geoWorld

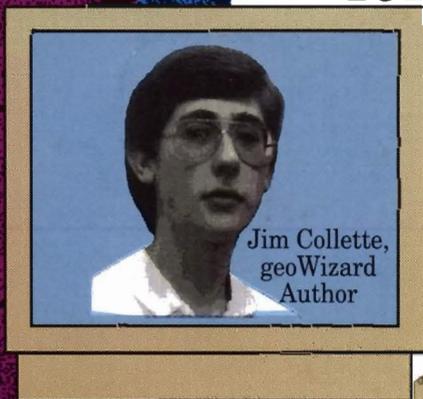## The definitive magazine about GEOS

geoWizard!

and other
GREAT
disk utilities
for GEOS...

Jim Collette,
geoWizard
Author

geoWizard

ELLER ART STUDIO
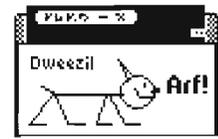1991

NEW! **NEW!!**

The GeoSTAMP Disk

GeoSTAMP is here!

One of our beta-testers said it best about this new geoPaint Desk Accessory: "This is one program you have to use to appreciate, and once you use it, you'll **LOVE IT!**"

GeoSTAMP lets you relive your childhood love of stamp-pads. Make multiple copies of small, geoPaint graphic images with the speed and accuracy that cut-and-paste just doesn't have. Making mazes and floor plans is fast and fun! With **GeoSTAMP** your kids can enjoy the fun of stamp-pads without the mess! Create beautiful borders around your geoPaint works with ease! You'll think of a "bizillion" ways to use **GeoSTAMP**!!!

Each **GeoSTAMP** file holds up to 30 stamp images which you pick up, carry around the screen, and place anywhere you want with a simple press of a button. You can even layer stamp images to create new, intricate designs. And since **GeoSTAMP** displays your exact position on the screen, you can fine place your image where **you** want it! Invert the image, flip it left-right or top-bottom, make it into a "cookie cutter", even "paint" with it!

The **GeoSTAMP** disk comes with as many stamp sets as we can fit on it, but you're not locked into our ideas, because we've included two programs that let you make your own stamp sets!

StampCollect is our favorite. With this Desk Accessory you can lift graphic images right from a geoPaint screen! Use geoPaint's drawing tools to create stamps to add to your collection. Work with **GeoSTAMP** and **StampCollect** to build new stamp sets! Or "borrow" graphic images from other geoPaint sources.

StampEdit is a simple, fast pixel editor for creating new stamps or for editing existing stamp sets. This Application is the one the "real" Geos artists will use.
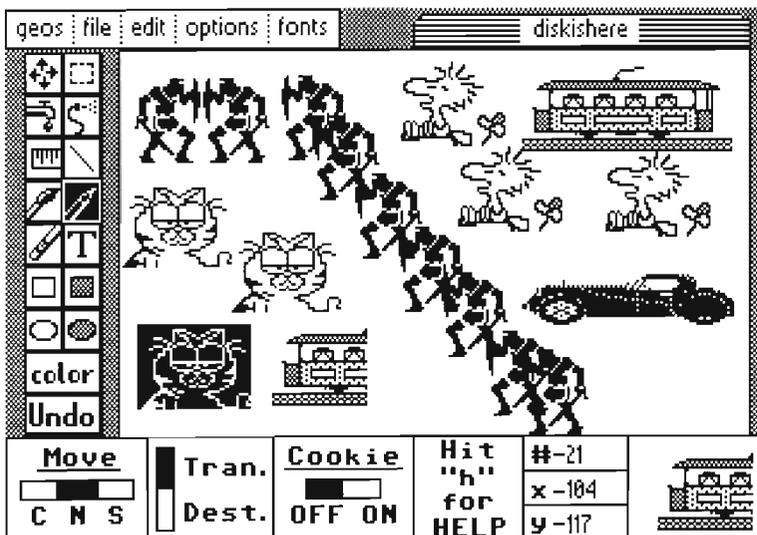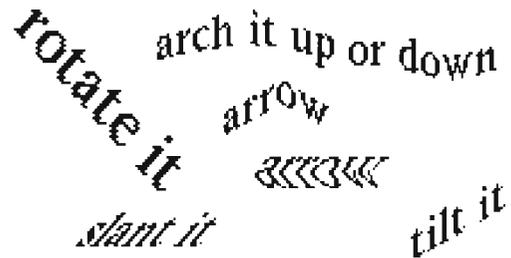
DweezilDisk 1
featuring
NewTools2

One of the most talked about GEOS Desk Accessories to come along in years!!!! Do things in GeoPaint that before you could only dream of: slant an object, tilt it, rotate it 45 degrees, make an arrow shape or an arch out of it, and MORE!! All of the best GEOS artists own **NewTools2!**. **NewTools2** is a MUST for the serious GeoPaint user!!

rotate it *arch it up or down* *arrow* *slant it* *tilt it*

Also on DweezilDisk 1:

Marker, a GEOS measuring tool Desk Accessory that lets you make fine "pencil" marks to locate your measurements. **CreatePatt**, a new GEOS Desk Accessory that lets you create and save fill pattern sets using GeoPaint. **PattDA**, a GEOS Desk Accessory that loads fill pattern sets. **AutoPattA** and **AutoPattB**, two Auto-Exec Applications which load fill pattern sets during GEOS boot-up or from the DeskTop. **PLUS**....Over 90 fill pattern sets to get you started!

geos	file	edit	options	fonts	diskishere

Move   C N S   Tran.   Dest.   Cookie   OFF ON   Hit "h" for HELP   #-21   x -104   y -117

GEOWORLD

The definitive magazine about GEOS

Inside this issue

About the Cover..
   This cover is a tribute to one of the best geoProgrammers of our time.
 He has written many GEOS-based programs that have become standard for our systems; I doubt that I could operate GEOS efficiently without them.
 Let's all give a round of applause to Jim Collette !
   This cover was made possible by Jim's father who secretly provided the photo which was scanned into MacPaint, then converted to geoPaint, and scaled inside of geoPublish to achieve the high resolution output. Jim, I hope you like your cover; we surely love geoWizard!   Roger Eller

Announcing *GEOWORLD #26 Disk*
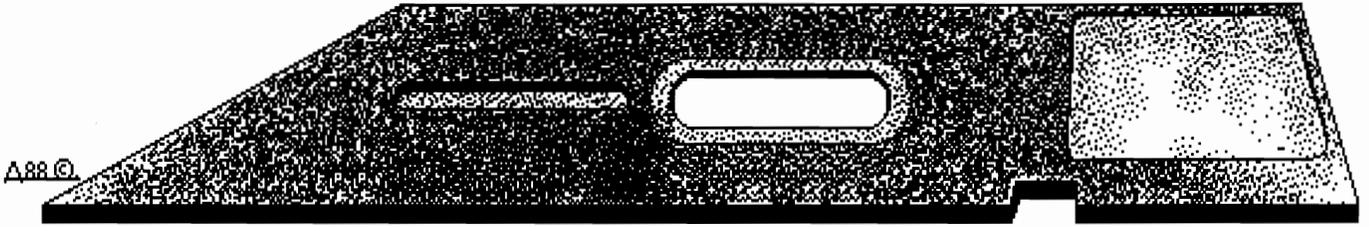
GEOWORLD #26 Disk is filled on both sides with a variety of programs and disk utilities.

Side one is packed with many disk utilities from directory printers to disk editors.

GeoList by John F. Howard lists a disk directory to the printer or disk file as a geoWrite document. It prints the file name, file type, permanent name, date, time, file size and write protect status and also file notes.

IconDir by Hank Wilkinson is a GeoForth program prints a disk directory of eight files across the page. The file information for each file is printed in about a one by two inch area. It prints the icon, file name, permanent name, author, file type, file size, date and track position.

GetDirectory by Nicholas Vrtis is a desk accessory that gets a disk directory into a geoWrite text scrap file.

Directory Label by Joe Buckley prints disk directories in BSW 9 font.

DirManager by Roger Lawhorn sorts the files on a disk by name, size, type, date and rewrites directory on disk.

GeoLogger by Mike Craig is a GEOS 128 80 columns disk file cataloging system.

GeoJacket is a geoPaint disk sleeve template with disk care instructions on back.

Header Editor by Nate Fiedler will let you edit GEOS file headers.

LockUnlock by Scott Resh changes the write protect bit on files.

UnTrash by John F. Howard untrashes GEOS files.

GeoDiskEdit128 by Mike Craig is a GEOS 128 80 columns sector editor.

QwikBAM by John F. Howard displays BAM to screen and printer.

QwikPik and *QwikStash* by John F. Howard will let you select files and will copy them to the REU.

There are several excellent fonts on this disk. R S V P font and DerVaterland by Robert Stanley are samples from his Hot Fonts Disk.

GeoGIF by Randy Weems is a GIF data stream format to geoPaint decoder.

GeoPCX by Jim Collette converts geoPaint files to PCX format for import to PC GeoDraw.

On Side two are alternative desktop programs, photo scrap utilities and a program demo.

QwikTop by John F. Howard will display 64 files on the screen. Files can be loaded and run like the deskTop. One version works in 128 80 columns and the other will copy single files.

WorkDesk by Payton W. Snider III is used instead of the deskTop to switch between applications.

DualTop by Paul B. Murdaugh is a deskTop alternative. There is a 64 and a 128 80 column version.

ScrapGrab by Michael Myers is used to manipulate small photo scraps (up to 8K). The main advantage of ScrapGrab is that it lets you work with photo albums in a second drive without leaving the application you are using as is required with BSW's Photo Manager.

PhotoGrab allows manipulation of somewhat larger photo scraps (up to 16k) and has a larger viewing screen. Because PhotoGrab is an application it can only be opened from the deskTop.

With *AlbumCopy* you can copy photo scraps (up to 16K) from one photo album to another, even if the albums are in separate drives.

GeoStamp Demo is by David B. Ferguson. An electronic stamp pad for use in geoPaint. This program is a desk accessory that can store up to 30 small graphics.

GeoWizard: Jim Collette
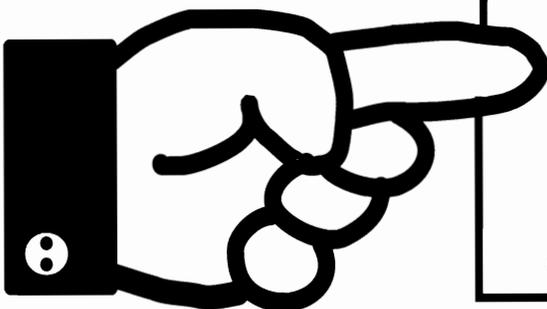## *The Wizard of GEOS Programming*
By Peter T. Hughes

Jim Collette is currently 16 years old and a junior at Pavilion Central School. His first computer was a VIC-20 in 1982 and he has been programming ever since - ML (machine language) since 1985 and GEOS programming since 1988. He does almost all of his programming now in GEOS. His more popular programs are GEOS Font Editor, geoWrite Font Changer, PS.Patch (PostScript patch), Center 80 (auto-exec), Batch Copier, 1581 Boot Disk Maker, and now geoWizard.

He met Bruce Gilson on Q-Link in 1988 and they joined together in late 1988 to form Comm-Plex Software to sell their products. The first disk was the GEOS Font Collection 1; since then there has been the Font Collection 2, MegaFont Disk 1 and geoWizard.

Jim has been a Q-Link geoRep since late 1989, and he has worked with BSW (Berkeley Softworks) and Q-Linkers to make Configure 2.1 to support the beyond 512K REUs (Ram Expansion Units).

He also has an Amiga 2000 with the PC/AT and mac emulators and in the future he wants to do more Amiga programming, and get started on programming for PC/GEOS.

The following is a brief description of Jim Collette's programs and some of the features of each.

Font Editor

Font Editor is a very powerful and full featured GEOS font editor that runs under GEOS 64 and GEOS 128 - in 40 and 80 columns. Use Font Editor to create or edit existing fonts. It supports point sizes up to 48 points. It has a stash and retreive buffer, scrolling, horizontal and vertical flipping, and photo scrap support. There is a built-in font scaler which makes multiple point sizes a breeze - create one point size, and scale it to the other sizes.

A Font Grabber converts BASIC 8, FontMaster II or standard Commodore fonts to GEOS format - your old collection is not useless. Preview a font by printing the complete character set from the editor in plain text or in bold, italic, outline or reverse - without ever loading geoWrite. With versatile save options and using "fake" point sizes (what you see in the menus in geoWrite), combine up to 7 different fonts into one file. This helps to get around the 7 font limit in geoWrite.

There is a Font ID editor and full cursor key support while editting.

geoWrite Font Changer

Font Changer is a short program that will scan through your geoWrite files and replace all occurrences of a selected font with any other font. This is usefull when you havemany fonts in a file and you only wish to change one particular font or point size. This runs in 40 or 80 columns and supports all current versions of geoWrite files through v2.1.

PostScript Patch

This PS.Patch patches geoLaser and geoPublaser to save PostScript files to disk. With the patches laser printing programs the output of the PostScript code is no longer sent directly to the PostScript laser printer. The PostScript code is printed or saved to disk as a sequential text file. This file can be ported to another computer such as an IBM, Macintosh or Amiga by modem or disk transfers. The other computer which is connected to a PostScript laser printer can print that file. This is good if you do not have a PostScript laser printer connected to your Commodore computer.

Batch Copier

Batch Copier will create scripted lists of multiple files to be copied from one disk to another in a group or batch.

With a program called Auto Loader files can be copied automatically from a boot disk to the RAM disk while GEOS is booting. The files you use most often or every time you use GEOS will be copied to your RAM disk and waiting there for you to use them.

1581 Boot Disk Makers

GEOS 64_1581 and GEOS 128_1581 are programs that create bootable 1581 GEOS boot disks. These programs and Batch Copier were on the RUN GEOS Companion disk

geoWizard

GeoWizard is the ultimate GEOS utility for GEOS owners with a RAM Expansion Unit (REU) - 17XX or GeoRAM. Once GeoWizard is installed, it sits resident in the REU waiting for you to activate it. GeoWizard can be activated from almost anywhere. With a simple mouse click, GeoWizard temporarily takes over the computer and provides the following features:

Start another program or desk accessory. You can run one program, suspend or pause it, go to another program and then return to the original program where you left off. Call up a desk accessory in a program that does not offer desk accessory support.

With GeoWizDump do screen dumps to printer or save GEOS screens as Photo Scraps or directly to geoPaints files without using Paint Drivers with full color support. 80 column screens can be captured in double height for proper aspect ratio.

MiniDesk

This is a separate desk accessory disk utility. It can be used in geoWizard. MiniDesk is short for Mini DeskTop. Copy, rename, or scratch files from a DA (desk accessory). Never again quit a program to copy a file. MiniDesk supports multiple files selection and three drives. Move files to and from drive C whenever you like.

GeoPCX

This program converts geoPaint files to PCX format for import to PC GeoDraw. This is great for bring your geoPaint clip art or masterpieces to GeoDraw on the IBM.

Jim Collette is a geoProgramming wizard or a person with amazing skill or accomplishment in programming GEOS. Other programmers contact him for help. He writes programs that people can use to expand the capabilites of their GEOS system. His programs are unique, innovative and very powerful. He updates his program with enhanced features and bug fixes. He offers great support to GEOS users. We look forward to anything the GeoWizard conjures up next. 🖑

Jim Collette
Comm-Plex Software
6782 Junction Road
Pavilion, NY 14525
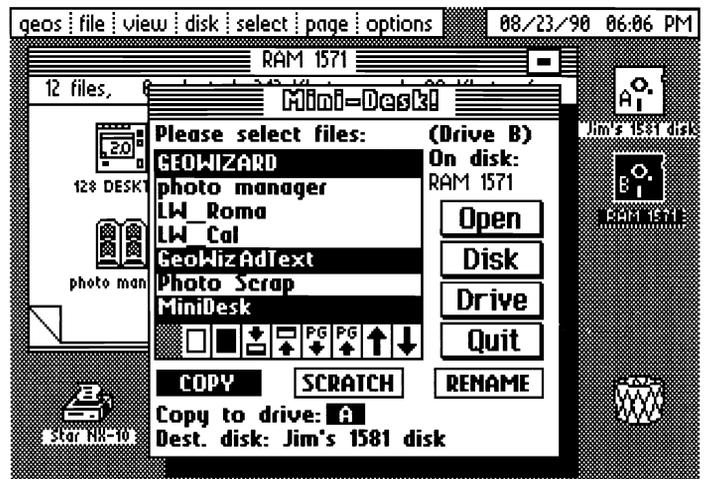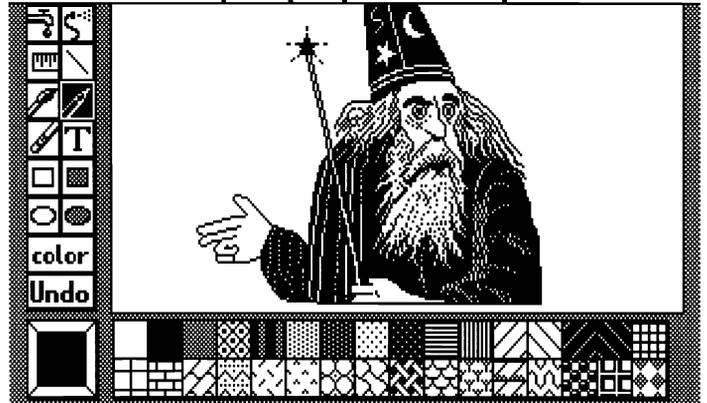
Dis(k)Organization

Adrift on a sea of floppy chaos...is that
Hope on the horizon, or only a Mirage? By Conrad Tillman
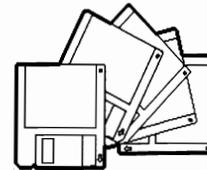
Organization, Man

Assuming, for the moment, that you did not acquire your computer for the express purpose of playing games, it is probably safe to say that you did acquire it for the express purpose of getting organized. Organization, after all, is a kind of Holy Grail in the realm of intellectual pursuit, and a personal computer no doubt seemed to be an ideal weapon in the crusade against the infidel forces of chaos.

By now, though, you no doubt have realized what everybody knows but nobody wants to admit. The computer revolution has spawned its very own barbaric horde, a senseless, uncontrollable mass that threatens to suffocate the flickering candle of Reason that the computer was meant to protect and enhance. I'm not talking about software pirates or network hackers. The problem at hand is more insidious than those dangers to civilization. I'm talking about software itself, and the network of storage and retrieval devices (which includes some types of software) that has sprung up around it.

For the purposes of this discussion, I will use the term "software" to refer to both program and data files. With a wide variety of productivity titles and access to download libraries on telecommunications services, a software collection can easily grow out of hand. There are some things you can do to help control it, but unfortunately, as yet, no "magick" completely adequate to the task on the small systems served by GEOS.

Proliferation

I remember my first look at a disk directory after a brief yet seemingly endless sojourn with cassette tapes. I remember quite clearly thinking that a single box of disks would easily serve all of my computing needs for all of the likely future. This thought was roughly equivalent to thinking that the federal deficit would soon be under control. We all subscribe to our own delusions. Mine, at that point in time, was that 165K of data storage was somehow a lot of data storage.

What I failed to realize was the effect of such a convenient means of storage and retrieval, especially when coupled to the steadily declining price of floppy disks and the steadily rising availability of previously inexistent but suddenly indispensable software. The advent of GEOS marked the point of no return in the proliferation of my magnetic disks. Whether or not that seemingly innocuous package can be held directly responsible for what
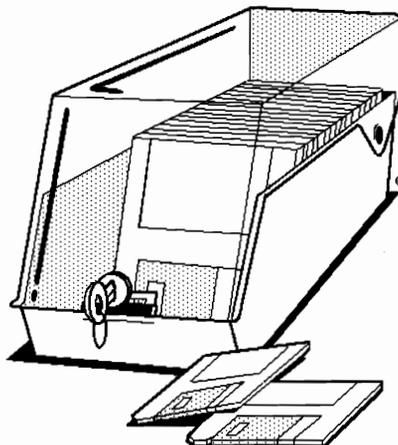
followed I am no longer prepared to say. All I know for sure is that my formerly docile collection of software grew restless. It began to request additional disks. That wasn't so bad but the disks, in turn, demanded and received an additional storage box, but weren't satisfied with that. Rioting out of control, they filled one box after another, demanding additional hardware as well. I discovered that, like a particularly ill-behaved gas, software tends to expand to exceed the space available to it.

As a quick and familiar example, I once used *Speedscript*, which fit nicely on a single disk along with an indeterminate, but large, number of text files. Now I use geoWrite, a process which aside from the boot disk needed to get to it involves a cramped application disk in one drive and a constantly overflowing data disk in another. This is by no means a complaint, only a description of fact. It is so easy now to have several works in progress, so hard to give up access to all those nifty desk accessories and file converters and alternate fonts and so on.

Let it be sufficient to say that where I once bought disks by the box at the local department store, I now buy them by the hundred via mail-order. Acquiring a 1581 helped to slow the rising flood somewhat, but the 3.5" box already is beginning to show signs of strain. I feel it should be noted here that all of this is despite the fact that my computer system is only a hobby. I shudder to consider the effect of using it to actually accomplish some- thing other than checkbook balancing, letter writing, creating personal budgets (to be exceeded shamefully), time killing, and all that sort of thing.

So What's the Problem?

The problem with all these disks, of course, is that each of these disks represents an indeterminate, but large, number of files: program files, data files, programming files, archive files, font and graphic files, files of works in progress, files of works completed, files of works abandoned, files that don't work, as well files that do, but can't be found.

Looking only at one variety, the program file: there are programs to create, programs to facilitate, programs to convert, revert, invert, divert, programs to write programs, to write words, to write directly to disk, programs to compare, combine, compute, compose, to dispose of other files without a trace, programs to encrypt, to disencrypt, compile and decompile, to assemble, disassemble, debug, demonstrate, entertain, interface, diagnose, diagram, set aside RAM, access RAM, programs to

configure, reconfigure, programs that need to be figured out, and programs that simply can't be found.

Scattered somewhere among these disks there are programs that purport to create useful indices to all the other files. I have tried, through the years, to utilize their services, only to find that they each and all would fail in some essential way to do what I wanted done. There are partial and outdated index files scattered here and there to bear mute testimony to these failed attempts at software organization. Meanwhile, whole generations of data files, offspring of the more fertile programs, have migrated from workdisks to archive disks without benefit of even a desultory gesture toward the creation of a meaningful index. The upshot is the evolution of a merely inconvenient chore into one of (as far as I can see) Herculean proportions.

So What's the Solution?

Although I may sometimes gaze out over this black sea of floppy disorganization and find myself visited by thoughts of suspicion concerning some Byzantine conspiracy between Berkeley Softworks and the manufacturers of magnetic media, the horizon of the geoSystem shows some hope for solution. There are the needed tools already in place to bring order to this chaos, tools which await only the direction of a guiding force to cut through the glacial inertia which has my system locked in a kind of icebound chaos.

Why have I not put these tools to work? Before attempting to formulate some reasonably convincing excuse, it may be useful here to list a few of these tools, together with a way in which they might be utilized. I will stipulate that the list is by no means complete, and my suggestions by no means exhaustive or even necessarily sensible. They are offered only as an observation of what appears to me to represent the best hope for the creation of a useful system index on this particular computer.

On One Disk

The prospect of organizing the files on a single disk has grown considerably less bleak in the past few months. One program, in particular, gets my vote as a standout from the rest. *Quicktop* by John F. Howard is an alternative deskTop, one that dispenses with icons in favor of a more informative display. Up to 64 program files, neatly arranged by page, compose a single screen. Version 2.1 has facilities to rearrange the displayed files on the screen, subsequently rearranging them on the disk directory. Approximately 4k in size, *Quicktop* can be used to launch any geoProgram, and will intercept the exit routine to reload itself rather than the deskTop when done. It is an extremely useful program, particularly so in conjunction with a 1581, and is available on Q-Link.

Other programs of note in this regard are *geoOrganizer* from the first RUN disk and the deskTop itself in its v2.0 incarnation. Ideally, each disk should have its component files arranged in some consistent and sensible way, and these programs can aid in accomplishing that feat. I'll come back to that misleading phrase "consistent and sensible" later.

On Several Disks

There are a couple of geoPrograms that can be of some assistance in creating an index to a few disks, both available on geoWorld Disk #2. Each has its strengths and weaknesses, but both are able to handle only one disk at a time when creating a file on disk. Nevertheless, *GetDirectory* will write a simple directory into a text scrap, and *geoList* places a more complete version directly into a 'Write document. Together with geoWrite, the text manager, and *Toolkit* for combining 'Write documents, these would be useful for indexing only "several" disks. All of these are available on Q-Link, too.

To get the job done for a large collection, though, a program is needed to read all available information from one disk after another, one drive after another, into

a standard sequential file, with options to create a new file or append to an existing one. Either *WrongisWrite* or one of the text grabbers could then convert the resultant file into a 'Write document. There are several programs available to accomplish this (perhaps with some modification) from BASIC, but none that I know of to run under GEOS.

However it gets done, once the directories are in a 'Write document they can be edited, annotated, searched, formatted, printed out, or otherwise processed. Searches could be performed on keywords in the annotations as well as the filenames, and any file easily located. Using a word processor as a database is a giant step into the past, but without a facility for merging a 'Write document into geoFile, it seems the only viable alternative.

Although the prospect of putting the following notion to actual use may seem monstrous, I nevertheless feel compelled to expose the depths of my organizational desparation by pointing out that geoCalc provides the means for chopping and sorting directories into categories via its internal cut and paste options and import/export arrangements with 'Write. If anyone wanted that level of organization, using 'Calc in this way would sure beat trying to make do with the text manager. I long ago gave up the idea of maintaining a wholly categorized index. It is simply too time-consuming to keep up to date, and the infamous phrase "consistent and sensible" crops up here once more, only to be beaten back with a promise to return to it later.

Across the Entire System

The problem with mass storage of any type is that storage is so easy. With the price of floppies approaching negligibility, there is almost no impetus to be at all selective in saving this or that on the flimsy ground that it might someday come in handy. An entire discarded writing project may be saved because it contains a few good paragraphs (although I'm not entirely sure which ones: deal with it later), or

an abandoned programming project saved because it has a few good routines (although I'm not entirely sure which ones: deal with it later). I have 3.5" floppies full of barely surveyed downloads (deal with them later) and I don't even know what else. Yes, storage is entirely too easy to deal with.

The real problem is retrieval. A geoWrite document (or two or five) assembled as hinted above could be invaluable in finding this file or that, provided it actually relates in some meaningful way to the current state of your disks. Before any attempt can be made at creating a computerized index there has to be some (here's that phrase again) consistent and sensible physical order imposed upon the disks themselves. It does little good to know that FIleConvertXY is located on the B side of GraphicUtilitiesII if you aren't quite sure where GraphicUtilitiesII might be.

As I type these words, it seems eminently consistent and sensible to use a numbering system that identifies a box location, partition number within the box, disk within partition, and so on. Four or five characters should do it.

An example of what I mean would be as follows: Disk 1B9A would be found in File Box 1, Partition B, Position 9, Side A. Disk 4D1B would denote File Box 4, Partition D, Position 1, Side B. As long as any particular disk always wound up in the proper box and partition, it would be very easy to locate. The advantage here is the ability to insert or delete disks in any particular partition without mucking up the whole numbering system. Sensible? I think so. Consistently executed? That remains to be seen.

Another important advantage to this particular system (which I do not claim to have originated) is that it allows you to divide your software roughly into broad categories. Box 1 might hold word processing and graphics files, Box 2 hold financial records and spreadsheets, and so on. Note the description of the categories as "broad" ones. Note the description of the division of software into categories as "rough."

Categorization

Have you ever spent an extordinary amount of time that ought to have been better spent elsewhere in attempting to locate some particular item in the rows of a self-service department store? Have you ever tried to locate something in someone else's filing cabinet, or even in your own, and wondered why things weren't arranged with more evidence of (that phrase again) a consistent and sensible approach to the problem of categorization?

The horrible and almost unbelievable truth is that someone, sometime, most likely did carefully arrange things to reflect whatever sense of order and beauty was ascendant in their mind at the moment of arrangement. The hopelessly deranged and twisted path of one-way passages and cul-de-sacs of which you may find yourself the unwilling victim, once appeared to be (to someone in some remote and mist-enshrouded past) the solution, the perfect and obvious solution, to some long forgotten puzzle. The horror is exacerbated if that cursed someone happens to be some prior incarnation of yourself.

The thing is that the criteria by which we judge a "consistent and sensible" system are likely to change considerably over a period of time. Focuses shift, as do expectations and experience. Unless you happen to be one of those rare individuals gifted with the foresight to know beyond all shadow of doubt not only exactly what they want today, but to know with equal certainty that it will neatly coincide with what they are likely to want tomorrow, you are far, far better off with rough division into broad categories. Some may call it sloppy. I call it keeping options open.

A Few Suggestions

Besides organizing the files on your disks, and maintaining a specific arrangement of disks in their containers, there are several things you can do to simplify the retrieval of stored files. One method that seems to have fallen into disfavor is the use of filename extensions. Many Commodore users, particularly GEOS users, frown at the idea of affixing a period and three character abbreviation to a correspondingly shortened filename. "Use descriptive names," they say, "and extensions are unnecessary. They serve no useful purpose in Commodore DOS," they say, "and are only a foolish mimicry of MS-DOS conventions." Nevertheless, such extensions are useful in scanning a printed directory whether it appears on hardcopy or flows by on your monitor. Even from the deskTop, a consistent system of extensions can aid mightily in locating files of a particular class among several from the same application.

Extensions are particularly useful in the matter of backup and revision files. There are few things more frustrating in computing than inadvertently working with an outdated, possibly buggy version of a program for which you have an improved replacement. Why keep the old version at all? If you have to ask, then you'll find out: sometimes the older version turns out to be preferable. This is equally true for both program and data files. The version number included in the filename can be very useful in differentiating between them. Backups, of course, are a subject in themselves. Suffice it to say that life is more simple if backups are identified as such, preferably with the date included, in the filename.

The deskTop itself uses an improved form of filename extension in its file icons. With an icon editor, you can create a unique version of the application data icons for each class of utilization (keep an empty document on hand with the custom icon, then duplicate it to open a new file within the class). My income/expense spreadsheets, for example, sport a dollar sign, while those that tell the sad tale of my investments show an optimistically uptrending stock chart. The 2.0 level deskTop carries the extension concept still further by incorporating color to indicate different types of files. These

are essentially useless, though, outside the deskTop. And the deskTop itself is hardly suited to conducting a search for FileConvertXY.

As a matter of fact, it appears that there is little hope for any single approach to the problem of organizing software to incorporate sufficient responsiveness and flexibility to serve the needs of a variety of users. The acceptable balance between speed, convenience, and level of detail varies widely from user to user, and the basic organizational structure of file storage can differ even with a single user, depending on the nature of the work being done. Some files are more logically stored chronologically, others by subject matter, and still others by application. Once a particular organizational scheme is adopted, it doesn't take long to solidify into a rigid structure which may or may not, over the course of time, prove adequate to house the needs of an ever growing and changing library. The more detailed and apparently useful the scheme, the greater its potential for becoming unmanageable and ultimately useless.

The foregoing paragraph, at least, will serve as my reasonably convincing excuse for not having completed the task of organizing my library despite several attempts at doing so. The best I hope for now is localized areas of organization, small islands of reason in the midst of oceanic chaos. Rather than attempting to eliminate disorder, I would now be satisfied merely to be able to find my way through it.

A major navigational aid in this regard is Payton Snider's *Wormdesk,* another alternative to the deskTop that dispenses with both file icons and the notion of the physical organization of files on a disk level. *Wormdesk v4.0* is an auto-execute file that enables the user to view selective directories on any of three drives. You can choose all files, applications only, datafiles only (with an option to limit types of data), desk accessories, or quickly locate input and printer drivers. You have read access to the Info blocks, and can launch any displayed executable file by clicking.

This is an invaluable program for 1581 users, but doesn't address the problem of locating a misplaced file or some particular information other than speeding up the manual search procedure.

On a system wide level, there are some utilities that can be of help. Graphics files can be reduced, combined, and printed out by *Thumbnail* from the first RUN GEOS disk. *Fontview,* from the second RUN disk can do the same for alternate character sets. *GeoList* has already been mentioned, but is named again for its hardcopy option. All these offerings become most useful in conjunction with old fashioned paper and file folders.

It appears, in fact, that the best method of maintaining a system-wide index to all the files in an extensive library may still be the most old fashioned of all. A physical file folder containing printed directories of each disk properly identified by number, one disk per page, remains the most easily implemented and most easily maintained system of file tracking. Although it is decidedly lacking in the kind of convenience one would expect from a computer system, it demands little time and less commitment, and most importantly, is there when you need it. The same can't always be said for systems more ambitious and complex.

A Challenge to Programmers

Nevertheless, Holy Grails being what they are, the quest for computerized system indexing tools will and ought to continue. There are possibilities at every level of programming expertise. An enterprising programmer could likely cash in, or at least earn a bit of gratitude, on the need of every computerist to make his file storage system more convenient to navigate.

A relatively minor programming effort (I think) would enable those who suffer from the extended use of text files to search a disk full of them for a particular word or phrase. The program I have in mind would report the name of each file containing a specified search string, and should be able to handle either ASCII or PETSCII text.

A more ambitious project, one related more directly to the matter of indexing, would read directories (and Info blocks) directly into geoFile. To be truly useful, it would probably need to offer automatic protection against accidental duplication of directories (filing the same disk twice) and a means of deleting entire directories from the file.

The ultimate indexing program would combine the functions of several smaller ones via overlays into a complete management system which would be a worthy full-scale application, and possibly a viable commercial product. The essential ingredients in such a system would be a facility for the user to arrange and rearrange files or groups of files within the display, to automatically generate sublists based on a variety of criteria, and to view the contents of or to launch any compatible file by clicking on its filename. The system should be capable of launching non-GEOS applications as well, after setting the printer and renumbering disk drives as specified in a set-up file included as part of the filename's record within the system.

Some of you may be familiar with Lotus' *Magellan* for MS-DOS computers (reviewed in the August 1989 issues of BYTE and Computer Shopper), and will recognize that what I'm suggesting is a very similar approach. Many features of that program, of course, would not be possible, but the navigational core could be reasonably done (*Magellan's* system-wide string search, for example, could be implemented only for Info blocks). If someone did develop a system like this for my computer, I know I would buy it. Having seen what has been done, and from my own experimentations in BASIC, I would think that a system like this would be entirely feasible under GEOS, and that there would be considerable demand for it.

Until then, I'll put a new ribbon in the printer and grit my teeth. It's about past time to update the contents of my directory folder. 🌀

GEOS GEMS

By Peter T. Hughes

Disk Utilities

GeoList

GeoList by John F. Howard outputs a disk directory to a printer or to a GeoWrite file on disk.

```
GEOS Disk Directory Lister                      Listed on: 07/30/91

GEOWORLD #26 A         GEOS format V1.0    005 K Bytes free

File Name         File Type      Permanent Name      Date & Time      KB    WP

Page  01
GeoList2.0        Application    GeoList    V2.0     02/20/89 1137    05
ICONDIR2          Application    StudentForthV1.0    05/14/90 1129    20       X
GetDirectory      Desk Acc       GetDirectoryV1.2    08/04/88 0705    02
Directory Label   Application    Disk Labeler 2.0    09/14/89 1800    02
DIRMANAGER        Application    DIR MANAGER V1.0     02/28/90 1717    06
DIRMAN DOCS       Appl Data      Write Image V1.1     02/28/90 1831    03
geoLogger         Application    geoLogger  V1.0      03/31/91 2227    09
GEOJACKET 2       Appl Data      Paint Image V1.1     01/20/91 1937    13
```

ICONDIR

ICONDIR by Hank Wilkinson is a geoForth program that prints a disk directory of eight files across the page. It prints the icon, file name, permanent name, author, file type, file size, date and track position on disk.

```
[Forth]        On disk: GEOWORLD #26 A     01
ICONDIR        27 files using 160 k
               91/08/01 13:36:21  Page 1 of 1

  20/5k          83/21k         9/2k           9/2k           25/6k          15/4k          36/9k          55/14k
  89/02/20       90/05/14       88/08/04       89/09/14       90/02/28       90/02/28       91/03/31       91/01/20
GeoList2.0     ICONDIR2       GetDirectory   Directory Label DIRMANAGER     DIRMAN DOCS    geoLogger      GEOJACKET 2
GeoList  V2.0  StudentForthV1.0 GetDirectoryV1.2 Disk Labeler 2.0 DIR MANAGER V1.0 Write Image V1.1 geoLogger V1.0 Paint Image V1.1
John F. Howard Hank Wilkinson  Nicholas Urtis  Red Storm      Roger L. Lawhorn Red Storm     Mike Craig
                                                                             geoWrite  V1.1                geoPaint  V1.1
1,18 1,10      19,1 19,12      1,16 1,8       24,14 23,6      4,5 4,18       5,7 5,20       14,15 14,17    2,2 2,15
SEQ APPLICATION SEQ APPLICATION SEQ DESK_ACC  SEQ APPLICATION SEQ APPLICATION VLIR APP_DATA VLIR APPLICATION VLIR APP_DATA
```

Header Editor

Header Editor by Nate Fiedler will let you edit GEOS file headers. You can change the info box text on a GEOS file. Change the file name, file type GEOS type, structure, start, end and exec address, permanent name, author's name, parent application, write protect status, time and date and file size. You can edit almost any information in a GEOS file's header. This program does it very easily. Before this program it would be very hard to edit that information in a disk editor or imposible otherwise.

```
geos : file

File name:    GEOPUBLISH n              [Save]
File type:    USR
Geos type:    APPLICATION              [Undo]
Structure:    VLIR
Start addr:   0334                      [Exit]
End addr:     0333
Exec addr:    0400
Permanent:    geoPublish   V1.0        [→Buf]
Author/Disk:  Alice and Mike
Parent Appl:
Write Protect: On                       [←Buf]
Time & Date:  88/10/4 11:20
Size in blks: 018E
```
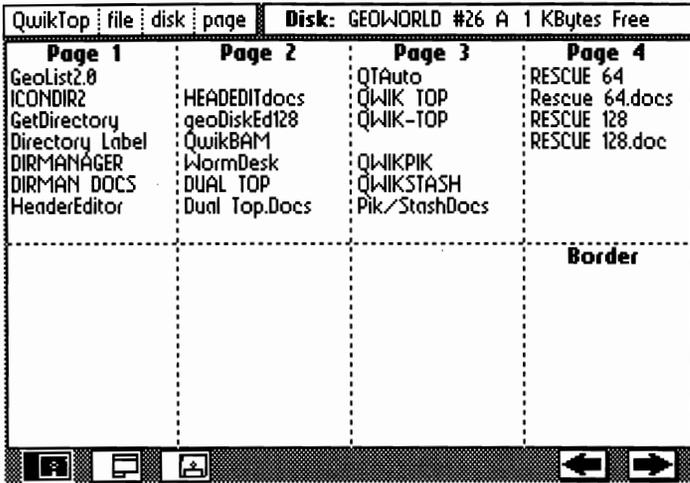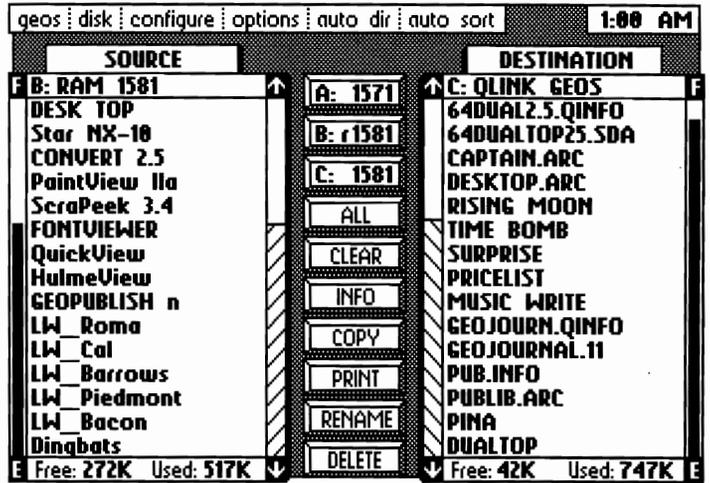
Alternative DeskTops
By Peter T. Hughes

QwikTop

QwikTop by John F. Howard will display 64 files on the screen. Files can be loaded and run like the deskTop. Files can be deleted or moved to a border area. You can delete pages and insert new pages. One version works in 128 80 columns and the other will copy single files. The ability to move files from page to page makes it a great disk organizer.

DualTop

DualTop by Paul B. Murdaugh is a deskTop alternative.There is a 64 and 128 version.You can select the printer, input device and preferences. Disks can be renamed, erased and formatted. Files can be copied and deleted. File names can be viewed alphabetized.There is three drive support and files can be run from Drive C. The clock is displayed. There are sliders to scroll file list. The disk space used and free is displayed.
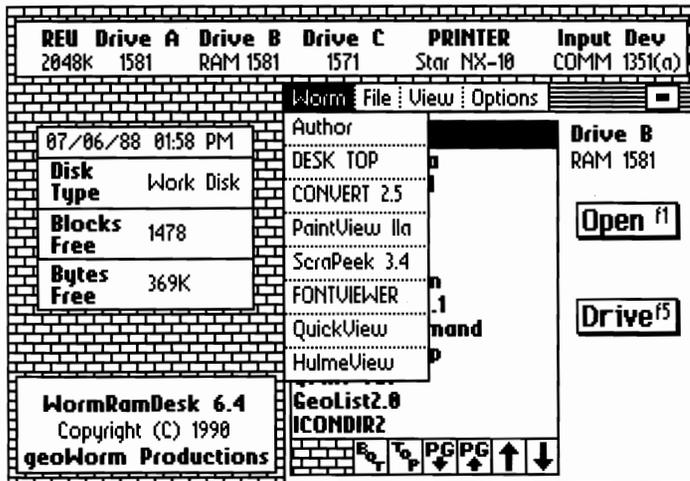
WormDesk

WormDesk by Payton W. Snider III is used instead of the deskTop to switch between applications. Files can be listed selectively by GEOS file type. There is a new version of WormDesk that will take advantage of a spare REU bank. WormRamDesk and up to six other seq applications can be loaded into a spare REU bank and these applications can be executed from the **worm** menu.
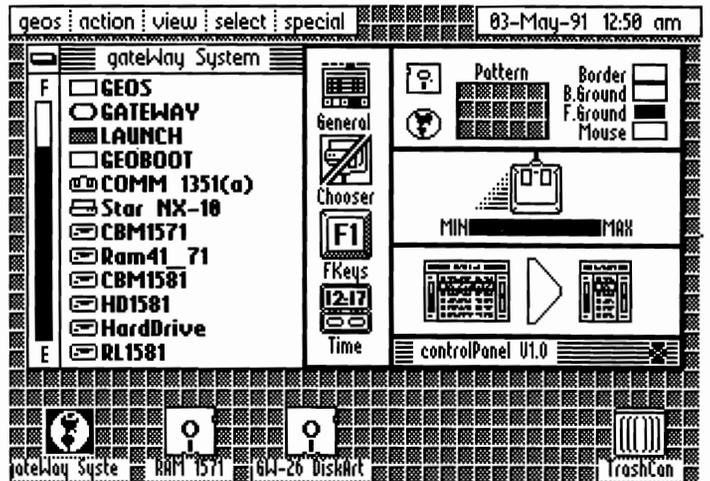
gateWay

GateWay is from Creative Micro Designs. Gateway is more than a replacement deskTop.From the creation of a new boot disk to disk drivers and gateWay itself, a new level of sophistication is brought to GEOS.GateWay was specifically designed for multi-drive, RAM-expanded systems. It supports hard drives and high capacity RAM drives. The Switcher allows two separate tasks to run concurrently.

ramlink

New gadget from Creative Micro Designs has major ramifications for your system: a first look
By Conrad Tillman

Say You Want a Revolution

You say your old Commodore eight bit is beginning to show its age? You say you're fed up with waiting on your floppy disks, and disgusted with expansion memory modules that are great within GEOS, but useless with your other software? You say you're tired of spending money on gadgets that are okay in themselves, but incompatible with all your other stuff? You say your Jiffy-Dos & your hard drive only make you hanker for still more speed and convenience? Well, maybe you ought to try a little more **CMD.**

If you ever struggled with the old Commodore Datasette, you may remember what a revelation it was to make the switch to disk drives. Well, prepare for a new epiphany. Creative Micro Designs, the folks who brought you *Jiffy-Dos* and made usable hard drives a reality, have unleashed their talents to create yet another product close to the heart of your system: a device so clever, so slick, and so thoroughly *neat* that it can only be described as revolutionary. With CMD's RamLink, your Commodore computer can ascend to heights previously denied to these lowly "antique" machines. Does that sound like overstatement? Well, lend me your ears.

RamLink

This product is unlike anything else in the Commodore market, a fact which makes it very difficult to describe. Visually, it resembles an extremely fast Commodore Ram Expansion Unit. Like the REU, it plugs into your computer's expansion port. Like a two-slot expansion board, it allows the simultaneous use of certain compatible expansion port

devices. Like a disk drive, it contains its own operating system software. It has switches and LED's and a not insignificant price tag, and by itself it is, like a printer interface, almost completely useless! While this may sound somewhat inauspicious, you have no doubt by now surmised that I have not yet begun to describe.

As its name implies, RamLink is an *interfacing device,* one which has been carefully designed to connect your computer with expansion RAM in a way that allows a flexibility and utility never before available. It does so while allowing the continued use of utility cartridges, and more or less subsumes your existing expansion RAM module, either 17xx or geoRam. Moreover, your existing expansion RAM can be accessed separately or in combination with memory installed on *RamCard,* an optional component of the RamLink subsystem. If you have a CMD hard drive, RamLink fulfills the promise of a high speed parallel connection to that device. It has its own power supply, and an optional battery backup power system. It includes an implementation of Jiffy-Dos v6.0 which will work with all JD equipped drives, and which will provide a raft of conveniences even without the standard JD drive chips. It provides its own operating system software known as RL-Dos.

As for what it actually does, here's the quick description: RamLink creates a miniature version of the CMD hard drive implemented entirely in electronic RAM. For the expanded version of this description, read on.

Information Please

Before getting into RamLink itself, a little background discussion is in

order. GEOS users equipped with expansion RAM modules already are familiar with the idea of a ramdisk. Briefly, the extra memory is utilized as though it were a floppy disk. Whatever contortions the computer must perform to accomplish this are transparent to the user. For all intent and purpose, the ramdisk *is* a floppy with two very important differences. The first of these is that ramdisks are blindingly fast. Everything is electronic, so there is no waiting for mechanical head movements. The second difference is less fortunate.

With normal memory expansion, when you turn off the computer, you have effectively destroyed the ramdisk and all its contents.

With a 17xx REU, there's yet another problem. The ramdisk created by Commodore's RamDos software is compatible with some programs but not with the GEOS ramdisk. Either one will happily and obliviously destroy the other, along with whatever it may contain. This won't happen with geoRam because Berkeley Softworks' product works only in conjunction with GEOS.

With a 17xx REU the non-GEOS ramdisk requires computer memory to execute its system software, memory which all too often stands in the way of the application you want to use. The result is that the expansion RAM simply disappears from the system as its interfacing program is overwritten by the application. On the plus side, the 17xx REU's can be directly accessed via program code within an REU-aware application. The bad news here is that there are very few such applications available. For the most part, existing expansion memory modules are not particularly useful outside GEOS.

One thing RamLink does is to fix all that. With an expansion memory module plugged into its *RamPort*, RamLink creates a RamDisk that requires no computer memory at all. Moreover, the RamDisk it creates is complete, right down to track and sector operations, so the same RamDisk will function equally well in or out of GEOS. You can turn off your computer, but leave the RamDisk powered up, all its contents intact. With the optional battery backup, even the power company's periodic fainting spells won't disturb your stored codes. For the few programs that utilize the REU directly, RamLink provides a switch that allows exactly that.

All by itself, this set of functions justifies the product. A RamLink RamDisk is highly compatible with a lot of existing software. It can be used by both GEOS and non-GEOS software and by programs that never heard of expanded memory or that refused to recognize a RamDos 'Disk. RamLink 'Disks are semi-permanent, and can be loaded once for several computer sessions. With battery backup added, they are a relatively safe place to temporarily store your data.

You Ain't Heard Nothing Yet

So far, I've been talking about an existing expansion memory module connected to RamLink. This module can be either a stock unit or one that has been modified to contain more memory. With a CMD RamCard added, RamLink creates a new set of possibilities. RamCard is a prewired and socketed circuit board that can be ordered with one to four megabytes of RAM installed (in one megabyte increments). It installs entirely within the enclosure of RamLink. If you're really power-mad and financially flush, you can install four-meg chips instead of one-meg ones for a total of sixteen megabytes of memory. With RamCard plus an existing REU, you can elect to utilize the expansion module separately in the same way that you're now using it, or to add the capacities together. For example, a one meg RamCard plus a 1750 will yield a one and one half meg RamDisk. Alternately, you could use the same equipment as a one meg RamDisk with direct access to a "normal" 1750. If you don't already have an expansion memory module, RamCard with installed memory chips will provide space for RamLink to create a RamDisk up to the capacity of the memory installed. In other words, you can use the system with an expansion module, RamCard, or both.

Besides the RamPort, there is a "pass-through" port on RamLink which allows the installation of a utility cartridge such as Super Snapshot in addition to an expansion memory module. This particular cartridge is highly recommended to RamLink users, as its memory dump capabilities can be instrumental in converting otherwise incompatible software into RamLink bootable program files.

Random Choices

RamLink allows its RamDisk to be partitioned like the CMD hard drive into several separate and distinct areas, but with an upper limit of thirty two partitions, dependent upon how much memory is installed and the types of partitions. You can have emulation mode partitions that mimic the 1541, 1571, and 1581 drives, as well as "Native mode" partitions. All are created through the RamTools software provided, which also allows you to set the default device number and default partition. The Commodore emulation partitions provide track and sector layouts identical to the type of disk being emulated, so your software will not know the difference between a RamDisk and a physical one. Native mode allows dynamic subdirectories, which unlike 1581 style subpartitions are not of any fixed size. These subdirectories can be enlarged or divided into further subdirectories. The size of a Native mode partition is limited only by the amount of memory installed, up to sixteen megabytes. All of this is made possible by RL-Dos, RamLink's system software which patches directly and automatically into that of the computer.

As an added bonus, RamLink users get all the benefit of the newest Jiffy-Dos kernel (both 64 and 128 versions included) with the dos wedge, function keys, and file copier, even without the drive components of Jiffy-Dos installed. Without the drive chips, you will not get the faster physical disk access that Jiffy-Dos makes possible, except of course for the CMD hard drive which also has Jiffy-Dos built in. The preponderance of *if's* and *or's* in this report is beginning to sound like a treatise in MS-DOSese, but that's the price you pay for flexibility. There are a lot of options, some of which, like the subdirectory path syntax which allows you to access programs in alternate directories and/or partitions, were in fact inspired by MS-DOS.

The upshot of all this is that you quickly and easily can copy an entire disk from a physical drive to the RamDisk, run your programs, then copy the RamDisk back to a physical one. Or, you can copy only the necessary files, depending on the size of the project. CMD provides the necessary programs for these operations as part of the RamLink package. Again, there are a lot of if's and or's. Multi-drive software can have programs on a physical drive and data on the RamDisk, or vice-versa.

Partitions and subdirectories are easily accessed via Jiffy-Dos commands, as well as by standard BASIC ones. Custom software can be written to access subdirectory paths within the RamDisk automatically and transparently. Programmers can utilize the extra space to advantage by breaking large programs or data areas into discreet overlay modules, with each module stored as a separate RamDisk file. An advantage of this technique over using REU DMA routines is that programs will work with or without expanded memory. Without it, they'll just work more slowly as memory will be swapped to a physical disk instead of RAM. Even so, CMD has provided direct access routines for ML programmers with time critical applications. While not as fast as an REU's DMA capabilities, these ML routines bypass RL-Dos completely, allowing faster transfers

of specific memory areas. CMD provides a special partition type to reserve space on the 'Disk for these direct access operations without corrupting 'Disk data.

In summary, the RamLink subsystem functions primarily as a disk drive. To your computer, it looks like just another disk drive chained to the serial bus, even though it is actually connected to the expansion port. Practically anything that can be done from a physical drive can be done from a RamLink 'Disk. Each of its partitions responds to all the normal drive commands available for the type of drive being emulated as well as to the appropriate RL-Dos commands. With the Jiffy-Dos wedge built into the system, the syntax for all disk commands to all drives is greatly simplified, and the simplified syntax can be used in program mode. The system has a lot of potential for programmers, but no programming knowledge is required to use it.

Hands On

Physically, RamLink is very easy to install, but you are warned to read the manual first. There are some extremely important facts of which you must be aware before attempting installation. RamLink plugs into your computer's expansion port, and has been designed to lie flat on your desktop, making for a very solid installation. The cartridge ports are vertically oriented, which for some users may require a rearrangement of some components. In my case, I was able to install an REU via an Aprotek ribbon cable with no problems, except having to saw away part of the connector on the cable to fit the REU. CMD says that there is no danger to this arrangement, but that it may not work on some computers due to varying signal strengths generated by different computer models. In any case, CMD does not guarantee the ribbon installation of an REU. In a related vein, some users have expanded their REU's to one or more megabytes. CMD has attempted to provide compatibility with these expanded units, but their success depends upon the specific method used to accomplish the expansion. If you

have one of these units, you should call CMD's technical support line with the particulars of your modification to determine whether it will work with RamLink.

With an optional RamCard installed, RamLink is easily user-expandable to incorporate 1-4 or 4-16 megabytes of SIMM (Single In-line Memory Module) memory, depending on the type of chip installed. All chips must be of the same capacity. If you are comfortable with disassembling components and handling computer chips, this is a very easy procedure. If you have never dealt with this kind of thing before, this is probably not the best place to learn. Chips and circuit boards are fragile, expensive, and require careful handling. CMD will happily install RamCard and memory from 1-4 megs in RamLink in accordance with their stated price structure. They will also install four-meg chips, and if this is the route you plan you should order RamCard with at least one four-megger to avoid waste.

If you are familiar with the operation of the CMD HD, you already know how to operate RamLink. According to CMD, RL-Dos is essentially a modification of HD-Dos. Unlike the HD, RL-Dos is stored on a socketed ROM chip. If you have an HD and will use RamLink's parallel connection to that device, you may need to install a newer version of HD-Dos in your hard drive. This is included in the RamLink package, and is a painless procedure that does not endanger your hard disk data.

RL-Dos has commands to change partitions; make, change, delete, or backtrack subdirectories; perform filtered directory searches, and so on. These are identical to the HD commands for the same functions. They have limited utility under the 128's BASIC 7, and function best with BASIC 2.0 syntax. Overall, control of RamLink is not much more complex than that of a 1541 from BASIC 2.0. The built-in Jiffy-Dos greatly simplifies command syntax to all of your drives, including RamLink.

There is a lot of flexibility in how a RamLink 'Disk may be set up and used,

largely dependent upon the amount of memory installed. At the lowest level (RamLink plus a 1700 REU), you get a single small capacity Native mode partition suitable for temporary file operations. With various combinations of RamCard, SIMM chips, and an REU or geoRam, you get 'Disks of correspondingly varying sizes and capabilities. For 1541 emulation, you need at least a 1764 REU. GeoRam or a 1750 will provide 1571 emulation. A one meg RamCard will provide five 1541 partitions, two 1571's, or one 1581 partition. The accompanying illustration shows how a one meg 'Disk may be divided up. Larger capacities allow you to create combinations of different types of partitions. These are of course examples only. You can partition your RamDisk as you like within the limits of the available memory. The "system" partition where RamLink stores its partition and device number info occupies only the equivalent of about 16 disk blocks, and so is not much of a factor in the memory you will have available for your partitions.

Slicing the RAM Pie:
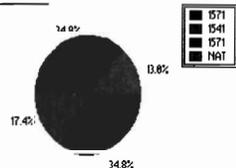
This chart represents one way of partitioning a one-meg RamDisk. Alternately, you could utilize the 1571 & 1541 areas as a single 1581 partition. The minimum partition size is 256 blocks, the maximum is limited by memory. You could devote the entire area to a single NATIVE mode partition, or have five 1541 areas plus the NATIVE shown, or have a 1581 plus a 1541 partition. As you can see, RamLink provides a lot of flexibility.

At the lower capacities, RamLink functions as a temporary high speed work area. Files are copied to it for a session, then stored to physical media to make room for other projects. With larger capacities, you can set up semi-permanent work areas for different ongoing projects and rotate only altered data files to physical media.

Jiffy-Dos has a built-in file copier that may be used from program mode to automate interdisk file transferral operations with only minimal programming knowledge. This copier function can also be quite easily used from direct mode, and CMD provides a full featured copier program called Fcopy for the same purpose.

One problem with file rotation is that RamLink does not perform date stamping, so there is no automatic way to separate altered files for rotation. The most convenient way of accomplishing software rotation may be to set up partitions that duplicate your physical storage media, then use CMD's MCOPY software to transfer "whole disk" images to and from RamLink.

Software Compatibilities

RamLink should be compatible with any software that can be used from the CMD hard drive or transferred to a 1581. Since RamLink supports emulation partitions which simulate the track and sector map of a 1541, 1571, or 1581 drive, software which will not work on a 1581 may be usable. This topic was covered in more detail in my review of the CMD hard drive (*geoWorld* #24). Briefly, the trick is to use non-protected or de-protected software that does not attempt to reprogram the disk drives. Prime de-protection tools are available in Software Support International's *Maverick* and *Super Snapshot* utilities.

Software that uses non-standard disk access routines will not work with RamLink. Here is an easy way to determine whether a particular package will work: Load the software normally, then turn your disk drives off and on again. If the program crashes at the next disk access, you will not be able to use it entirely from a RamDisk. The only exception to this rule is GEOS, which is directly supported by the RamLink subsystem. Other types of software that definitely will not work entirely from RamLink are those that depend upon specific hardware or firmware characteristics of Commodore drives to operate. One prime example is the Maverick software, some of whose modules will not work with RamLink because they do not recognize the drive type.

Software which will not operate entirely from the RamDisk may still be used with it in many cases by virtue of the device swap switches. These instantaneously swap device numbers between RamLink and an existing drive eight or nine. For these

applications, the program is loaded normally from a 1541/71, then the swap function invoked to access auxiliary and data files from the RamDisk.

For more about software compatibility and device numbering, please see the text box accompanying this article.

GateWay to GEOS

The RamLink subsystem and the HD drive create new types of peripherals, ones that Berkeley Softworks never envisioned. These peripherals have capabilities of which the GEOS deskTop is totally unaware, such as partitions and subdirectories. Luckily for us users, CMD appreciates the utility of the GEOS operating system, and has gone to great lengths to ensure the compatibility of all their products with it. While the hard drive package provided adequately functional GEOS capabilities through system patches and *QuickMove* (a separate application program to allow access to 1581 emulation partitions), CMD's new software leaves all that behind. Typically, CMD was not content to create something that merely works.

GateWay is also sold as a separate product from CMD, and is a subject for its own review. It is included as part of the RamLink package and is integral to the use of the package within GEOS. Like the hardware it was created to support, gateWay creates a fundamental and dramatic change in the way your computer system works, and in the way that you work with it.

Unfortunately, these columns are written months in advance of publication. I was privileged to be selected as a gamma tester for RamLink, and so have become familiar with its capabilities. As this is written, gateWay is not yet available. Rather than rehash information generally available, I refer you to CMD's full page advertisements in this and other publications. In doing so, I will point out that, unlike some other companies, CMD is known for the accuracy of their promotional material, and for delivering what they promise. Still, you should be aware

that RamLink will not work with GEOS except under gateWay, and unless you have a RamCard in addition to an REU you will have to give up either the REU under GEOS or the relative permanence of the RamDisk.

Even without the gateWay software, some things are clear about the operation of RamLink in conjunction with GEOS. RamLink appears to the system as a disk drive. It will operate with GEOS as a disk drive, and will not provide the "shadow" modes you may be accustomed to. Moreover, since RamLink lacks the special DMA hardware of the REU, it is likely that 'Paint, 'Calc, 'File or 'Publish documents will not scroll as smoothly as they do with an REU. This ought not be a concern however, since the speed of the RamDisk is such that while the difference may be noticeable, it should not be objectionable. I find the hard drive's speed quite adequate for moving around in these documents, and have seldom used the REU since installing the HD. RamLink is significantly faster than the hard drive.

This very minor drawback is more than compensated by the relative permanence of the RamLink 'Disk, as it will no longer be necessary to copy files to the ramdisk for each session. It is not entirely clear as this is written what other options may exist for REU/RamCard combinations under GEOS. Further information in this regard will have to await the release of gateWay.

Hopefully, by the time this is published, the editors will have cause to delete some of the foregoing sentences and refer you to gateWay's own review.

Pedal to the Metal

RamLink is a remarkable product, but is of no real use if it does not significantly improve your system. How much improvement can you expect? The answer, unfortunately, is not as clear cut and simple as I would like. Speed is the main consideration, and speed is a relative thing. The perceived benefit of a RamLink 'Disk is a function of what you're used to.

The transfer rate of information between your computer's main and external memory forms a continuum with a stock 1541 at the slow end and REU Direct Memory Access at the other. DMA transfers are practically instantaneous, and RamLink is not this fast. However, DMA is not directly comparable to ramdisk operations at any rate. A more apt comparison is to a Jiffy-Dos equipped 1581, which seems to take a very long time when measured against RamLink. RamLink is noticeably faster than an REU under Commodore's severely flawed RamDos, which grows slower as more data is added. An HD with Jiffy-Dos is not as fast as RamLink, but compared to a stock 1541 is pretty close to it. We all know what a picture is worth, so please refer to the accompanying chart for a graphic approximation of relative load times for a 95 block program file. These are unscientific results obtained with a C-64 and a Timex analogue watch with second hand, but they will serve for rough comparisons.

Approximate time to LOAD 95 block PRG file to C-64
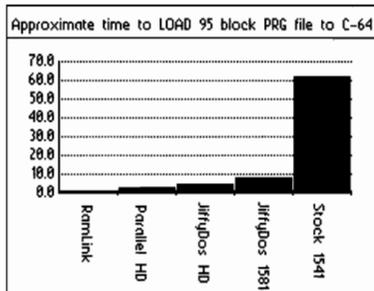
Raw speed, while important, is not the only consideration. If you have an HD, which is competitively fast, RamLink can save considerable wear and tear with disk-intensive operations such as program development or GEOS. The convenience of assembling and maintaining workspaces in RAM is significant, particularly with respect to the battery backup option.

If you are completely satisfied with your current GEOS/REU combination, and don't use much non-GEOS software, RamLink basically adds "only" the luxury of separate RamDisk power and battery backup, together with more versatile directory structures and expanded 'Disk size. If you do use non-GEOS software,

RamLink makes your REU or geoRam useful in ways otherwise impossible.

Although extremely desirable, the addition of RamLink in the above cases should probably be considered a luxury. If you are still trying to use GEOS without an REU though, or use a lot of disk-intensive non-GEOS software, the picture changes dramatically. It may· cost a little more, but RamLink with RamCard is in many important ways superior to the REU. Likewise, if you are not considering a hard drive for your system, RamLink provides much of the utility and interest of an HD at a fraction of the price.

For all users, the deciding factors will probably not be the analytic, hard-edged, quantifiable benefits of the package, but the subjective and substantive way that it transforms your equipment into a more powerful, more convenient, and more interesting system. From this perspective, an expandable and reliable RamDisk that can be used with most (if not all) of your existing software makes a very attractive addition to your system. Throw in the fact that it is reasonably priced and backed by the support and reputation of a company like Creative Micro Designs and it becomes a practically irresistable one.

A few Caveats

A fully expanded Commodore computer system is more complex than anyone ever imagined it could be, and it is amazing how the talents of programmers and hardware designers have managed to keep these technological antiques going. The possible combinations of hardware/software systems are many, and nothing works with everything else. There are some limits to what your computer can do. Like everything else, RamLink does run up against these limits. One problem is multiple disk drives. Some users have reported having to remove an existing drive or other serial buss device to prevent lockups when using RamLink. The problem mainly crops up with several devices connected, affecting the timing on the serial loop. This is caused by peculiarities in individual

computers and peripherals and is beyond anyone's control. My test unit has functioned well with my C-64, two 1541's, 1581, HD, and serial printer. As with the EPA automotive mileage ratings, your results may vary.

Likewise, you should be aware that most programs using direct access to an REU via RamLink's "direct" switch will preclude the relative permanency of a RamLink 'Disk if you have chosen not to install RamCard. RamLink without a RamCard is almost certain to lose its formatting under these conditions, and even if not, files on the 'Disk are likely to be corrupted. Again, this is an unavoidable result of how you may choose to set up and use your hardware, and is not a fault with the RamLink subsystem. Loss of formatting, by the way, is not necessarily the tragedy it may sound like. What it means is that whatever customization you have done in the way of partitions, subdirectories, and files commited to the RamDisk is lost. If your use of the 'Disk is not complex, or if you have installed RamCard, this is no problem. If RamLink powers up with no formatting it creates its own in whatever memory is available, placing the "system partition" at the top of available memory and creating separate partitions for REU and RamCard memory.

If you are accustomed to switching off your computer's power supply rather than using the case switch, you may need to change your habits. This about drove me crazy until I realized that my unit was losing its formatting due to a power drain through the closed computer switch. If you use this arrangement, switch the computer off first, then the power supply. Reverse the procedure for powering up: first the supply, then the computer.

Finally, if you buy a RamLink of any capacity, be sure to buy the battery backup option. Once you see the capabilities of this gadget, you will want to have them always ready. You can rebuild your RamDisk after a power outage, but RamLink 'Disks can be very complex. For only the price of the battery backup option, you won't have to bother.

Conclusion

For all the foregoing, RamLink is a well designed, thoroughly thought out subsystem for your Commodore 64/128 computer. It opens new avenues of program development, allowing more complex applications than were practical with other available external storage devices. It permits you to better utilize your existing software, does not require you to dispose of your existing hardware, and is easy to install and to use. It is expandable, reliable, flexible, convenient, and fast. In short, RamLink joins Jiffy-Dos and the HD drives as another winner from Creative Micro Designs. 🌐

-- Conrad Tillman

Creative Micro Designs
50 Industrial Drive, PO Box 646
East Longmeadow, MA 01028
(Jiffy Dos, HD drives, RamLink)

Software Support International
2700 NE Andresen Road
Vancouver, WA 98661
(Super Snapshot, Maverick)

Aprotek
1071-A Avenida Acaso
Camarillo, CA 93010
(Ribbon Cable)

Consider the Alternatives

About Device Numbers

An important consideration for software compatibility is device numbering. Like the CMD hard drive, RamLink can be configured to default on power up or reset to any device number between eight and twenty nine. It has switches that instantaneously swap the RamDisk's device number with an existing drive eight or nine.

For people whose systems have grown over the years, some unexpected problems can crop up in this regard. My system, for example, now includes two 1541's, a 1581, an HD, and RamLink. It's most convenient to have the HD as device eight, since that's where most of my software is and expects to be, and my 1541's are now hardwired as devices 10 and 11. That leaves nine for the 1581, and device twelve for RamLink. This works all right most of the time, since my system includes configuration software that automatically swaps device numbers around as needed for any particular hardware/software combination.

The problem is that some packages perform a drive reset in the course of operation, which undoes any softwired numbering. I mention this because you <u>do not</u> want to hardwire your 1541 away from device eight unless you have an easy way to restore it. I've solved the problem after a fashion by soldering toggle switches across the device number pads on the 1541's, so they can be restored to a device eight or nine powerup, but this is an inelegant solution at best. If you take the toggle switch approach, NEVER flip the switches with the drive

powered on. The device number pads are extremely fragile and will fry away at the slightest provocation. Trust me.

This is only a problem for peripheral fanatics with old style 1541's, and not much of a problem at that since RamLink's device swap switches easily will yield most usable configurations, and you can always resort to the power switches. It is worth noting here that the RamLink swap switches will swap numbers with an existing drive eight or nine, or simply change to the desired number if there is no existing one to be swapped. If you're into writing device swapping programs, it helps to be aware that the 1541 renumbering command (consult your 1541 manual) works with all the devices mentioned here, a fact which is not made clear in the Commodore or CMD manuals. As with the HD, special swap commands are also available for program mode implementation, and will work with some commercial packages that allow sending disk commands.

GeoSurprise

As your system grows, the subject of device numbering holds several unexpected and potentially perplexing problems. One of these is with GEOS 2.0, an REU, and device numbers eight, nine, ten, and eleven. In short, if all device numbers are present, GEOS gets confused and gives up trying to track them. You'll wind up with only a single disk icon. The solution is to temporarily renumber device eleven to twelve or higher before booting GEOS, or simply to turn off device eleven. 🌐 -- Conrad Tillman

Integrating Geos 🌐

CMD's Gateway makes it a whole new ballgame . .
By Conrad Tillman

After seemingly endless months of anticipation, the long-awaited replacement for the GEOS deskTop has finally arrived from Creative Micro Designs. At least, it's arrived on my C-64 in a gamma release version that still contains a few glitches here and there, but by the time you read this I am confident that these will have been eliminated. Long-time customers of CMD know this about the company: it may take a little longer than we'd like, but they deliver what they advertise. The gateWay is no exception to this happy rule. You want to know what this product can do? Read the full page ads that have been appearing in this and other publications for the last several months. You want to know what it's really like? Read on.

To boldly go...

One of the things that GEOS did better than any other software available for Commodore computers was to integrate all of the peripherals into a single, consistent system. After the release of version 2.0 though, Berkeley Softworks more or less abandoned the Commodore market for other, potentially more lucrative ones. Development continued for Commodore computers, producing hardware advancements not directly supported by GEOS. Chief among these were expanded REU's up to two megabytes, the CMD hard drives, and the CMD RAMLink and RAMDrives. Utilization of these devices under GEOS depended upon cumbersome and potentially incompatible software solutions for the first two, and was not possible for CMD's RAM devices. In short, many users found themselves with hardware systems that had outgrown the capabilities of GEOS.

Luckily for us, Creative Micro Designs took it upon themselves to design a new soft- to hardware interface for the GEOS environment, one that would directly support their own products while not forcing the abandonment of our existing equipment. In the process, they added several goodies to this interface, combining many elements from other geoPrograms into a single integrated package called the gateWay. Under this product, GEOS is once more a seamless environment incorporating the most advanced Commodore compatible hardware available.

More than an alternate deskTop

GateWay is best known as a replacement for the GEOS deskTop, but it is in fact much more than that. Reading a list of its functions, a casual observer may be apt to conclude that most of its capabilities are readily available elsewhere, and to dismiss its nearly thirty dollar price tag as too high. After all, only CMD's RamLink and RamDrive really require this software, and those packages already include gateWay. For minimal hardware systems, there is some truth to that observation. GateWay has capabilities beyond the needs of, for example, a C-64/ 1541/ 1764 combination.

GateWay is intended for serious GEOS users, and as such begins to be really useful at the minimal configuration for serious GEOS usage: two physical drives and a 512K REU or geoRam. Its usefulness increases with the complexity of your system, reaching full flower with a hard drive, RamLink, and a high capacity REU. This is not to say that lesser systems won't benefit from conversion to gateWay, but they will not derive the same level of improvement that the the gateWay system offers for more ambitious installations. The most important thing to realize about gateWay is that it is an integrated, professional package. All of its features fit together smoothly and (once you get used to it) intuitively in the best GEOS tradition. With gateWay installed, your system really is more streamlined, more sleek, and easier to use than ever before. The installation

procedure modifies the GEOS kernal, writing out a new boot file to the disk drive of your choice. Although the system is copy-protected and requires an original GEOS disk to install, it allows you to make multiple boot disks. This is convenient for people with a collection of peripherals that is sometimes used in differing configurations.

GateWay dispenses with the BSW CONFIGURE program, replacing it with a set of storage device drivers. Similarly to the placement of printer and input drivers on your boot disk, the placement of these disk drivers determines which will be mounted by the system during boot-up. If you have expansion RAM of any type, gateWay will support up to three physical disk drives. Without expansion RAM, there is a provision to enable usage of two dissimilar drives without need for a separate CONFIGURE file on each disk.

For hardware fanatics, it is possible to mount a new drive type during a session by using the SWAP switches on CMD devices, then double-clicking the device driver for that drive. Such shenanigans, of course, will require some prior planning to prevent device number conflicts. Nevertheless, it can be done. This feature requires expansion RAM and *may* also work by powering Commodore devices on- & offline (in my gamma version, this sometimes worked). There are separate drivers for CMD Native and 1581 emulation partitions. These are the only CMD partition types supported by gateWay, and you must select between them by mounting the proper driver. The drivers for different partition types can be switched in mid-session, so you need not commit to one partition type or the other.

Expansion RAM users have several options. The standard GEOS ramDisk is available via the 41/71 ram driver. For 512K or more, GateWay provides another option

which will automatically utilize all available expansion RAM up to two megabytes for a GEOS ramDisk. This ramDisk is not automatically formatted when mounted, so any data it may contain is preserved. This is primarily a feature for RamLink (with its separate power supply and battery backup for expansion RAM), but others may get some use from it as well.

RamLink owners have more flexibility in utilising their existing expansion RAM, either as an integral part of the RamLink memory or as a separate GEOS ramDisk. Those without an existing REU can set up their RamLink/ RamCard combination with a special partition which gateWay will utilize as though it were expansion RAM, allowing three drives and the use of Switcher. It is important to note here that a GEOS ramDisk is a separate entity from the RamDisk created by RamLink itself. The RamLInk 'Disk appears to the system as a physical disk drive and is accessed via a RamLink device driver.

Go directly to C

With expansion RAM of any type, gateWay supports up to three storage devices. As with BSW's 2.0 deskTop, these are drives A, B, and C. The difference here is that drive C is directly accessible. It is no longer necessary to manually swap C into the A or B position before you can use it. If an application is launched from drive C, gateWay will automatically and transparently swap C into the A or B slot. Applications able to handle three drive systems internally will not trigger the auto-swap mechanism, and will simply run from drive C. Another new capability of gateWay is utilisation of special drive C considerations apparently built into GEOS, but never directly supported by it. Specifically, if a data file is launched from drive A or B, and its parent application is located only on drive C, gateWay will find it there and launch it normally. "Normally" that is, except for the fact that the application is actually running from drive C. It accesses C for its overlay files, fonts, scraps, desk accessories, and so on, but operates on data files

currently found in drives A or B. At last, owners of high capacity drives can actually use GEOS as it always seemed to promise, with single copies of desk accessories accessible from all applications. The true utility of this feature will depend upon the hardware available to it, with the best case being both a hard drive and a battery backed RamLink, with a GEOS ramDisk in an REU.

Besides being able to access drive C directly, you can manually swap it to the A or B position using the same C= key combinations used by the deskTop. Or, you can program your function keys to perform that task (more on this later).

HD, RL, OK

GateWay directly supports partition access on both the CMD hard drive and RamLink. A <shift> C=P combination brings up a directory of partitions for the CMD device driver currently mounted for the currently active device. If you're using an '81 partition driver, you'll get a directory of '81 partitions. Using the Native driver will display all native partitions. Select the partition you want by double clicking its name and there you'll be. The HD's "QuickMove" is still an option, but is no longer needed unless you want to copy files between partitions. In CMD Native partitions you get full use of subdirectories, and a provision for creating new subdirectories from gateWay. This is the way GEOS was always meant to work!

Brains and beauty. . .

Hardware support is what gateWay is about, but it doesn't stop there. The system provides a whole new "look and feel" to the space between your applications, and streamlines most of the services previously performed by the deskTop. GateWay's interface most resembles the deskTop in "view by filename" mode. You get a visual representation of free space on the current disk (the "fuel guage"), a display of up to twelve filenames (the "filePad"), and a way to display additional files (the "slider"). Depending on where you click the Slider, you can scroll the display one file at a time, one page at a time, to the beginning, to the end, or proportionately toward either extreme. Some Slider functions also respond to cursor key controls.

The width of the filePad can be altered to display or to conceal additional information about each file. Info boxes can be brought up for either a selected file or the current disk. Each disk or partition can have its own custom icon, which will replace the generic drive icon whenever the disk is opened. Many operations invoke a "status box" over the display while they operate, which is very nice for multi-file operations. Naturally, the display is also customizable for border, background, and character colors, plus a selectable screen-fill pattern.

In all, the display is efficient and business-like. Users who have spent hours creating custom file icons will

The Control Panel defines the "Preferences" style parameters, selects input & printer devices, and provides for custom definition of the function keys. You may also select a system fill pattern from this screen.
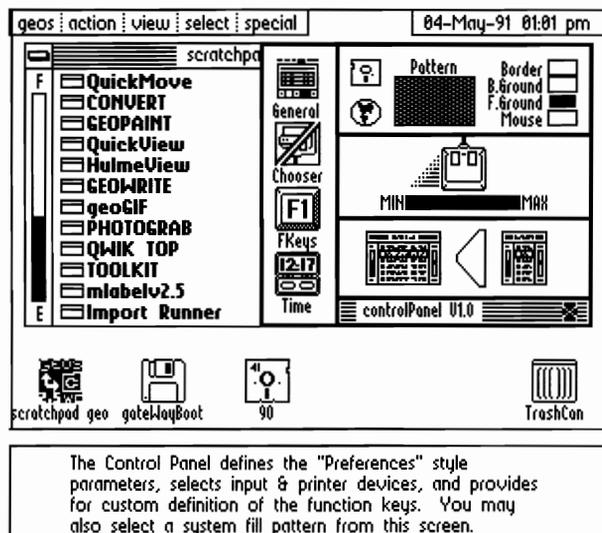
find much of that work sacrificed to the increased efficiency. The only time you'll see a file icon is in its info box. GateWay's interface is a definite case of "form following function", and users who have spent much time with the deskTop may find it difficult to get used to. Once you are used to it though, gateWay offers many advantages.

One such advantage is selective directories. You can elect to display only applications, data files, system files, fonts, or desk accessories. This enables you to cut through potentially cluttered directories on large capacity devices, and has additional utility as well. Certain activities such as file copying or renaming can be exercised upon all files in the currently displayed directory.

GateWay "remembers" the filePad mode and page for each disk, so you can arrange to have a disk open to any section of its directory. Likewise, it stores display customization parameters for each disk, and executes them when the disk is opened. It is possible to rearrange directories as you like, but the procedure is a little cumbersome since there is no deskTop style border. The multi-file trashcan can be of help here. All files placed in the can are reclaimable until the trash is emptied or a new disk is opened.

There is a "browse" feature to quickly locate a specific file by name. This may be more accurately called "hunt" as suggested by its keyboard shortcut C=H. It locates the first file in the current directory matching the search criteria. Again, this is most useful on high capacity devices.

Most of the gateWay options have associated keyboard shortcuts, which in most cases are the same as those used by the deskTop. Additionally, you can define your function keys to perform any of these actions. Function key definition is accomplished from the "Control Panel", a section of gateWay which also serves to replace BSW's Preferences. Besides function keys and "preferences" parameters, the Control Panel allows you to select alternate input or printer drivers.

The gateWay display design is more consistent with most applications than was the deskTop. This makes moving between applications subjectively smoother and aesthetically more pleasing. A side effect of the interface design is that you have more flexibility in choosing system display colors. Under the deskTop, there were many color combinations that were effective within applications, but difficult or impossible on the deskTop.

Another new concept embodied in gateWay is the gateWay Document. These are optional modules which can be added to the VLIR structure of gateWay, then loaded into it on command. A few sample documents are provided, including a photo scrap viewer and a module to create HD/RL native mode subdirectories. The standard gateWay info-box is an abbreviated one without the familiar comment field. Another optional document allows access to full-scale info-boxes. Essentially, the document concept is an invitation for programmers to create custom modules for use with gateWay. These modules may be stand-alone programs or function entirely as gateWay overlays. Once incorporated, they become part of the gateWay file until they are deliberately deleted. A special program called "GW Mover" is included to facilitate adding or deleting these modules. GateWay can accommodate up to six of these document files.

Problems. . .

The net result of the gateWay interface is not all wonder and glory. Nothing is perfect, and this is no exception. GateWay is a very ambitious program, and has a lot going for it, but some compromises may be necessary to get it going on your system. There are several third party programs that won't operate with gateWay. I suspect that these use non-standard system calls, and none are truly indispensable. You can't fairly fault CMD for this. Remember, a lot of programs won't work on a standard GEOS ramDisk, either.

Shadow mode is no longer an option for 41/71 disk drives. I gather that most people preferred a ramDisk for their REU anyway, but here in Florida (with lightning and air-conditioning induced power outages) I always liked this mode. The battery-backed RamLink should reduce the risk of working in a ramDisk, but not all gateWay users will have this hardware.

The deskTop can be accessed at all only through special consider-ations, and it has some services not provided by gateWay. Whole disk copying is one of these, and a border for directory manipulation is another. These are not serious lacks, as you probably have non-GEOS programs to perform these tasks more quickly and efficiently than the deskTop ever permitted. My version

| geos | action | view | select | special | 03-May-91 11:54 pm |

scratchpad.geo

F
QuickMove
CONVERT
GEOPAINT
QuickView
HulmeView
GEOWRITE
geoGIF
PHOTOGRAB
QWIK TOP
TOOLKIT
mlabelv2.5
E

QuickMove

Kind: Application
Size: 7k

Author: Paul J. Bosacki
Where: scratchpad.geo, Drive C
Modified: 24-Sep-90, 09:27 am

Application
Application

90   gateWayBoot   scratchpad.geo   TrashCan

GateWay's Info Boxes present basic information for files or disks. For access to the comment fields, you can use the "Big Info" gateWay document invoked from the geos menu. Note the custom disk icons at lower left.

of gateWay, more seriously, lacks an option to duplicate a selected file. This is a necessary service which I can only hope will be present in the final version. You cannot boot non-GEOS programs from gateWay, but must instead select ShutDown from the Special menu, which returns you to BASIC.

And now for something completely different . . .

GateWay offers about the closest thing you'll ever see to Commodore GEOS multitasking in the form of a context stasher known as Switcher. Switcher utilizes expansion RAM to provide instantaneous switching between two active applications. Once it has been initialised, the C=<restore> key combination freezes the current application and swaps it with the one previously stashed into expansion RAM. Unlike true multitasking, the stashed application does not continue to run, it just waits in suspended animation until you're ready to return to it. This is a limitation of Commodore eight-bit hardware and not a fault with gateWay, but is a slight inaccuracy in the gateWay advertising.

Switcher requires some presence of mind to use, and can only operate within certain constraints. These are not overly limiting, but failure to observe its limits can result in a locked computer and lost data. On the plus side, it can be extremely useful for something like a 'Publish project, enabling you to move between 'Paint and 'Publish instantaneously. Where it works, it works quite well. You should be aware though that it pushes your computer to its limit, and is not an all-purpose, "do anything at any time" utility.

You also should be aware that Switcher is not an option with 256K of expansion RAM, which allows only the mounting of a GEOS ramDisk. According to the documentation of my version, a 128K 1700 will not allow a ramDisk, but will permit the mounting of Switcher. To further muddy the expository waters, my version of Switcher declares that it requires at least 512K to operate. If you have an unexpanded 1700, my advice is to check with CMD's support line before placing your order for gateWay if you are interested in using Switcher.

RamLink Update

RamLink is the primary reason for gateWay's existence, and can only be accessed by GEOS through gateWay. I have been experimenting with the two, and am in fact writing this within a subdirectory of an RL native mode partition, with 'Write running from an HD '81 partition. GEOS will boot from RamLink, and does so very rapidly (boot from scratch speed is comparable to RBOOT). The most pleasant surprise of seeing the system in action is the speed of RamLink accesses. I could absolutely not tell the difference between scrolling a 'Paint document from the RamLink 'Disk and scrolling it from a GEOS ramDisk. I had found the HD's speed to be adequate to abandon using a ramDisk under the deskTop. After using RamLink, I find myself telling the HD to hurry up. I will definitely be installing more SIMM's to expand the available workspace.

C-64 owners will encounter an extra step in installing RamLink in their systems. To compensate for a wider than anticipated range in the specific hardware characteristics of different "runs" of '64 computers, CMD found it necessary to provide an extra connection between the computer and RamLink. As usual with CMD, the instructions for making this connection are clear and complete, but they do require opening your computer's case. The parts you need to locate are all clearly labelled, and the connection itself is practically foolproof.

In conclusion. . .

GateWay is not a product for the casual user of GEOS. Setting it up and exploring its capabilities is a project in itself, and full exploitation of its many features may lead to a complete re-organization of your system. This is, of course, precisely what many people enjoy doing with their computers. If you have the hardware it is designed to handle, gateWay is exactly what you need to handle it. For my money, that's at least two physical drives and expansion RAM, 512K preferred. Below that level, you'll be buying a lot of excess capacity. At that level and above, you'll be getting a lot of convenience, some capabilities otherwise unavailable, and a really slick GEOS system upgrade.

The total impact of Creative Micro Designs' enhancements to Commodore eight bit computers must be seen to be believed. Jiffy-Dos, the HD hard drive, RamLink, and gateWay each make a significant improvement to your computer system. Together, they transform it into a system that would most likely astound the original designers of the C-64. If you are commited to your Commodore equipment, by all means check out these offerings from CMD. You'll be glad you did. 🌐

-- Conrad Tillman
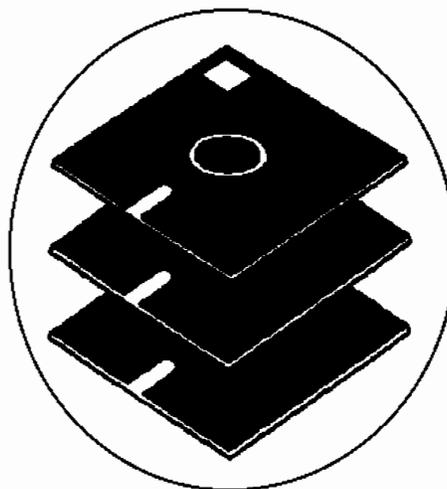
THE LASER REVISITED

By Jeanine Olsen Cutler

Many GEO users have wanted a Laser Printer and like myself could not justify purchasing an Apple Laser Writer. I have received many letters from overseas users, as well as letters and phone calls from state side geoWorld readers. I would like to share some of the questions and answers (to the best of my ability) that have been asked.

Before I start the questions and answers, I'm happy to report that the total price of the (Hewlett Packard) HP IIP with 2-1/2 MG of memory and the PostScript cartridge is now $300.00 lower in price. Also, Pacific Page no longer makes the Mac Page cartridge. One cartridge, The Pacific Page PE, does it all. You do not need to specify for the Mac. All you get are extra cables and disks that you cannot use.

The Pacific Page PE will receive information via serial or parallel. I have tested the cartridge using the Omnitronix (serial) interface and the geoCable (parallel) interface. However, in order to use the geoCable, you need revised GEOPUBLASER, GEOLASER, and LASERWRITER drivers. These drivers show a GC at the end of the name. These drivers were written by Jim Collette, and are available by sending $10.00 to Comm-Plex Software, 6782 Junction Road, Pavilion, NY 14525-9755. The geoCable can be purchased from George H. Wells, Jr., 1620 Victoria Place, LaVerne, CA 91750. The price is $25.00 for the cable. Using the parallel setup, transmission to the printer is significantly faster.

Also, information that I have received from a geoWorld reader in Switzerland is that he (Daniel) has a Ricoh PC Laser 6000/PS. I have seen his work, and it is very nice. Daniel pointed out to me that: "Sometimes PostScript printers don't print the first time they are switched on (even on Macintosh computers). You have to switch them off and try again." Probably I was just lucky, but I didn't run into this problem with the Mac Page cartridge. However, I have with the PE cartridge.

(Q) A salesman told me he had a printer that had 7 internal fonts and that I didn't need a cartridge.

(A) The HP has 7 internal fonts. They are:
(1) Courier 10 point regular.
(2) Courier 10 point bold.
(3) Courier 10 point italic.
(4) Courier 12 point regular.
(5) Courier 12 point bold.
(6) Courier 12 point italic.
(7) Line Printer 8.5 point regular.

At this time, I do not know if we can access them. I also figure there isn't any need to, because with a PostScript cartridge, GEOS does it all. As an example, in geoPublish you can use all the LW fonts from point size 4 - 192, in regular, bold, italics, outline and underline. You can also use these in combination, such as: bold and italics, bold and outline, etc. If you multiply 188 sizes by 11 fonts it equals 2,068, not to mention that amount multiplied by all the combinations.

(Q) If a font is larger that 24 points doesn't it print jagged rather than smooth?

(A) No. Using geoPublish, I printed out "FONT SIZE 192". That took one full page. It printed perfect PostScript.

(Q) Can you get the jazzies out of the graphics using a laser printer?

(A) Yes, but it takes longer to load your Publish file into the printer. A full page file that would normally take 4 minutes to load takes about 15 minutes, using the serial mode of transfer. This is how I did it.

(1) Take a graphic about 2 to 2-1/4 inches wide and 4 inches high.

(2) Scan the graphic with Handyscanner 64 at 200 % and save.

(3) Transfer the graphic to geoPaint with Handy Import.

(4) Clean up the graphic if necessary in geoPaint.

(5) Load Scrap It and save your scrap in a Photo Albumn.

(6) Set up a test geoPublish file.

(7) Either in Master page layout or Graphic layout, click on the graphic icon. (You should have your photo scrap in the Ram.)

(8) Drop the scrap on the Publish page. (Try at X 1" - Y 1".)

(9) Go to the pointer (arrow) and click it on.

(10) Place the pointer on the graphic and box will appear around the graphic.

(11) With the box around the graphic, hit C= A.

(12) The attribute box will appear.

(13) Click on (second down) scaled to fit. Also click on smoothing.

(14) Exit the attribute box by clicking the left bottom corner box.

(15) Click the lower right corner of the box. (You are back to the original box which you made prior to going to the attribute box.)

(16) Move the box up and in until the box is approximately 1-1/2" wide and 2-1/2" high. Click the mouse or Icontroller button.

(17) With the upper left (black rectangle) part of the box, when clicked on, you can move the graphic where you want it on the page.

(18) To check this out, quit geoPublish.

(19) Turn on you printer.

(20) Double click the GEOPUBLASER icon.

(21) If you are using a serial interface, click 9600 baud.

(22) Load test or whatever you named your test data.

(23) Be sure 300 smoothing is on and print your test file. (Be sure your printer has gone through the cycles and

Pacific Page is registering on the message display control panel of your printer.

The jaggies should be gone and a smooth graphic printed. If you do not have a Handyscanner, I have found that Dale Beach's (Cartoon Sampler, 7048 Michigan St., Elwell, MI 48832) Toons reduce well in geoPublish and produce very good results.

(Q) When I printed out my geoPublish file, the last part of the letter in the masthead was missing. Also, the bottom of the g was missing. How is this corrected?

(A) Your masthead was probably left justified. Click on the pointer and click on your text. Go to the right lower end of the box and click on the black rectangle. Move the box to the right and down. The size font you are using determines the amount of space which needs to be opened up. It is better to make it larger, so you are sure to have enough room. Laser fonts need more room to expand, especially large point sizes and italic style fonts.

(Q) My margins were set at 1/4" and 8" in my tabulated geoWrite document. When I set the page document at 1/4" and 8" in geoPublish, the last tab on each line printed on the left side of the next line. The same thing happened with each additonal line in the document. How do I correct this?

(A) After I received your data disk, this is how I did it:

#1-In the page layout mode of geoPublish, set the area for 1/4" on the left and 8-16/80" (as far as it will go) on the right..

#2-Go to the options menu and click on Set Gutters.

#3-The dialog box will appear and the default setting of 5 appears in the boxes.

#4-Change these setting on the left and right at 0.

#5-Depending on the amount of data in your geoWrite document, you may need to adjust the top and bottom gutters as well.

By setting the gutters at 0, all the information will print in the proper place as long as you click it on at the 1/4" setting on the left side. This allows the extra room on the right side. This is similar to opening the box on the masthead.

(Q) Can you print in color on the HP IIP?

(A) No. If you have a Cannon copier, you can buy different color cartridges and you can re-charge the black ones in blue and brown. I'm sure Chenesko Products (Ph. 1-800-221-3516) will be handling different color toners for the Laser printers when they are available. Even if color toner was available, you would have to make a seperate master and change the cartridge for each color.

There is an alternative to buying a high priced colored laser printer. Chenesko Products carries a packet called Laser Color. The sample color pack contains sheets of 8-1/2" X 11" of specially designed film product, with one of each color available. They are Red, Blue, Gold, Silver, Green, Turquoise and Violet.. Lets say you want your Logo in Red and your masthead in Blue. You would cut a piece of red film the size of your logo plus 1/4" border and paste it on your laser printed copy, with the removable adhesive dots which are included in the packet. You would do the same for the blue masthead. The film has a special adhesive which only bonds to dry toner. After your colors are in place, you run it through your printer as a blank page. (To create a blank page, open geoPublish. Create a new document named Blank, then Quit. Place your article in the manual feed tray of your Laser Printer with the Lasercolor showing, face up and with the dots going into the machine first. Then double click GEOPUBLASER and select Blank as the article to print.) The heat and the pressure of your Laser Printer transfers brillant color to your printed page. The color is permanent. By buying the Sample packet, you can decide which colors you like best and then purchase the 10 sheet pack of the desired color. My favorites are Red, Blue and Gold. The brilliant color reminds me of colored aluminum foil. It looks very good on coated paper, like the paper used on the cover of geoWorld.

(Q) I purchased a HP IIP about a year ago. The salesman told me I need a Xetec Gold interface. I hooked it up and have tryed the HP drivers and have not been able to get it to print. Can you help me?

(A) You can use the Xetec Gold interface with the HP. You use the FX-80 driver. This is one way that geoWorld readers can work into a PostScript Laser Printer. Many of you probably already have dot matrix printers with a Xetec interface. Buy your HP IIP now and set it up as a FX-80 printer. Later you can add 2 Mgs of memory to your printer and a PostScript cartridge.

(Q) I haven't been able to get the PostScript cartridge for my HP IIP. I am able to get the additional memory board here in Germany. Will you buy it , test it, and ship it to me?

(A) I sure will. I'm glad to help you in any way that I can. The PE cartridge is on the way to you. I shipped it Air Mail Insured through the US post office. The supplier wanted $75.00 shipping to Germany. My total cost (to me and then to Germany) was $37.00. By the way, it worked great. A sample print out is enclosed in the package.

(Q) The HP IIP printer instructions say: "The Cleaning Paper must be used when you install a new EP-L (toner) Cartridge." I can't find any Cleaning Paper in the box. Will it work alright without it?

(A) Yes it works. I didn't get any Cleaning Paper either. I did purchase Laser and Copier Cleaning Papers from Chenesko Products which I use on the HP and Canon Copier. It is important that you purchase and use Cleaning Paper on a regular basis. The Cleaning Paper is used to remove excess toner found on the fuser roller and all other rollers inside. The blank side of the Cleaning paper should be face down in the tray on the HP.

(Q) What kind of paper do you use in your laser printer?

(A) A good quality, conventional white paper for most of my printing applications. (Paper stock should range from 16 to 28 pounds.) I received a catalog from Paper Direct. (205 Chubb Ave., Lyndhurst, NJ 07071-0618, Phone 1-800-A-PAPERS) They offer Finch Laser Opaque, 8-1/2 X 11, 24#, 500 sheet ream, Item# F10015 for $7.95. This paper is very white and smooth. It produces a very high resolution and quality image, at a reasonable price.

They have a $30.00 minimum order. A $5.00 shipping and handling charge regardless of the order size, which is a plus! If you have ever had to pay the actual shipping charges on paper, you'll know what I mean. But, the best part is, with your first order you can request Item# PK2000, Paper Selector and Paper Kit FREE of charge. If you don't want to order now, you can buy the kit for $19.95 plus $2.50 S & H. The kit contains 8-1/2 X 11 sheets of the different papers which are shown in their catalog. This way you can see, touch and try what you are getting before you order. It also contains envelopes, swatches and specifications of every paper available from Paper Direct.

(Q) Is there any way to get regular Fonts to look as nice as Laser Fonts, when they are printed?

(A) Almost! I experimented with Susan Lamb's Bonanza Font. I set up a letterhead in geoPaint. Then, put it into a photo scrap and transferred it to geoPublish as a graphic with smoothing. I printed it with 300 smoothing and it looked very close to a Laser Font. With time and patience, you can create some really neat things.

(Q) Have you tried doing labels on your Laser printer?

(A) No, I haven't tried labels or card stock. At the present time, I am using a bottom feed Okidata 180 for labels. Card stock, I feel, is too heavy for the Laser printer. I have printed transparencies on the laser. You must be sure that the transparent plastic sheets are made for Laser printers.

If any of you have the 10/87 version of geoPublish, you may want to send your original disk and $7.00 to Berkley Softworks, 2120 Shattuck Ave., Berkeley, CA 94704, for the updated 10/88 version. This version seems to work better with the Laser printer.

I would like to Thank my new geoWorld friends, especially Michael Lamb and his congregation, who prayed for our son David (Dave) Cutler. Dave is the Throttleman on the offshore racing boat, Hyperactive. It hit a wave and crashed on April 29, 1991, in Marathon, FL. **Prayer works--Thank you.**

I have enjoyed hearing from all of my new geoWorld friends. I have especially enjoyed collecting all the stamps on the letters that I have received from England, Switzerland and Germany. If I can help any of the geoWorld and GEOS users in any way, please feel free to contact me. Jeanine Cutler, LAKESHORE CAMPGROUND, 231 Lakeshore Drive, Fair Play, SC 29643, Phone (803) 972-3330. - Peace & Light.- Jeanine 🌐

Manipulating Columns IN GEOWRITE By Joseph Thomas

One of the few things that geoWrite does not offer is the ability to add, move, or delete columns of text. If you have geoCalc, however, you can accomplish just this by a little creative cutting and pasting.

For instance, a write document generated by John Howard's GeoList program has lots of columns of text that we can play with. To save space here, I will make a **text scrap** of a few nonjustified lines, although I could just have easily used the **select page** option to do an entire page. Here is my **text scrap**:

File Name	File Type	Permanent Name	Date & Time	KB	WP
Page 01					
DESK TOP	System	deskTop AM V2.0	08/19/88 1335	30	
Panasonic	Printer	Printdriver V2.0	07/18/86 2300	01	
LaserMatrix-1080	Printer	LASERMATRIX V2.0	07/06/88 1317	01	
Comm 1352ia	Input Driver	Input Drvr V1.1	05/09/88 2136	01	
CONFIGURE	Auto Exec	Configure V2.0	05/31/88 1149	19	

Now let's say we want to delete the **Permanent Name** column. We already have created our **text scrap**. We now open a new **geoCalc** file and select the **paste text scrap** option (with cell **A1** active). This is what results:

	A	B	C	D	E	
1	File Name	File Type	Permanent	Date & Time	KB	WP
2						
3	Page 01					
4	DESK TOP	System	deskTop AM	08/19/88 13		30
5	Panasonic	Printer	Printdriver V	07/18/86 2		1
6	LaserMatrix-	Printer	LASERMATRI	07/06/88 1		1
7	Comm 13521	Input Driver	Input Drvr	05/09/88 2		1
8	CONFIGURE	Auto Exec	Configure	05/31/88 11		19
9						
10						
11						

As you see, the tabbed columns from the **write** document align themselves into columns of cells in **calc**. Don't worry that some of the text doesn't quite fit into the cells--the text is there even though you don't see it. Next select the block of cells from **D1** to **F8**, and use the **cut** option from the **edit** menu. Activate cell **C1**, then use the **paste** option from the **edit** menu. You now have this:

	A	B	C	D	E	
1	File Name	File Type	Date & Time	KB	WP	
2						
3	Page 01					
4	DESK TOP	System	08/19/88 13		30	
5	Panasonic	Printer	07/18/86 2		1	
6	LaserMatrix-	Printer	07/06/88 1		1	
7	Comm 13521	Input Driver	05/09/88 2		1	
8	CONFIGURE	Auto Exec	05/31/88 11		19	
9						
10						
11						

Now select the **block** of cells from **A1** to **E8**, then use the **copy text scrap** option. We may now **quit** to the desktop, and re-open your **write document**. We have a couple of options as to pasting this new text scrap. For now, lets just paste it onto a page where there are **no** existing tabs:

File NameFile TypeDate & TimeKBWP

Page 01
DESK TOPSystem08/19/88 133530
PanasonicPrinter07/18/86 23001
LaserMatrix-1080Printer07/06/88 13171
Comm 1352iaInput Driver05/09/88 21361
CONFIGUREAuto Exec05/31/88 114919

Now we can drag our pointer across this text (highlight it), and put our tabs wherever we want them. The text will automatically fall into place with what was each cell in geoCalc moving to each tab. We could have set the tabs before pasting the scrap, or even have deleted the text we are replacing and pasted the scrap in its place.

We can similarly manipulate text within **geoCalc** to **add** columns, or to **move** text from one column to another, using the normal cut and paste techniques of geoCalc.

To **add** a column showing the authors in the above list, we could go back to our last **geoCalc** file, select the **block** of cells from **B1** to **E8**, then use the **cut** option from the **edit** menu. Activate cell **C1**, then use the **paste** option from the **edit menu**. Now column **B** is available for us to type in the Author heading (cell **B1**) and the author names for each file. Make your **text scrap** as before and paste into your **geoWrite** document.

If you paste a **text scrap** copied from **geoCalc** into a **geoWrite** document that already has tabs set, the columns will line up based on those tab settings. This may necessitate adding or deleting tabs to line your columns up the way you want them. Make sure all text in scrap is left justified. Or you will have problems. Center and full justify adds codes that mess up text in cells in geoCalc.

While it would have been nice if Berkeley had provided the option of manipulating columns within **geoWrite**, interfacing with **geoCalc** as described here is much faster and easier than adding or deleting the text manually. ✺
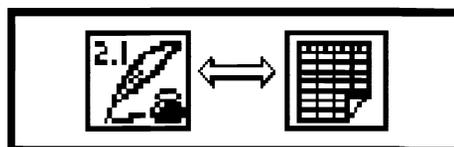
GEOS was introduced in 1986 and revolutionized the Commodore 64. It happened again in 1988 with GEOS 2.0. Now the 90's are here, and so is...

GEOWIZARD!

The program that pushes GEOS one step closer to the Mac... **GEOWIZARD!** GEOWIZARD is a brand new utility for GEOS 64 2.0 and GEOS 128 2.0 owners with a RAM Expansion Unit (REU) - 17xx or GEORAM. Once GEOWIZARD is installed, it sits resident in the REU waiting for you to activate it. GEOWIZARD can be activated from almost anywhere. With a simple mouse click, GEOWIZARD temporarily takes over the computer and provides the following features:
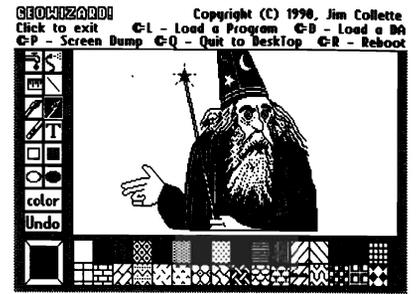
* Screen Dump (double-height option in 80 columns for proper aspect ratio) - *do screen dumps like those you see in geoWorld, of dialog boxes and menus!* Dump to printer, Photo Scrap, or directly to geoPaint without using Paint Drivers - full color support!

* Return to deskTop (or in severe cases, RBOOT) - *get out of most System Error dialog boxes with no problem, with the RAM disk intact!*

* *Start another application or desk accessory!* This is GEOWIZARD's most powerful option - almost like MultiFinder on the Mac! *Run almost any application as if it were a desk accessory (DA)! This will revolutionize your GEOS computing!!!*

When you're done with GEOWIZARD, the original program is restored as if nothing ever happened!

The last option is what makes GEOWIZARD truly special. Working in geoWrite and want to paste in a Photo Scrap but you forgot to cut it out of geoPaint? *No problem!* Pop up GEOWIZARD and run geoPaint, cut the scrap, then return to geoWrite where you left off! Need to run the Text Manager but the program you're in doesn't offer desk accessory support? Call up GEOWIZARD and run the DA! You can even run a DA from within a DA!

GEOWIZARD is something you have to see to believe. No longer do you have to quit a program to start something else! Great for time-consuming programs like geoPublish which take a long time to shut down and restart. Not multi-tasking but the closest thing GEOS has seen to it!

MiniDesk is a separate DA included with GEOWIZARD and goes hand-in-hand with it. MiniDesk is short for Mini DeskTop, and that's essentially what it is. Copy, Rename, or Scratch files from a DA! Can be used by itself as a normal desk accessory, or from GEOWIZARD - never again will you quit a program just to copy a file! MiniDesk will do the job in just a few seconds. Naturally, MiniDesk supports multiple file selection and 3 drives. Helps strip away the barrier to drive C - now you can move files to and from it whenever you like.

<u>**THE FINE PRINT:**</u> *(IMPORTANT - PLEASE READ!)*
GEOWIZARD, MiniDesk, and geoWizDump fully support GEOS 128 in both 40 and 80 columns, and make use of three drives. GEOWIZARD is an Auto-Exec file and will install automatically on bootup if placed on your GEOS boot disk. GEOWIZARD is compatible with any input device.
You MUST have an REU with at least one 64K bank free. To determine if GEOWIZARD will work on your system, follow these steps:
(1) Divide the size (in K) of your REU by 64, then subtract 1. (i.e. 128K = 1; 256K = 3; 512K = 7; 1024K = 15; 2048K = 31)
(2) Subtract for each RAM or Shadowed disk you use: *(Shadowed Dir 1581 doesn't do much and can be removed for GEOWIZARD if you need the RAM)*
      RAM 1541/Shadowed 1541 - 3   RAM 1571 - 6   RAM 1581 - 13   Shadowed Dir 1581 - 1 (available in GEOS 64 2.0 only)
(3) If you are left with a number greater than 0, GEOWIZARD will run on your system. Otherwise you need to remove a RAM disk (i.e. Shadowed Dir 1581).
In case you are lost, here is an example. Let's say you have a 1764, unexpanded - that's 256K. Divide 256 by 64 and you get 4, now subtract one - 3. Now subtract 3 for the RAM 1541 you use. That leaves 0, which means GEOWIZARD can't be used with only a 256K REU and a RAM 1541.
Before ordering, please follow the above steps and make sure you have enough RAM to use GEOWIZARD.
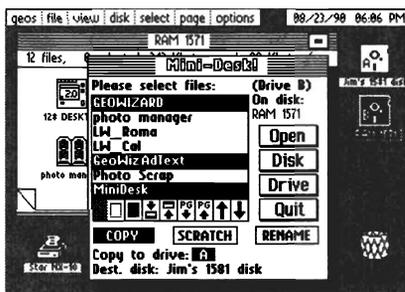
The **GEOWIZARD** disk is just **$16.50*** and includes **GEOWIZARD, MiniDesk, and geoWizDump. This could be the bargain of a lifetime. To order, send a check or money order (in US funds, drawn on a US bank, payable to Jim Collette) to:**

Comm-Plex Software / 6782 Junction Road / Pavilion, NY 14525

* NY residents please add sales tax. **GEOWIZARD, MiniDesk,** and **geoWizDump** are Copyright (C) 1990, Jim Collette.
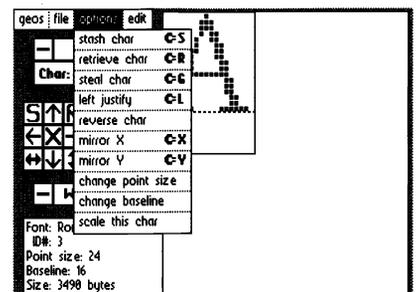
Also still available - GEOS Font Collection 2 ($21.50), GEOS Font Collection 1 ($16.50), & MegaFont Disk 1 ($16.50)!!!
Remember that exciting feeling when you first used GEOS? When you first used a RAM disk? Prepare to experience that feeling all over again.... with GEOWIZARD!!! Don't be left behind - order today!!!
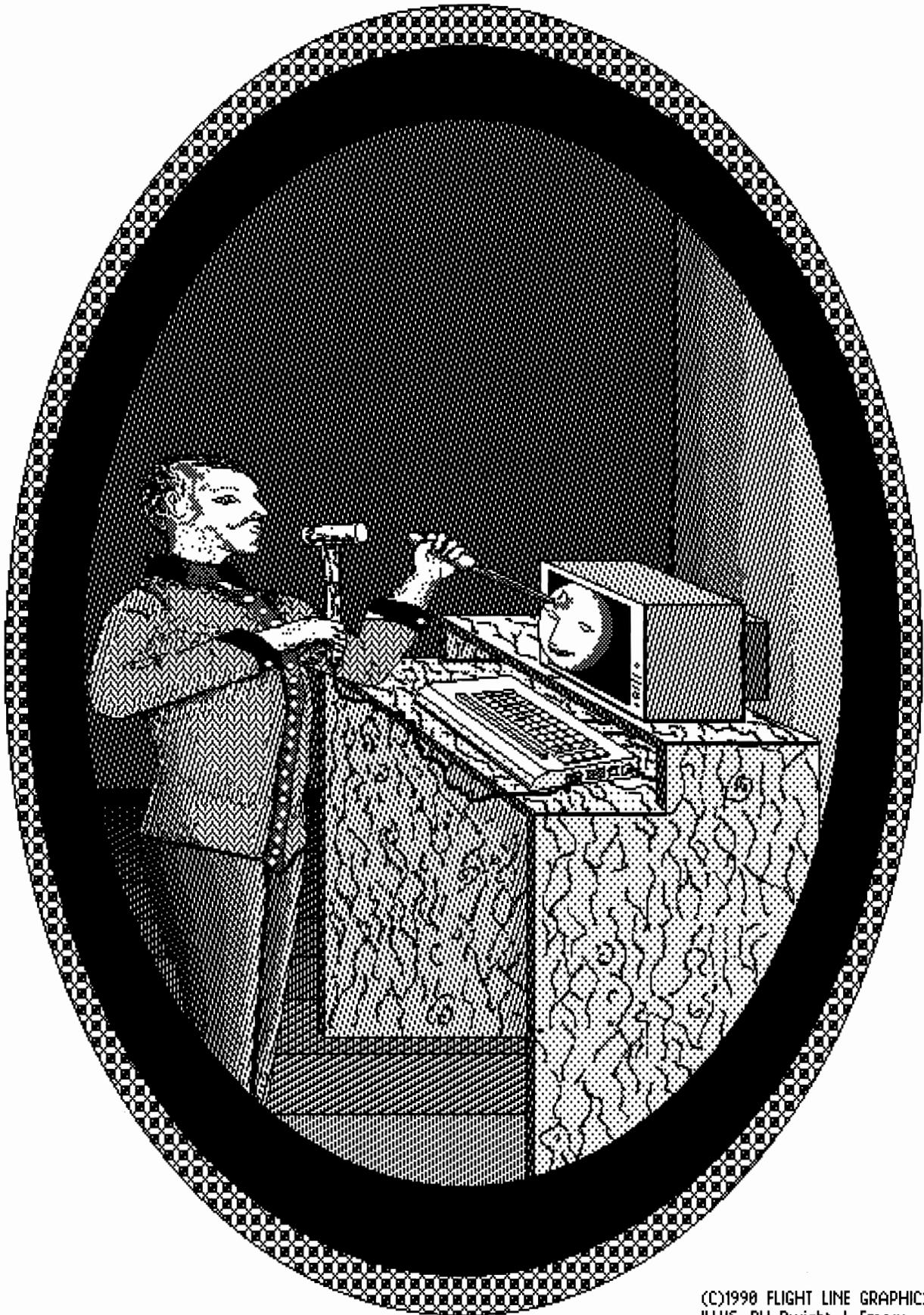
(C)1990 FLIGHT LINE GRAPHICS!
ILLUS. BY Dwight J. Emery

Lost Files--or Not?

by Joseph Thomas
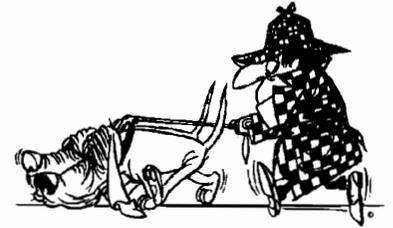
I recently had an experience using Geos that might be worth mentioning here. I was copying files from a 1571 RAM to my 1581 drive. This disk in the drive had over 100 files on it, and since I had some blank spaces on some of the file pages, I had reached page 18. I wanted all the new files to be on the same page, so I **appended** page **1** with a couple of new, blank pages. I then copied my files from the Desktop with no apparent problem.

Later on, I needed a file that I knew to be on the 1581 disk, but when I tried to get it, it was gone! In fact, several files that I thought should be there were missing. I found another copy of the file so I could add it back to the 1581 disk that had lost the file. To my amazement I got a **File Exists** message. I cancelled the file copy and opened the 1581 disk again to search for the mysterious file. It simply wasn't there! From another drive I loaded my GeoList Program and made a listing of the files on the 1581. It showed the file on page 19. I went **back** to the 1581 and there **was no** page 19.

After calming myself with another pot of coffee, I launched my attack. I removed the files I had added , then I deleted those pages. I flipped to page 18 and there, safe and sound, were my missing files! I validated my disk and swore to remember that Geos allows a maximum of 144 files, on a maximum of 18 pages. Or should I...?

Had I found a magic way to cheat Geos and sneak extra files and pages onto a disk? After all, the files **seemed** OK....

I boldly experimented with the disk and found that I could force page 18 and its files into limbo by inserting pages ahead of it. The number of files shown in the title bar was reduced, but the **Kb used** and **Kb free** values remained intact.

Even more interesting was Experiment #2. I copied **geoWrite** to the 1581, then deleted it from my REU. I then went to the 1581, moved the **geoWrite** application to page 18, then **appended** page 1. Another peek at page 18 showed that **geoWrite** had been moved into the twilight zone. I went back to RAM and double clicked a geoWrite **document**. The 1581 whirred and my file opened! Then I "hid" a geoWrite **document** in the 1581 and opened **geoWrite** from RAM. Guess what! I was able to open the hidden document!

I'm not recommending that anyone count on this as being foolproof. There are enough things that are **supposed** to work that crash and burn. It **is** interesting, however, and perhaps helpful for someone whose files have disappeared from the directory but are detected by other methods. Or to someone like me who likes to push at the edges of the envelope. 🌍


```
                    FONTS 1581          ▬
113 files   0 selected   751 Kbytes used   38 Kbytes free

                                        19?
```