionary**. If **geoSpell** were to find this word, it would give the option to add Festus to the personal dictionary. **geoSpell** would also allow for the addition of certain variations of the word, like Fesutusable, Festusing, Festused, or many other alternatives. Once added to the personal dictionary, these words will always be amongst the words checked by **geoSpell**.

Also included on the **geoSpell** disk is **geoFont Editor**. QuantumLink subscribers might be familiar with this program written by Arthur "Cosmac" Dahm. **geoFont Editor** is designed to allow the user to alter existing fonts, as well as to create new ones. In fact, there are a number of fonts that have been uploaded to Q-Link that were created with this program.

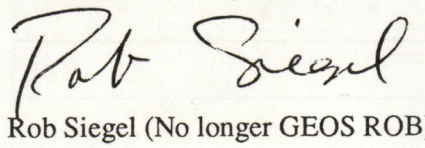
The program allows the user to load in a font, and to alter it in the large drawing area that appears on the right side of the screen. The smaller box to the left of the editing area allows the user to see the effects of his changes as they are made. The program also gives the size dimensions of the font, both as memory on the disk, as well as pixel size (vertical and horizontal) on the screen.

If you want to design your own font, **geoFont Editor** allows you to choose the point size you want and to alter each successive point size by drawing them in one at a time. For those of you with a creative bent, this program is highly recommended.

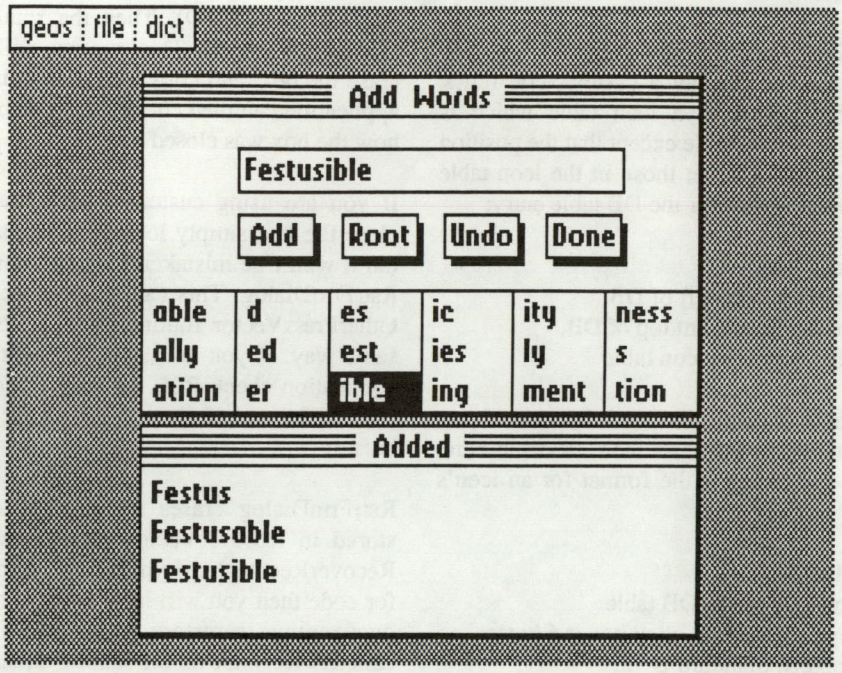
General News

geoPublish, geoSpell, and geoWrite Workshop 128 (formerly titled **Writer's Workshop 128**) will all be released within the first two or three weeks of October. Shortly on their heels will be **geoProgrammer**: the combined Assembler, Linker, and Debugger for **GEOS**. As these programs are released, you can read about them right here in **geoWorld**, the only magazine devoted completely to, and produced entirely on **GEOS**. Keep an eye out for a review of **geoPublish** in the next issue.

Take care, and see you on the boards!!



Rob Siegel (No longer GEOS ROB)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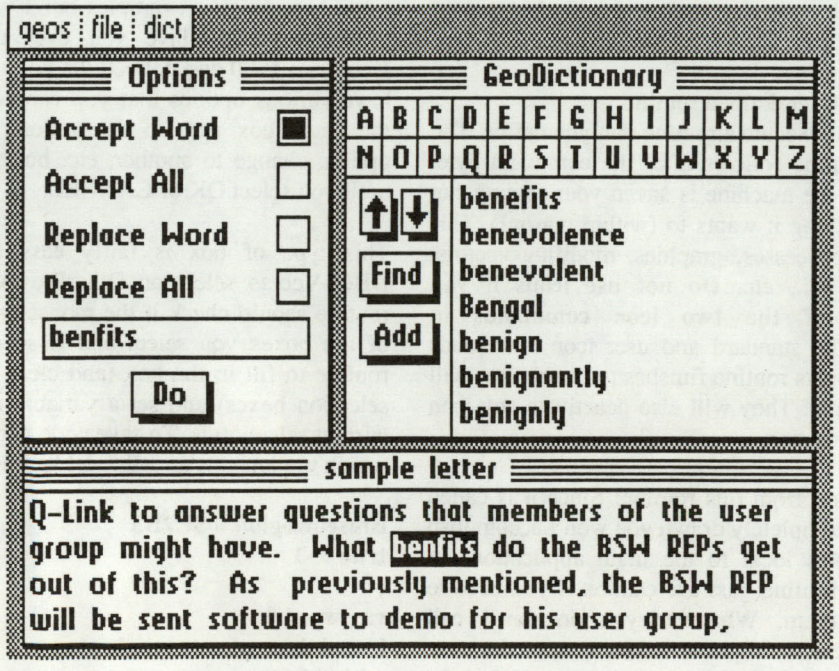
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sample letter
Q-Link to answer questions that members of the user group might have. What benfits do the BSW REPs get out of this? As previously mentioned, the BSW REP will be sent software to demo for his user group.

routine. Unless the routine wants to exit the box it should simply RTS when it's finished (exiting the DB will be discussed below).

DBUSRICON - Display a user-defined icon.
This command is used to display a custom icon (click box). The DB table points to a icon table which is identical to the standard icon table except that the position bytes are stored in the DB table; those in the icon table are ignored. Here's the format for the DB table entry:

.BYTE 18; Command byte
.BYTE X offset; in **bytes** from left of DB.
.BYTE Y offset; in scanlines from top of DB.
.WORD icon table; Address of icon table

Icons and icon table where discussed in one of my previous articles so I won't discuss them in depth here. As a reminder the following is the format for an icon's table:

.WORD icon graphic data
.BYTE 0,0; Position is given in DB table
.BYTE width; in bytes. Standard click box is 6 bytes.
.BYTE height; in pixels. Standard is 16.
.WORD service routine

If the icon is supposed to close the DB then a jmp to RstrFrmDialog should be made (discussed below). If not it can just RTS when it's finished; unlike the predefined system icons (OK, CANCEL, etc.) user icons do not automatically close the box. Icons are drawn after any graphics so they will always be in the foreground.Unlike the main application, only eight icons may be active at one time (although a service routine could change to a different set if you wish).

DB_USR_OUT - User defined routine.
This command will execute a routine that you define. The address of the routine follows after the command byte. Since the state of the machine is saved your routine can do just about anything it wants to (within reason!). This includes menus, processes, graphics, modifing vectors, changing colors, etc., etc. **Do not use icons if you are using one of the two icon commands in the box table!** The standard and user icon commands are executed after this routine finishes to insure they will be in the foreground. They will also deactivate any icon you define in this routine.

Don't close the box from this routine! Since it is called before the box is completely drawn you won't accomplish much. All variables local to the main application are accessible to this routine, just use caution if you need to modify any of them. Whatever you do **don't call another DB!** There is only one buffer to save the state of the machine in. If you call another box you won't be able to restore this state because it will get overwritten when the second box is opened.

EXITING FROM THE DB
Whenever the user clicks on a standard icon, the value of that icon (same as it's command byte) is placed in SysDBData ($851D). Then the routine RstrFrmDialog ($82BF) is called. This routine will restore the state, erase the box, and copy SysDBData into R0L. The main application can then check the value in R0L to determine how the box was closed.

If you are using custom icons and you want them to close the box simply load SysDBData with a value >11 (so it won't be mistaken for a system icon) and **JMP** to RstrFrmDialog. This can also be accomplished from an OtherPressVector routine, if you are using one, in the same way. If you are using **DBGetString** have the main application check R0L for icon values (usually for a 2, CANCEL) and if they didn't occur check your string buffer.

RstrFrmDialog erases the box by calling the routine stored in RecoverVector ($84B1) which by default is RecoverRectangle. if you are using the backround buffer for code then you will have to load this vector with your own routine to restore the screen. This routine will be called twice, once for the shadow square and a second time for the main square. See the specs for RecoverRectangle (page 87 in the BSWRG) for the variables used to store the size of the box to erase. If your routine restores the whole box at one time (for example by clearing the screen) then it will have to set a local flag so it doesn't execute a second time.

ADVANCED TOPICS
Dialog boxes can get quite complex. I don't have the room here to give examples but I will discuss some of the possibilties. Have you ever tried to print with GeoWrite V2.0 and noticed the box that opens? In it you have various options that you can select by clicking on the small box next to the option. You can select an option, change to another, etc. but the box won't close until you select OK or CANCEL.

This type of box is fairly easy to implement. Use DBOpVec to select an OtherPressVector routine. This routine should check if the mouse was pressed over any of the boxes you select and if so call the appropriate routine to fill in the box (and clear any of the alternate selection boxes) and set a variable to tell you what the current selection is. To save code here is a code fragment which implements an inline IsMseInRegion:

```
ismseinregion = $C2B3
true = -1
;
ra .word 0
i.mseinbox  pla:sta ra:pla sta ra+1
  ldy #6
msl  lda (ra),y:sta r1h,y:dey:bne msl
  clc:lda ra:adc #6:tay
  lda ra+1:adc #0:pha
  tya:pha:jsr mseinregion
  cmp #true:rts
```

Use this routine like this:

```
jsr i.mseinbox; check first box
  .byte top,bottom; in scanlines (0-199)
  .word left,right; in pixels (0-319)
 beq inbox1; beq true if mouse within the box
jsr i.mseinbox; check second box
  .byte top2,bottom2:.word left2,right2
 beq inbox2
 rts; not in box so exit
 inbox1 & 2 fill in box, etc.
```

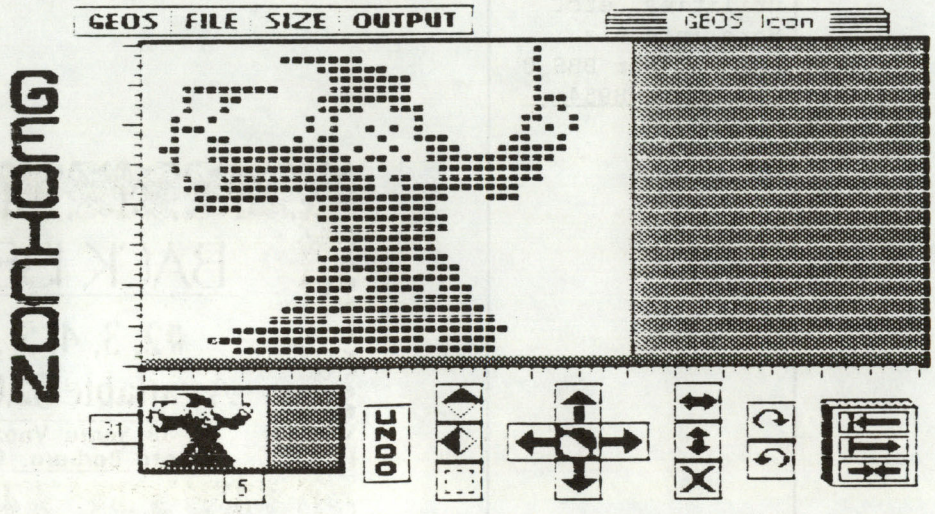
Menus are also easy to implement, just remember that all references to the menus position are in relation to the entire screen not the DB itself. The service routines called by each option should at the least set a variable so you can tell what option was selected. Any menus that where active in the main application will not be affected although they are inactive while the box is opened. This is a good time to mention that you should refrain from printing outside of the DB's borders. While menus and submenus will roll up properly, graphics, icon, and text will not.

Processes can also be set up within the box. The process will be disabled when the box closes. In all honesty I've never found the need to use them within a DB but I'm sure somebody will think of a use for them eventually. Be careful if you are defining a custom sized box and it is near the border of the screen. Remember to leave room for the shadow (8 pixels right and bottom) if you are using one. Some decidedly strange things will happen if the box trys to print off the screen (actually it will wrap around to the other side).

Well that's about it for this time. I hope you find this article informative. If you have any questions or comments on any matter pertaining to Geos programming send me mail care of GeoWorld or leave me e-mail on Qlink. My handle is MBlaster1.

I want to take a second to plug my latest application. It's called GeoIcon V2.3. It's an Icon and graphic editing utility. The program will take the images you have designed and generate source code that can then be inserted into your own applications. Some of it's features include:

All images stored as data files for later use.
A full range of editing features including rotate, scroll, mirroring, reversing, etc.
A backround buffer for holding a second image. Both buffers can be swapped at any time
Variable sizing up to 8 bytes by 32 pixels. Larger sizes can be created by splitting the image into two or more files and combining the source code.
Disk icons can be pulled out of files, modified, then pushed back into the file (or a different one). this allows you to use the program as a disk icon editor.
Sorce code can be generated to screen, printer, or disk. Disk source can be in either PRG or SEQ format for use with virtually all popular assemblers
Eighteen pages of documentation are included on disk. The price is only $20.00 thru Mystic Jim Software. Shareware members get a 25% discount. See the ad in this issue. See you next time. **MB**



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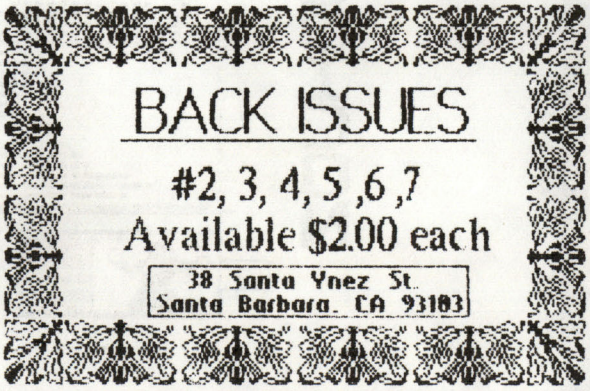

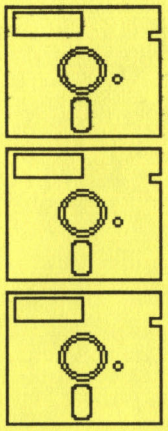

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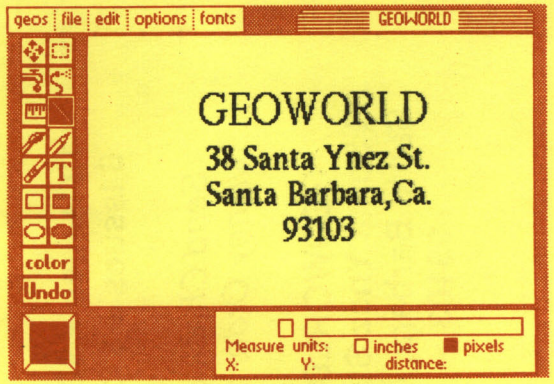

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