

The Official Newsletter of geoMETRIX, The Nation's First GEOS-SPECIFIC User Group

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geoJOURNAL

BIG LITTLE QUESTIONS

BIG ANSWERS TO COMMON LITTLE QUESTIONS

MAC: STILL A COMPUTER FOR THE HOME?

TREKKIE HEAVEN

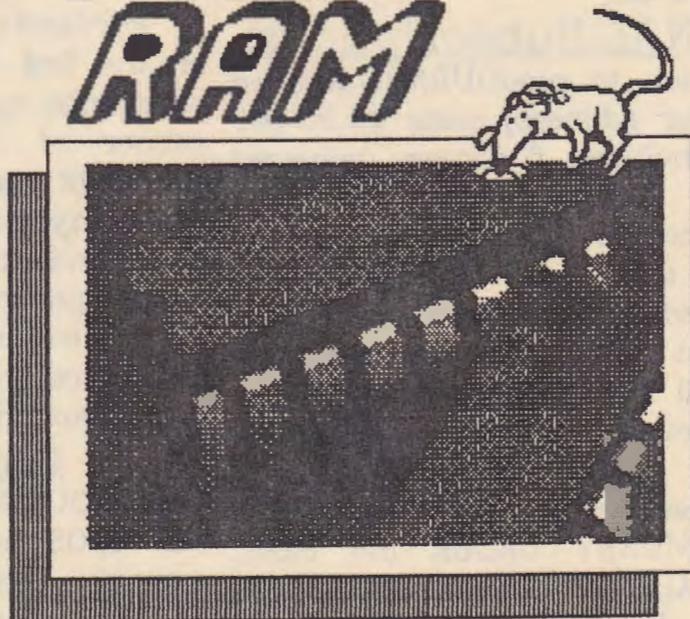
VOYAGES NEWSLETTER SHOWS OFF GEOS

STORM DISK 1 REVIEWED

AN INTUITIVE LOOK AT STORM SYSTEMS NEWEST BRAINCHILD

Merry
Christmas!

THE FACTS ON RAM



geoJOURNAL INFORMATION

General Info:

geoMETRIX is currently a Portland-based, GEOS-SPECIFIC user group. We are dedicated to giving the latest information on GEOS available to us, and to supporting people who are amazed, wondering, or even confused about GEOS. If a person has the slightest interest in GEOS, they're the ones that we're here for. We hope you enjoy our newsletter, and find it as informative as it is intended to be.

geoJOURNAL Subscriptions:

A subscription to geoJOURNAL (mailed directly to your address) costs \$3.00 per year. This includes 6 issues, delivered BI-MONTHLY. Although this is the same price as the cover, you are getting free postage with this deal. We hope that those of you who cannot come to visit us or cannot get to a store to get our Newsletter will subscribe so that we can still keep in touch with you. You may either bring your payment to a geoMETRIX meeting, or you may send a CHECK OR MONEY ORDER (no cash, please) to: RAINBOW SOFTWARE, 20224 S. Sprague RD., Oregon City, OR 97045-9641

Club Membership:

A full-year's membership in geoMETRIX to any one individual costs \$10.00 per year. This includes 6 issues of geoJOURNAL delivered to your address (every other month), privileges to

participate in ANY demonstration or presentation at a group meeting, and access to geoMETRIX's extensive Public Domain GEOS Library, as well as geoMETRIX contest disks and special MEMBERSHIP-ONLY files. As with payment for geoJOURNAL subscriptions, you may either bring your money to a geoMETRIX meeting, or send it to the address listed below "geoJOURNAL Subscriptions".

Club Meetings:

Portland's geoMETRIX User Group meets on the 3rd Sunday of every month (unless otherwise specified) at Pietro's Pizza on the corner of S.E. 122nd and Stark. Our meetings start at 4:00 pm and end at 8:00 pm. Anyone interested in GEOS is welcome to attend, but only geoMETRIX members may participate in presentations and demonstrations. Please try to be there, as the more you see, the more you will get out of our friendly club!

geoJOURNAL INFO:

geoJOURNAL is created ENTIRELY under the GEOS environment (with the possible exception of some advertisements). Bryce L. Tomlinson is the geoJOURNAL editor. Additional articles are welcome.

Advertisement prices are as follows (omit layout charge for photo-ready ads):

Full-Page: \$6.00 (layout charge add 15.00)

Half-Page: \$3.25 (layout charge add 7.50)

Quarter-Page: \$1.75 (layout charge add 3.75)

Please send in your advertisements by the 1st of the month of press-time. Otherwise, ads may not be printed until the next issue.

(Sorry... deadlines... deadlines..)

geoJOURNAL HIGHLIGHTS

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Peter Lerten

geoJOURNAL Editor:

Bryce L. Tomlinson

Upcoming geoMETRIX Meetings:

January 21st

February 18th

Portland geoMETRIX Meetings are held on
the 3rd Sunday of every month at Pietro's
Pizza on S.E. 122nd & Stark.

geoJOURNAL is proudly created on a Commodore 128 computer with 2 1581 disk drives, a 1571 disk drive, a 1750 RAM, Super Snapshot 4.0, 1351 Mouse (when alive), using GEOS 128 2.0, geoPUBLISH, geoPAINT 2.0, geoWRITE 2.1, Paint Scrap 2.0, Scrap it (by TERRY), Import Runner, Graphics Grabber, WrongIsWrite, as well as many other fine GEOS products. geoJOURNAL is printed on an EPSON RX-80 printer using a Super Graphix Gold interface and a LaserMatrix printer driver--Which accounts for such amazing resolution on a 9-pin printer!

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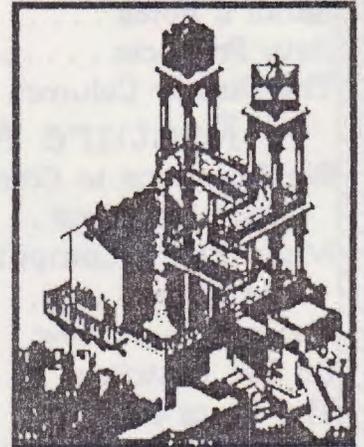
RAINBOW SOFTWARE



At Rainbow Software, we've made an art of collecting MACINTOSH files to convert to GEOS, combing the world for the very best in graphics, clip art, and full-page pictures. Hundreds of geoPAINTs, converted straight from hi-resolution MacPaint files.

From cartoon characters to movie posters to bathing beauties, there's something to suit all types of people of any age.

Here at Rainbow, we realize that finding good pictures can sometimes be tough, so we've saved you that part of the trouble... The next step is up to you



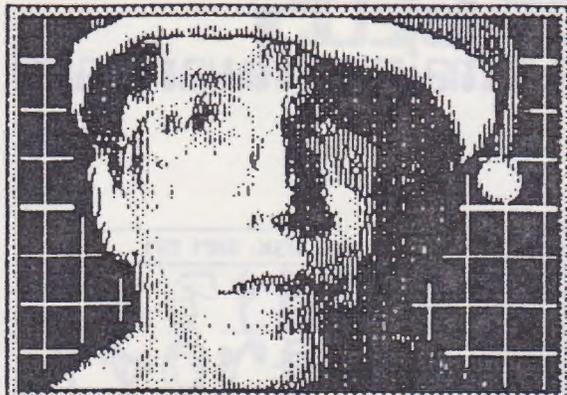
We've created a catalog of miniaturized duplicates, giving the closest representations of the files without actually handing them to you, so it's easy to choose which pictures you want. Still want more?

As an introductory offer, we will give you a 2-disk sample set of geoPaint files, right along with our catalog, for a special price of just \$5.00.

But if you really don't want the sample disk, we can still give you the catalog for \$2.00. (Postage & Handling)



Mail Check or Money Order (or requests for info) to:
Rainbow Software
20224 S. Sprague Rd.
Oregon City, OR 97045-9641



THE EDITOR'S NOTES

by Bruce L. Tomlinson

Well, now that the Christmas rush has hit us all but good, here's one more thing to fill your mailbox. Do you think you'll get what you want for Christmas? Well, I hope I do. If any of you plan to shop for me, let me know and I'll send you my Christmas list (heh heh).

We sure have had a lot going on in the last two months (doesn't seem like news, though, does it?) We've had lots of mail come in, and E-Mail on Q-Link. For those of you who would like to correspond with us via Q, our screen name is Metrix1. Along with that, Commodore has

dropped its 8-bit line (although I don't think we'll miss them much).

Lots of new information about the GEORAM from Berkeley Softworks has been changing hands, and I think you will find just about all you can find out right here. Check out our "The Facts on RAM" article!

You might want to check out the Public Domain Library page (in the VERY back of the newsletter) for some VERY new additions you might find. For those of you who have ordered disks and have not yet received them, please be patient, as there is much going on here at the old fort--hopefully it will be solved soon.

This newsletter has proven to be MUCH easier to put together than the last 3 were. Special thanks MUST go to the following people for their contributions: Grady Brown (for all the great questions we've published this month), Mike Sparling from Miles City User Group (for sending me these articles from his newsletter,

The Digest), John Tackett (for his great VOYAGES newsletter) and ALL the helpful folks on Q-Link who make getting information about GEOS so easy!!! I would also like to thank Ken Nakatsu and Prez Pete Lerten for bringing their systems to the meeting, and Bill Sightler for bringing along STORM DISK I (which Peter & I have since purchased!).

As said above, John Tackett has published three issues of his newsletter, called VOYAGES, and is working on number 4. Since it is such a GREAT example of the marvelous things that GEOS can do, we thought that it would be a neat idea to print it here in 2-page sections. Anyone who is into STAR TREK should find it really interesting, and even anyone who ISN'T into it will enjoy it (take ME for example!)

Thanks to all who have helped, and have a VERY MERRY CHRISTMAS as well as a HAPPY NEW YEAR!

WE LOVE TO HEAR FROM YOU!

Send your questions, answers, or just say HI! We'll even PRINT IT!

Mail to:
Editorials

2305 SE 121st. #66
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geo **TOURNA**

New Products for GEOS

The newest in marketed and Public Domain software and hardware!

Paint-Scrap 2.0 ***

First, there was Big Clipper. Then Paint-Scrap... Now, there is Paint-Scrap 2.0. This is one of the newest finds on Q-Link. Paint-Scrap is a utility that you can use to make photos up to 28k large straight from geoPAINT documents.

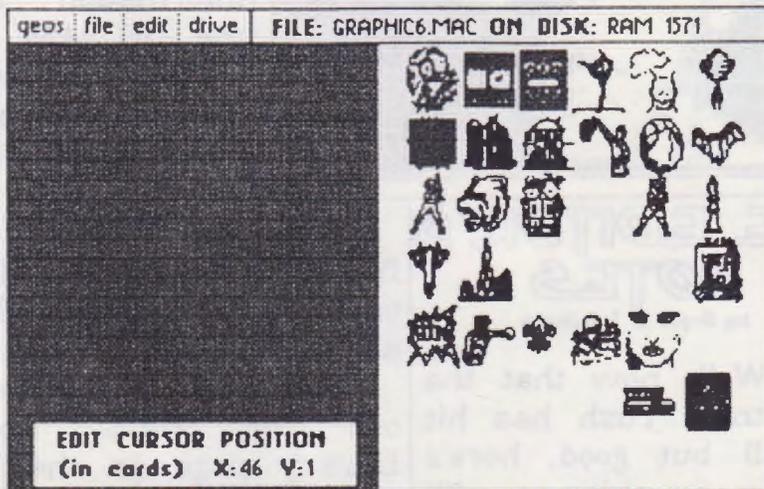
It shows a "Preview" (a shrunk down image of the page) on the right side of the screen, and allows you to simply designate a frame around whatever section of the page you wish to clip, and then clip it. If the area is too complex or large for Paint-Scrap to clip, it lets you know.

This is the first time that anyone has written a program that will literally allow you to view the page and clip DIRECTLY from it--you don't enter ANY coordinates in this program! It makes really short work of some of the larger MAC clip art files.

One other neat aspect is that the

GeoRAM

Since Commodore Business Machines has discontinued its line of 8-bit computers and accessories, many people might be frustrated as to how they might be able to get ahold of a RAM EXPANSION UNIT (REU). Well,



Paint-Scrap 2.0 allows the viewer to clip a photo right from the preview!

author of the program is in the process of adding a feature that allows the user to actually PASTE a scrap back into the page! If you stop to think about it, that could open up desktop publishing to some really wild extents!

Available from Q-Link or geoMETRIX.

depending on what you are looking for, Berkeley Softworks might have solved your problem.

BSW has just come out with a new RAM card for the 64 and 128, called the geoRAM. This REU packs the same 512k load as the Commodore 1750 card does, at

geo **geometric**

New Products

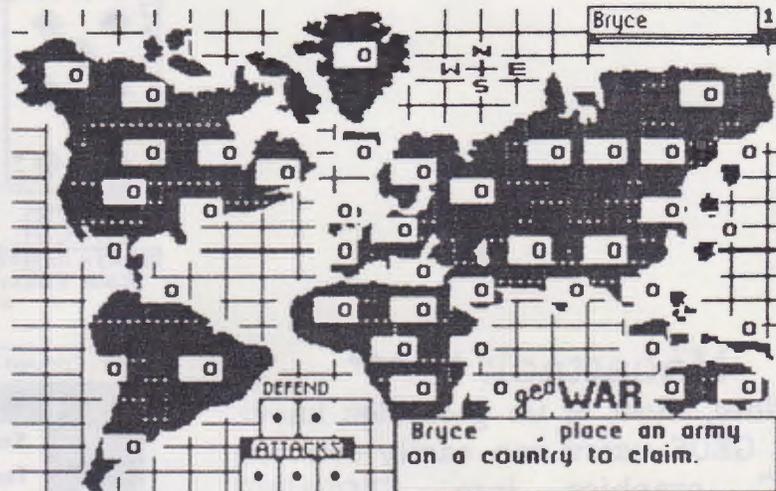
a smaller size AND price. According to Berkeley's geoREPS, the card is approximately the size of 2 standard 64 cartridges. And it only costs \$124.95. The card is supposed to be completely compatible with GEOS 2.0 (it comes with

a revised kernel on disk) and is read to ship... This could make those who have been waiting so long a little happier.

Available ONLY from Berkeley Softworks. For ordering information, call 1-800-888-0848 extension 1741.

GeoWar ****

Based on the classic war game of RISK, GeoWar pits you against either a very fine computer opponent, or up to 4 other human players. This program is elegantly designed in FULL color (40-column) and the graphics are VERY well done. The object of the game is to gain control over every country on the map (but of course, you can CHANGE the object!). Using a variety of different tactics, including matching continent cards for "Monopolizing" for armies, and getting bonus armies for every continent you control--EVERY TURN, you can gain control (or attempt to) and reap the rewards of victory!



One of the most prominent features in geoWAR is the attention to detail.

If the game gets old the way it comes, try the OPTIONS menu... You can change just about every aspect of the game through stylish and friendly menus.

Available from Q-Link and geoMETRIX.

Draw Poker ***

In this arcade-poker type game for GEOS 64, you can play all the combinations, and come out of the casino with all your money still in your pocket. On the bottom of the screen, your five cards are displayed in colorful graphics (even the FACE cards!).

The play is simple (heh heh): Insert

a coin. The computer picks five cards for you and tells you (at the top of the screen) what, if any, hands you have. Click on the "HOLD" bar for each of the cards that you would like to draw. Once you have only the cards you want to keep face up, click on the "DRAW" button. The computer draws the cards for you, and re-displays the scoring hand at the top of the screen.

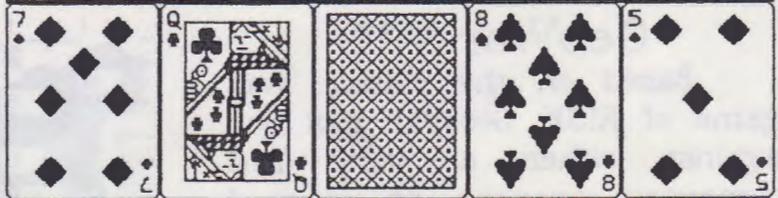
geoPaint

New Products

Remember... It's not how you play the game, it's **WHETHER YOU WIN OR LOSE!!!**

Available from Q-Link or geoMETRIX.

Royal Flush	250	500	750	1000	4000
Straight Flush	50	100	150	200	250
Four of a Kind	25	50	75	100	125
Full House	9	18	27	36	45
Flush	6	12	18	24	30
Straight	4	8	12	16	20
Three of a Kind	3	6	9	12	15
Two Pair	2	4	6	8	10
Jacks or Better	1	2	3	4	5

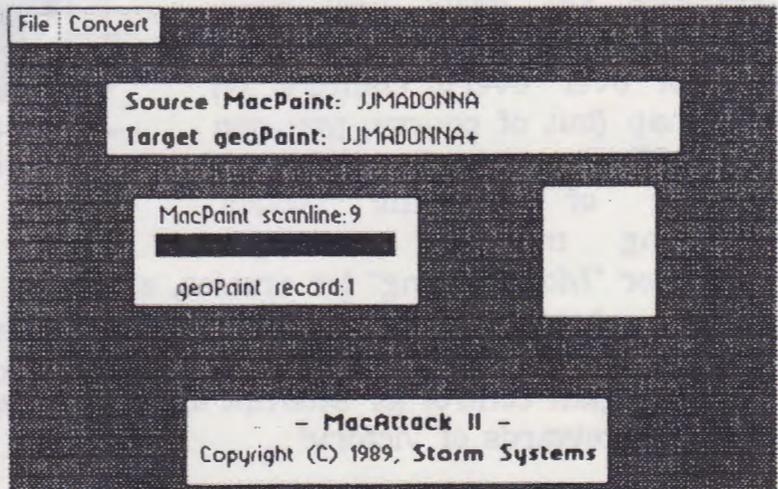


HOLD HOLD HOLD HOLD HOLD DRAW
 CASH OUT DEPOSIT COIN BET 1 CREDIT MAX BET 8
 Draw Poker is a fine piece of game programming--giving us some real fun without REAL CASH!

Macattack II ***

Now, most of us geoPhiles know that GEOS users can easily convert MAC graphics into GEOPAINT format so that we can benefit from those talented artists (and not to mention those wonderful DIGITIZERS...) that dwell amongst the MAC users. But until now, with the advent of Macattack II, there was no way to convert GeoPaint files to MacPaint.

Along with being able to access both header types of the MacPaint files (headers? Yup... that's why some of the files you convert with the OLD version DON'T WORK.), you can convert any geoPAINT page to MAC format. But remember one thing. Since GEOS depends on 80-DPI printers, and MAC depends on 72-DPI printers.... Well, you lose 4 dots on either side of the page in the process. This won't



Using MacAttack II, you CAN convert MacPaints to geoPAINT--and UISA-UERSA... But you CAN'T convert the "jj" picture that goofy Bryce tried!

effect files that you converted from MAC in the first place, but it might effect some of the original geoPAINT files.

This version is totally compatible with 80-columns on the 128, and uses the 2 mHz processing speed... But not that it needs it that much--THIS BABY FLIES!

Available from Q-Link and geoMETRIX.

geo **TOOLZ** **MAN**

New Products

GeoSidPlayer **

Well, we finally have a real music program for GEOS! Using regular SID files (for use with the zillions of Public Domain SID players available for 64 users), GEOS users can play tunes from a jukebox-style environment. Just select a song... and ZING! Melodious marvels move maticulously from your computer.

Available from Q-Link and geoMETRIX.

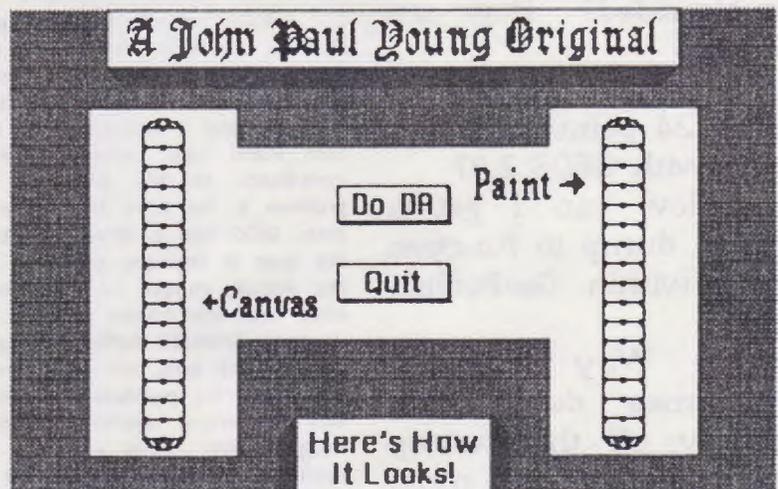


With GeoSidPlayer, you can listen to the great sound of all the SID TUNES you played BEFORE you ran across GEOS!

Color Smasher *

How would you like a bunch of separate color preference files for GEOS available at the touch of a button? Well, now you can have it. With COLOR SMASHER, you can now pick the colors that you want, and create DESK ACCESSORY files containing the colors you would like to use with your GEOS screen. Just click on the color file from the GEOS submenu, and presto! Your page changes colors!

Available from Q-Link and geoMETRIX.



Color Smasher allows users to set up DESK ACCESSORY files with their favorite colors saved right in!

Attention: GeoProgrammers and GeoCollectors!
Send us your latest GeoToys! We can always
use something more to play with, and you could
get some exposure!

Big Little Questions on Common Problems

by Bryce L. Tomlinson & Grady Brown

I have a few questions for you:

1. Why can't I open a disk under GEOS that has been formatted double-sided? How can I?
2. Why can't I use some 24 point or larger fonts with GEOS 2.0?
3. How can I get a screen dump to function from within GeoPublish 1.0?
4. Why can I sometimes delete files directly off the desktop and other times I must drag them to the border first?
5. In geoLIST 2.2, what does "NOT GEOS" mean? Is this a program that can or cannot be run from GEOS? Are these

converted programs? Are they usable?

-Grady Brown,
Camas, WA

1. First off, let me say that the ONLY way GEOS can use double-sided 5.25" disks is if they are formatted FROM GEOS,

on the 1571. They cannot be used under GEOS if they are formatted outside of GEOS (Although some might tell you otherwise, experience will tell most it is not good practice to try it). Secondly, are you trying to read the double-sided disks on a disk drive that is NOT a 1571? Remember that the 1541 only has ONE read-write head (as opposed to the 1571-which has TWO), and cannot access the second side.

2. Now, about the 24 point fonts. Actually, the problem you are experiencing is a VERY common one. In fact, it is one of the most talked-about subjects on Q-Link. And it doesn't really have to do with POINT size, although that can be a contributor to the problem. The REAL problem is the total FONT size. To begin with, GEOS has a small font buffer (that's the area in memory in which GEOS stores the actual images for the fonts). And now, with the advent of GEOS 2.0, there is an even SMALLER buffer. As you can see, the desktop only has ONE font, so that's not where the problem lies. Once you get into the major applications, that's where trouble starts. For example, geoPUBLISH cannot even SEE fonts that are larger than 4896 bytes (about 4k is safe).

Don't be gloomy, though... There is a rather easy solution to your problem. If you have a font editor, load up the font that you wish to use, and reduce the width of each unwanted character to 1 or 2 pixels. If you have FONT MONSTER from the STORM DISK 1 collection, it's even easier. Just select a width, grab the first character in a series, and just keep grabbing, because it automatically increments the character number. I had to

do that today, and it worked like a champ!

3. Your "screen dump from geoPUBLISH" problem is also a common one. There is a bug in geoPUBLISH that, after you access certain features, will not allow access to ANY of the "GEOS SUBMENU" items. The only solution short of sending the disk back to Berkeley (they have developed a cure for the problem) is to abort to the Desktop, and re-load the document into geoPUBLISH, and immediately go to the GEOS submenu. If you follow these instructions, geoPUBLISH should be able to recognize desk accessories. Those with the updated geoPublish disk will not have to worry about it.

4. The only reason that you cannot always delete files right off the Desktop is this: GEOS MASTER DISKS have a special bit of information embedded in the directory header, as a protective measure. That way, if you are about to do something that might be drastic to your disk, it will say "THE REQUESTED OPERATION CANNOT BE PERFORMED ON A MASTER DISK". Of course, the only way around this is to drag the file to the border, THEN to the trashcan. This message will also come up if you try to copy a file that already exists to a MASTER disk. Most of the time, this only happens on the boot disk, but occasionally, people will try to do this to another of their original disks. Remember: ALL GEOS original disks are MASTERS. They are ALL protected in this manner.

5. GEOS programs have a special GEOS header that allows the system to know what kind of program it is. If that header is NOT there, GEOS thinks of it as a foreign file. That header can be placed on most BASIC programs, but not all will work from GEOS. You might notice that many of the older PD GEOS applications were written in basic, and then a person used an ICON editor to add the header and ICON. At that point, GEOS calls the file BASIC, instead of NON-GEOS. Sounds funny, but it does make sense in the long run.

-Bryce

Mac: Still a Computer for the Home?

Is GEOS's closest "SYStem" getting farther away?

MACINTOSH-- THE COMPUTER FOR THE BEST OF US?

By Dan Cutman
(Downloaded from Q-Link)

When it was introduced in 1984, the Macintosh was considered so easy to use that Apple advertised it as "the computer for the rest of us." These days, they might as well call it "the computer for the BEST of us."

Apple has taken tremendous strides in making the Mac faster, more powerful, colorful and portable. But in changing it from a creative toy for hippie programmers to a muscle machine for three-piece suiters, they've made it just as confusing, intimidating and difficult to use as all

the other computers on the market.

When I bought my first Macintosh in 1985, I thought the future had arrived. Finally--a computer you could plug in, turn on, and actually DO something with in minutes, even without reading any instructions. Someday, I imagined, ALL computers would be like this, and everyone would have a computer in their home.

Someday seems to be getting further and further away.

Recently, the folks at Apple were kind enough to loan me an Apple scanner and laser printer for review. When I opened the box, the first surprise was that I couldn't just attach a cable from my Macintosh to the scanner and another cable to the laser printer. The Mac system doesn't hook up like a stereo

anymore.

Instead, the poor user is confronted with a bewildering array of cables: "System Cables." "Peripheral Interface Cables." "Terminators." "Cable Extenders." After several hours, my office looked like Cher's bed in "The Witches of Eastwick."

Once the cables are hooked up properly, you have to install software into your hard disk (tough luck if you don't have one). All together, I was given 15 (!) floppy disks stuffed with printing tools, system tools, fonts, and things I didn't fully understand such as "laser prep," "Appletalk," "Multifinder," and "SCSI."

People used to say that the beauty of the Macintosh is that it's an "intuitive" system. The computer, in other words, is so well designed that it's OBVIOUS how to use it.

geo **TOTAL**

Mac: Still a Computer for the Home? (Continued)

Macintosh is no longer intuitive. I had to plow through the instructions for hours trying to figure out how everything worked. And after carefully connecting all the cables and installing all the software, NOTHING worked.

Fortunately, I was also given the phone number of a technical person at Apple. I talked with him

for about an hour and he determined that a component in the laser printer was broken. A new one was shipped out by overnight mail. Eventually, I got the printer and scanner to work with my Macintosh.

That's great, for me. But what if I didn't write a syndicated column and just bought the stuff in a store? Who would have held my hand? What if I was one of the majority of people in

this country who have never even TOUCHED a computer? How would I ever know what to do?

The tekkies who read this column are having a good chuckle right now. Technical people don't worry about petty problems like how to plug in a computer or how to install software. They have some innate gift of knowing these things, the same way you and I know how to hammer a nail.

(Continued...)



GIEWORLD is an independent magazine geared towards getting the most out of GEOS and all GEOS follow-on products. GIEWORLD reviews GEOS products as they are released,

discusses the programming aspects of GEOS, shares outstanding geoPaint graphics, and explores many other aspects of the GEOS product line.

Subscription rates are \$20 for 12 issues and \$12 for 6 issues. Back issues can be purchased at \$2 a

piece. To order, send check or money order to:

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Santa Barbara, CA 93103

If you have questions regarding GIEWORLD, send E-Mail on Q-Link to the handle of the same name.

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geo **JOURNAL**

Mac: Still a Computer for the Home? (Continued)

Somehow, when tekkies are born, they already know what a "Peripheral Interface Cable" is.

As for "the rest of us," we're still waiting for OUR computer.

HOTLINE: The Software Publisher's Asscoation is offering a free brochure titled "The Other Side of Computing" that's filled with non-business

applications for personal computers in the fields of recreation, education, creativity and home productivity. To get a copy, call 800-333-3944...

There's a clever disclaimer on the package of Interstel's new game "Empire": WARNING: THIS PROGRAM IS HIGHLY ADDICTIVE! CONSIDERABLE OTHERWISE PRODUCTIVE TIME MIGHT BE LOST.

QUOTE OF THE WEEK: "You just kicked over a

Macintosh 8000cx!" --Norm, on last week's episode of "Cheers."

CONTEST: This month I'm giving away "Indiana Jones and the Last Crusade." I have one IBM and one Commodore version. Send a postcard or e-mail with "INDY" on it to: DAN GUTMAN, 224 Euclid Ave., Haddonfield NJ 08033. CompuServe (70007,3263), GENie (D. GUTMAN), QuantumLink (DanGut) or Unison (DGUTMAN). The winner will be selected randomly.

The Rumor Column

This is a collection of the best rumors we've been hearing here at geoJOURNAL. Aren't rumors just SO MUCH FUN!?

DISCLAIMER:
This column consists of COMPLETELY

unverified RUMORS. And as such, they should not be treated with any amount of seriousness. These rumors may be true, but since they are unverified, they might be completely false. Please do not make any major decisions based on this information, as it might lead to undesirable

circumstances.
* RUN magazine will be coming out with a new POWER PACK disk, this time with a complete music editing/playing system, an animation system, and more games. It will also contain a new set of graphics. Also, there is a batch file copier that resembles the concept of REU ZAP from the STORM DISK I. Due date is FEB/MARCH 1990.
* Someone is working on a

geo JOURNAL

The Rumor Column ?

(Continued...)

program for GEOS to interpret post-script type fonts into LETTER-QUALITY print on 24-pin printers, much like the ability that many of the AMIGA programs have.

* CMD (Creative Micro Designs) has a couple of new items that should be coming in the next few months. One is a COMMODORE-READY hard drive that operates from a SERIAL BUS for compatibility that was unavailable with conventional IEEE interfaces. Supposedly FASTER than a 1581 in burst mode, this hard drive will be GEOS-COMPATIBLE and CHAINABLE to other SCSI (pronounced SCUZZY) devices. All this for under \$600.00 for a 20-meg drive.

The other item is RamLink. This is actually a RAM interface that plugs right into the cartridge port of the

64/128. Supposedly, you will be able to plug in a RAM unit in one slot, and a utility cartridge in the other at the SAME TIME!!!! With its built-in RAMDOS (Supposedly 20 times faster than Commodore's RamDos), it has the ability to work with almost ALL commercial software. It will also have an independent power source, so when you turn the computer off, that doesn't mean you lose data. This new interface will include JIFFYDOS (a popular disk turbo program) and a parallel port for ultra-fast data transfer when used with the above hard disk drive. There will also be a connector for ADDITIONAL RAM. (Note: Rep at World of Commodore said "Approximately \$50.00 per meg... I don't think there is a limit to the amount") Reset and pass-thru port disable switches are included. Should support 1700/1750/1764 model REU units. Due date is MARCH 1990.

* European developers have created an inexpensive interface that will hook up a standard CD PLAYER (compact disk) to a C-64/128, actually using it to load data! It comes with a disk, so you are able to sample it before you buy.



Got any hot new rumors?
Send'em to us!
Write to:

Editorials
c/o geoJOURNAL
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Portland, OR 97216

CHOOSING A PRINTER

by Mike G. Sparling of Miles City,
MT
Reprinted from "THE DIGEST", Oct.
1989

After the purchase of the computer and a disk drive, the next purchase most users make is a printer. Why is a printer

so important? It allows you to make hardcopy printouts of your work. Suddenly your computer, instead of just being a game machine, can be used for word processing, tax returns, making custom greeting cards, and printing out artwork. A printer

certainly can make your computer more versatile. Unfortunately, there are nearly as many different printers as there are people who want one. How do you choose the right printer for you?

While no one printer is right for everyone, there are some features to look for. Before you start shopping, you need to make a few basic decisions. What type of

(Continued...)

On Dot Matrix

by Mike G. Sparling of Miles City, MT
Reprinted from "THE DIGEST", Oct. 1989

For those unfamiliar with dot matrix terms, here is a brief run down.

Dot matrix means that each letter is formed by a series of dots, rather than as a whole character as with typewriters (and daisywheel printers). Most printers you will run into today are dot matrix.

Dot matrix printers are classified by the number of vertical pins in the printhead. Common configurations are 9 pin and 24 pin. These both print the same size character, the 24 pin printer uses smaller pins, which makes it harder to see the individual dots in a letter.

Most dot matrix printers offer several levels of printed output. For fast printing, they have 'draft' mode. In this

mode, the individual dots are clearly discernible. For formal correspondence, they offer near letter quality (NLQ), or in the case of 24 pin printers, letter quality (LQ). In this mode, individual dots start to disappear, and with 24 pin printers, they are undiscernible.

The industry standard for horizontal resolution is 80 dots per inch. Some printers offer several horizontal resolutions, ranging from 60 DPI to 240 DPI and greater. Apple Macintosh printers, for example utilize 72 DPI as their standard. Commodore printers utilize 60 DPI as their standard. Vertical resolution is standardized at 72 DPI. Some printers offer greater vertical resolution, also. Those printers that offer greater than standard resolutions need specific software to utilize these abilities. Geos, for example, takes advantage of these resolutions to print out reductions of normal pages.



Choosing a Printer

(Continued)

output do you want, near letter quality (NLQ), letter quality (LQ), or graphics? Or a combination of these? How much are you willing to spend? Do you want a Commodore-ready printer or not?

When deciding printed output, you decide which kind of printer to buy. If you demand LQ, for example, you have about three major groups to consider. You can purchase a daisywheel printer, a laser printer or a 24 pin dot matrix printer. A daisywheel printer is basically an electric typewriter you can hook to your computer. They are nice for business correspondence but are useless for printing graphics. You can get a daisywheel printer for about \$75. Laser printers are the nicest money can buy. Unfortunately, their prices reflect this as they start at about \$1500! They are basically copy machines that hook to

your computer, so their output is very nice. As for 24 pin dot matrix printers, they are really coming down in price. You can get one for about \$300. If you only need NLQ, you can get the most popular group of printers, 9 pin dot matrix models. These start at about \$150.

The question on Commodore-readiness is the most important to answer. Do you want a printer that you simply plug into your computer, or do you want to buy a separate interface? If you choose to go with a Commodore-ready printer, you narrow your choices down greatly. There are some very nice printers on the market that simply plug into your 64/128. The benefits to buying one of these printer is ease of set-up and cost. The drawbacks are loss of features and speed of print. Also, if you plan on getting another computer, if you go with a Commodore-ready printer, it will be useless with your new computer. If you ever decide to sell your printer, you will also have a

smaller market of buyers for it. The most glaring drawback has to do with print quality and speed.

When Commodore made their first printer, the 1525, they designed it to be an 80 dots per inch (DPI) printer. Unfortunately, in the actual production, the pins in the printhead came out too fat, and they were only able to get 60 DPI. This has since become the standard for Commodore printers, because nearly all software written for Commodore-ready printers is written for the 1525. Regrettably, this results in a coarser printout than can be achieved with 80 DPI. Commodore printers also tend to be very slow in printout, especially of graphics.

If you elect to go with a non-Commodore printer, you can sidestep all these disadvantages. The drawback of this route, however, is in complexity of set-up and cost. In order to use a non-Commodore printer, you must purchase a separate interface. The reason for this is that the industry standard

(Continued...)

Choosing a Printer (Continued)

for printer interfaces is Centronics Parallel. Commodore set up a special serial interface in the 64/128. In order for the computer and printer to talk to one another, you have to get a special interface to do this. This will add between \$30-\$100 to the cost of your printer. If you want a laser printer or a 24 pin dot matrix printer, though, you don't have a choice, as there are currently no Commodore-ready versions of either.

The interface is the key to flexibility when purchasing a printer. Some interfaces offer several different emulations. They can make your printer act like a 1525 printer, allow the use of different fonts, and add a printer buffer. A buffer is an area of RAM inside the interface that will store information for the printer while the printer is printing. This is nice because the computer

can send information far faster than the printer can print it, so a buffer will allow you to use your computer for other things while your printer finishes its work. I suggest the Xetec Super Graphics interface, although there are several others on the market.

As to choosing the actual printer, there is now another choice to make. If you have decided to go dot matrix, you need to decide what type of process is used to transfer ink to the printer. There are thermal transfer printers, ink jet printers, and impact printers. Thermal transfer printers take a special ribbon. They work by heating the pins in the printhead and 'melting' a wax-like ink from the ribbon to the paper. They offer darker printout and quieter operation, but the ribbons are more expensive, as they can only be used once. Ink jet printers use little jets or sprayers instead of pins. They spray the ink directly on the paper. They tend to be more expensive than other dot matrix printers,

but are also quieter. Impact printers are by far the most popular. They use a ribbon like a typewriter and the pins strike the ribbon, in turn leaving the dot on the paper. They offer inexpensive costs (a ribbon lasts a long time, especially if you reink it), but are louder than other types of dot matrix printers.

After you have decided all these things you are ready to shop. I suggest purchasing 'The Computer Shopper'. This magazine has hundreds of advertisers, so you can get a good grasp on what is out there, as well as comparative costs.

For most printing jobs, here is the logic I would follow for purchasing a printer.

First, go with a non-Commodore printer. The advantages far outweigh the disadvantages. You usually get more features, faster print speed, and more flexibility. As mentioned before, I recommend the Xetec Super Graphics interface.

Second, I recommend 9 pin printers. With the proper

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Choosing a Printer (Continued)

software, you can achieve impressive results. They are also much more inexpensive than 24 pin printers. (But a laser printer would be nice!)

Thirdly, stick with impact printers. Thermal transfer printers are

nice, but you end up paying a lot in ribbons. Ink jet are nice, but very expensive.

In my mind, the finest printers on the market now are the Star NX-1000 or NX-1000 Rainbow (for color printing), the Panasonic KX-P1180, and the Epson LX-810. They can all be

purchased for under \$200 through mail order.

On a final note, I suggest not buying a color printer. Most of your work will be done in black and white, and it is an unnecessary expense.

Happy printing!

by Bryce L. Tomlinson

There have been a lot of rumors flying around about this new product that Berkeley

Softworks is calling "geoRAM". As published in the last issue of *geoJOURNAL*, there have even been expressed doubts from within Berkeley's geoREP program. I just received a FACT SHEET in the mail the other day, containing the "ALL YOU NEED TO KNOW" about geoRAM... Basically, it explained a LOT of little "nothings" that Berkeley never mentioned when people were mailing their



money off to get it.

If what I do in this article seems to be slamming either the geoRAM or the 1750, it is unintentional. I am going to try to state the facts as I have seen them sprout. As there has been little if any information until now about geoRAM, I will try to supply you with something solid to base your decision upon--if you are considering the ever-popular choice of buying a RAM EXPANSION UNIT (REU).

First questions first:

Q. How much memory does the geoRAM have? How about the Commodore 1750?

A. Both carry 512k.

Q. Does the geoRAM need a high-power power supply?

A. No. Due to CMOS chips being used on-board, the REU is very low-drain.

Q. The 1750 is stated to NOT be able to work with the Commodore 64. Does the geoRAM?

A. Yes. The controller for the geoRAM works quite well with the 64.

Q. There were rumors running around that the

geoRAM

The Facts on RAM

(Continued)

geoRAM would have a built-in GEOS KERNAL. Is this true?

A. No. Although it would have been nice, (considering that Berkeley has all but STOPPED development on their Commodore line-and it would have been a great finish...) Berkeley decided to include a revised GEOS KERNAL on disk, along with a new desktop and configure. geoFANS will still need to have GEOS to run any applications though.

Here is a FACT CHART much like the one that Berkeley Softworks sent me in the mail.

	Commodore 1764	Commodore 1750	GEORAM
Memory Available	256k bytes	512k bytes	512k bytes
Can be used with 64	YES	YES	YES
Can be used with 128	NO	YES	YES
Requires external power supply on C-64	INCLUDED	YES	NO
DMA available	YES	YES	NO
Works with NON-GEOS programs	YES	YES	NO
Works with GEOS	YES	YES	YES
RAM 1541 available	YES	YES	YES
RAM 1571 available	NO	YES	YES
DiskDriver Cache (more than one type of disk drive used at once)	YES	YES	YES
RBOOT available	YES	YES	YES
GEOPROGRAMMER 1.0 compatible	YES	YES	NO

Compiled by Dave Durran, BSW Engineering, 11/16/89

The benefits of the geoRAM are obvious--as are those of the 1750. The geoRAM is smaller (about the size of 2 normal cartridges I'm told), and even MORE obviously, less expensive (\$124.95--as opposed to the 1750's

average price of \$199.99.) One other major plus is the availability of the GEORAM (1750's are HARD to find) On the 1750's side, there is its faster speed--partly due to its DMA access via the M.O.S. 17xx controller chip at the helm of its operations. It's also compatible with V1.0 of
(Continued...)

geo **TOTAL**

The Facts on RAM (Continued)

geoPROGRAMMER-very important to our beloved programmers.

You decide... They each have a plus or two--and a minus, too. If you are interested in the geoRAM, write to: Berkeley Softworks, 2150 Shattuck Avenue, Berkeley, CA 94704. If

you are more interested in the Commodore RAM, Commodore has discontinued their manufacture--but SOFTWARE SUPPORT INTERNATIONAL has 512k upgraded 1764's (TOTALLY compatible with all 1750 software) for \$199.95. For information, write to: Software Support International, 2700 N.E.

Andreson Rd., Vancouver, WA 98661.

Once you have made the choice, be prepared to take the biggest jump in speed you have ever made. RAM will be the most cost-effective investment you ever make for your GEOS system, and once you have a taste... Well... Eat up!

geodigest review

Storm Disk I

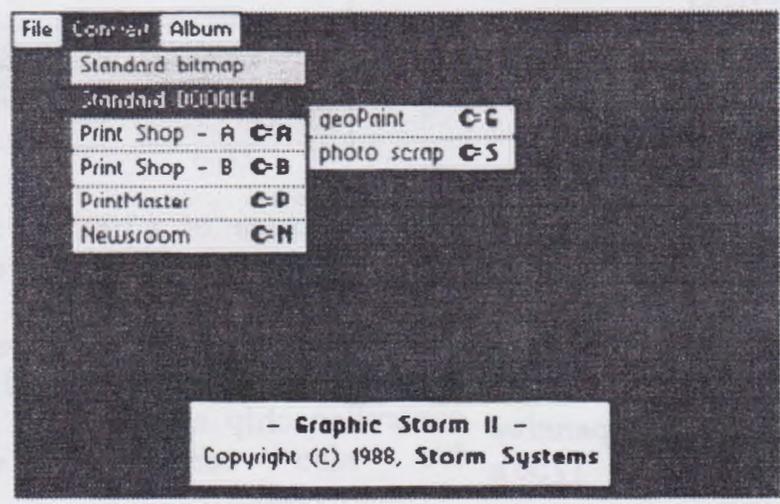
by Mike G. Sparling

(Reprinted from "The Digest", Nov. 1989)

This month's column will diverge from past columns. Rather than having a tutorial on a specific Geos application, I am going to review an exciting new event in the world of Geos.

This event is the release by Storm Systems of the Storm Disk One. For those

unfamiliar with the public domain world of geos, Joe Buckley, aka Red Storm, is one of the most famous third party programmers for geos.



His list of credits is impressive. He is responsible for Wrong is Write, Graphic Storm, Font Thief, Paint View, and MacAttack. Now he has released a disk full of the newest versions of all his favorites, along with some new programs. He is only asking \$20 for the disk, and it contains 18 programs along with their documentation.

Included on the disk are the newest versions of Wrong is Write (v8.0), Graphic Storm (v2.0), and Font Thief (v2.0). Graphic Storm allows you to translate various different graphic

geo **TOTAL**

geoDigest: Storm Disk I Review (Continued)

formats into geoPaint format. You can import Doodle!, Newsroom, Print Shop (side A or B), or high-res pictures into geoPaint format. This greatly expands the amount of graphics you can use in your geos documents. With Wrong is Write, you can translate between the different versions of geoWrite, as well as PETSII or ASCII text. When Berkeley brought out geoWrite 2.x, they made no provision to downgrade files made with this version to be read by geoWrite v1.x. If you have ever gotten the 'File beyond version 1.1' error message when trying to read a geoWrite document, you need this program. You can also import text created by most popular word processors (including those on IBM or Macs)

into geoWrite format. Font Thief is an application that geoProgrammers can use to include fonts in the programs they create.

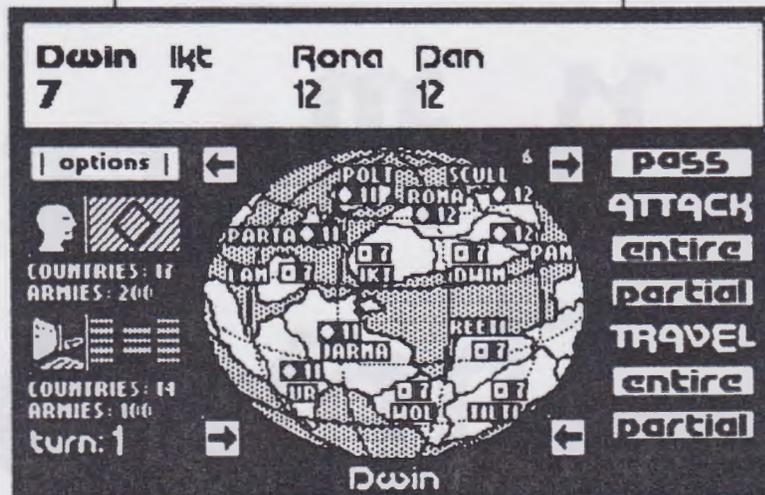
One of the most exciting new programs is Font

graphics. It must be seen to be believed. These two fine programs were written by Francis G. Kostella, another talented geoProgrammer.

On the disk are both versions of Bill Coleman's newest Convert program, v2.5. You get both the normal version, and the desk accessory version. As related in the Ask Dr. 64 column in this issue, you need these programs to convert geos programs into a form that can be

uploaded or downloaded to/from BBSs.

Joe outdid himself, though, with the Any Boot and Q.B.B. Boot programs. These two little programs allow you to create bootable copies of geos for any drive, or for the Quick Brown Box. The Quick Brown Box is a battery backed up 64K RAM expander for the 64. Using this program, and a Q.B.B., you can create a geos version that will boot in less than 10



Monster. This program allows you to create fonts from geoPaint documents. You can grab any part of the screen and make it into any letter, giving you untold flexibility in creating new fonts. There are two example fonts included on the disk, EdFont, and RainStorm.

The disk also includes the two newest versions of Circe, an excellent geos strategy game. It is very similar to Risk. The newest version, 2.0, has incredible

geoMETRIK

geoDigest: Storm Disk I Review (Continued)

seconds! Even using my 1581, I can only boot in 35 seconds! Which compares to a 1541 boot time of over 90 seconds!

If you are really crazy about geos, you should scrape up the \$20 for this disk. If you can, send it to the following address:

Storm Disk One
.c/o Joe Buckley

464 Beale St.
W. Quincy, MA 02169

Make checks payable to Joe Buckley, and tell him Mike Sparling sent you!

Next issue, we will get back to the geos tutorials.



A Merry Christmas And A Happy New Year!



from geoMETRIK!



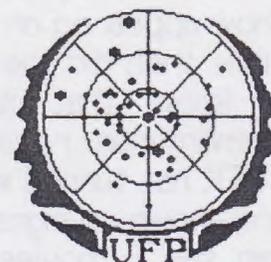
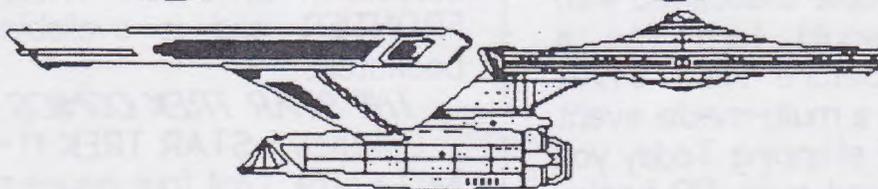
VOYAGES



THE 'ZINE' FOR STAR TREK FANS



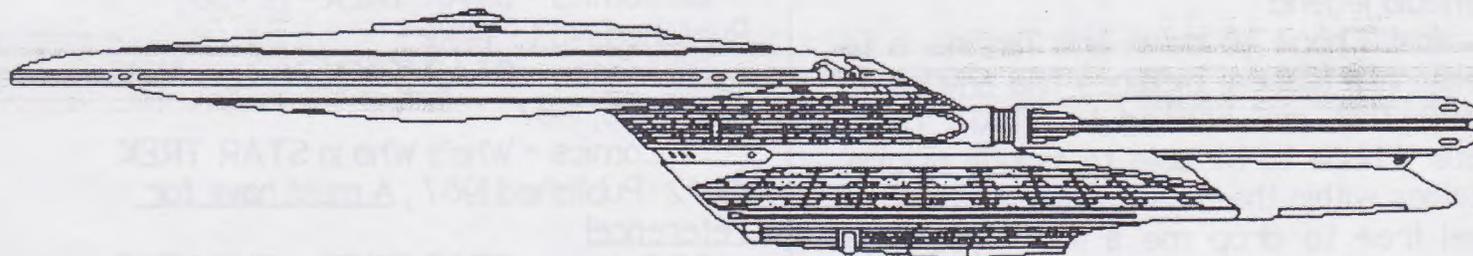
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STAR TREK



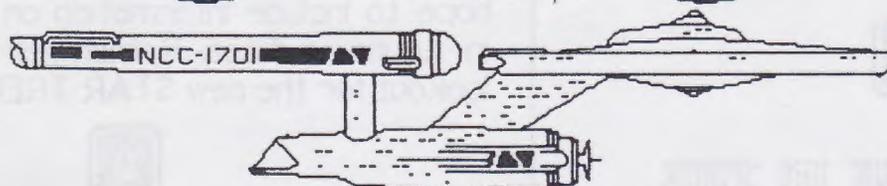
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STAR TREK
THE NEXT GENERATION



U.S.S. ENTERPRISE
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STAR TREK



EVOLUTION



Hailing Frequencies Open

SPACE . . . THE FINAL FRONTIER. These four little words are enough to bring tears to the eyes of a **STAR TREK** fan. Welcome to the first of what I hope to be many issue of **VOYAGES - The 'Zine' For Star Trek Fans.**

Over twenty years ago a new television show appeared on NBC called **STAR TREK**. Little then did the people associated with it know that it would turn into a phenomenon never before seen. **STAR TREK** has turned into a multi-media event and shows no signs of stopping. Today you can see 5 movies, read over 100 books, watch all 79 original episodes, pretend your Captain Kirk on your computer, and even meet your favorite character at one of the many conventions held throughout the year. **STAR TREK** has truly become a media legend.

What I hope to do in this fanzine is to relay information, pictures and any other items that are related to **STAR TREK**. Later I hope to be able to include original stories within the **STAR TREK** mythos. So feel free to drop me a line if you have something to say. My address will be printed at the end of the issue.

So sit back and enjoy the issue. I hope you can find something useful in it. Mr. Sulu. . . Ahead warp factor 5.



STAR TREK IN THE COMICS

How many of you were aware that **STAR TREK** has also been published in comic book form?? Since 1967 **STAR**

TREK has been published by various companys and I have compiled a listing of what is out there.

I have also just found out that DC comics will be printing two **STAR TREK** comics. One will feature the original characters and the other will feature characters from **STAR TREK-THE NEXT GENERATION**. They both should be out in August so be on the lookout for it. DC Comics has also just released the comic adaptation of **STAR TREK V-THE FINAL FRONTIER** and is available at your local bookstore.

THE STAR TREK COMICS:

Gold Key - **STAR TREK** #1 - #61 ; Published 1967 - 1979 ; Last four issues reprints.

Golden Press - **STAR TREK** #1-#4 ; Reprints Gold Key #1 - #38 ; Published 1976 - 1977

Marvel Comics - **STAR TREK** #1 - #18 ; Published 1980 - 1982

DC Comics - **STAR TREK** #1 - #56 ; Published 1984 - 1988

DC Comics - **STAR TREK** Annuals #1-#3 ; 1985, 1986, 1987

DC Comics - Who's Who in **STAR TREK** #1-#2 ; Published 1987 ; A must have for reference!

DC Comics - **STAR TREK - THE NEXT GENERATION** #1-#6 ; Published 1988

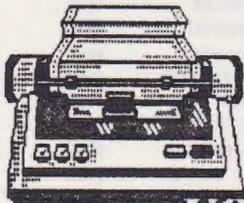
I hope that I have covered it all. If not let me know and I will publish an updated list. I also hope to include information on British comics in future updates. Remember to be on the lookout for the new **STAR TREK** comics.



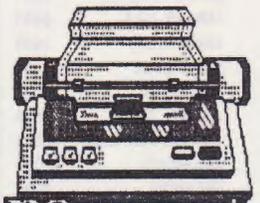
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VOYAGES - COPYRIGHT JOHN TACKETT 1989
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album reverter	0001	quick dater	0003	labeler.doc	0006	bluechip (gc)	0008	raw v1.1	000e	geodex.fix	000h
convert u2.1	0001	geolist2.0	0003	getdirectory.doc	0006	c.itoh 8510 (gc)	0008	mouseup3.0.arc	000e	geocalprint	000h
convert(8a)	0001	geomath	0003	readm1st	0006	epson fx-80 (gc)	0008	128 mouse jh 1	000e	doc.goadiox	000h
photo print	0001	geohexcol	0003	big clipper.doc	0006	epson jx-80 (gc)	0008	1124-c64 ver.lbr	000e	goodies.dec89	000h
icon editor	0001	albumanimator	0003	ihinfo	0006	epson mx-80 (gc)	0008	star 1m-1000	000e	leisure	000h
convert 3.0	0001	geodex upgrade	0003	rowplayer	0006	gemini 10x (gc)	0008	wormdesk	000e	peter.8x10	000h
pattern edit 2.0	0001	big clipper	0003	paint-scrap.doc	0006	ibm 5152+ (gc)	0008	springboard	000e	pscrapp.u2.0.doc	000h
macattack	0001	scrapeek 3.2	0003	mac - 64/eps.doc	0006	oki ml-92/93 (gc)	0008	sb documentation	000e	xmas girl	000h
imagecon	0001	retriever 2.0	0003	lasmatrix table	0006	star nb-15 (gc)	0008	blackout 2	000e	sdump pic	000h
protogeos2	0001	iqbull	0003	lightpen	0007	star nx-10 (gc)	0008	geos.to.bin	000e	bear1.mac	000i
convert 1.4	0001	labeler	0003	comm 1351(a)	0007	star sq-10 (gc)	0008	photo mover 1.0	000e	public	000i
macgeopoint	0001	geodiskedit	0003	koala pad ii	0007	gemini ii	0008	mover 1.0.doc	000e	railroad1	000i
geopointer	0001	untrash	0004	comm 1351	0007	epson dbl.prt	0008	combiner	000e	railroad2	000i
geodump	0001	copy editor	0004	joystick	0007	quad sq1.prtu2	0008	identifontu3.2	000e	santa by jeff	000i
auto pref	0001	quickstart	0004	supersketch	0007	quad dbl.prtu2	0008	bluepencil	000e	websters	000i
textgrab 1.1	0001	stormsystemsdemo	0004	penjoy	0007	c.itoh 8510a	0008	macattack ii.doc	000e	amiga.lady	000i
note printer	0001	geopassword	0004	onypen	0007	nx-1000 rainbow	0008	macattack ii	000e	city girl	000i
piconvert	0001	geodirprint2	0004	inkwell	0007	1526	0008	graphic storm	000e	raquel	000j
psbox2	0001	paint-scrap	0004	mouse 1351	0007	laserwriter 2.1	0008	getgraphic	000e	bestoflos.arc	000j
geovert	0001	dump	0004	mouse2	0007	mps-1000	0008	album reverter	000e	astro	000j
ps/pm/hr	0001	dump double	0004	joystick2	0007	c.itoh 8510 d.s.	0008	bigclippers3	000e	checkmate	000j
computereyes	0001	geokeyboard	0004	koala pod	0007	c.itoh 8510 q.s.	0008	photo print 2.1	000e	trains/01	000j
change printer	0001	transtext	0004	koala pad2	0007	epson red.	0008	geosidplayer	000f	mega star trek	000j
rboot	0001	form: petascii	0004	kpad ii2	0007	c.itoh red.	0008	128 da auto-boot	000f	mega nazareth 2	000k
psnop/doodle	0001	form: 152	0004	koala pad iii	0007	gemini ds	0008	fontview	000f		
paint drivers	0001	change input	0004	koala pad 1	0007	epson fx-80 ds	0008	photo mover 1.0	000f		
quickview	0001	convert-u2.5da	0004	atari trakball 2	0007	gemini qs	0008	mover 1.0.doc	000f		
blackout	0001	convert-u2.5	0004	joystick port 2	0007	epson fx-80	0008	antigrao info	000f		
icon edit 2.1	0001	row	0004	fx80 4/2	0008	ibm 5152+ ds	0008	font editor 2.2	000f		
convert u2.2	0001	printdrvpatcher	0004	bitshift 10/x	0008	ibm 5152+ qs	0008	fontswap	000f		
geofont	0002	lasmatrix edit 2	0004	dblstrike10/x	0008	imwrtr ii qs	0008	icon edit 2.1	000f		
geos2.0 hacker	0002	lasmatrix 2-sq10	0004	pan draft	0008	mps-1200 ds	0008	icon grabber 1.5	000f		
notes->album	0002	fftb	0004	pan dbl quad	0008	fx80 double	0008	colorsmasher	000f		
seq2textscrap1.3	0002	unlock	0004	pan dbl	0008	imagewriterqs	0008	dateprint	000f		
geohacker v1.6	0002	picshow	0004	pan quad	0008	mps 1200 qs	0008	unlock v1.1	000f		
multiprint	0002	newsysmod	0004	comm compat	0008	star nx-10 ds	0008	getdirectory	000f		
graphic labels	0002	new system error	0004	mps-803	0008	imwrtr ii ds	0008	geodiskedit28	000f		
eps.label.driver	0002	128 da auto-boot	0004	bluechip m120	0008	star nx-10 qs	0008	noteprint	000f		
hulmeuview	0002	geocalprint	0004	dualshift 10/x	0008	epsonlaser2	0008	40 scrn print	000f		
desk organizer	0002	antigrao info	0004	epson mx-80	0008	sq 00	0008	center 80	000f		
scrapeek 2.2	0002	file crc calc	0004	c.itoh 8510	0008	sq 01	0008	set pattern	000f		
writer's cramp	0002	bin.to.geos	0004	star sq-10/15	0008	sq 10	0008	pattern edit	000f		
icon editor	0002	bin.to.geos.doc	0004	oki ml-92/93	0008	sq 11	0008	set patt.doc	000f		
geodirprint	0002	bin.to.geos.txt	0004	okimate 10	0008	epson lx-80	0008	paintview1.2	000f		
quickview	0002	fontswap	0004	epson jx-80	0008	epson lq-1500	0008	geoview	000f		
wrong is write	0002	rawtogeos	0004	comm. 1526	0008	laserjet par.	0008	scrapeek 3.4	000f		
disk protect v2	0002	geoterm.patch	0004	comm. compat.	0008	laserjet ser.	0008	photo print 2.1	000f		
toolkit	0002	picshow3.3	0004	gemini 10x	0008	toshiba p321	0008	bigclipper3	000f		
ultimate stage	0002	clickmefirst!	0005	hp laserjet	0008	fx80 pointpages	0008	flag	000f		
us scrap	0002	multi print doc	0005	ibm 5152+	0008	ascii only	0008	female	000f		
icon edit	0002	solo docs	0005	imagewriter	0008	stornx100c	0008	geolist2.1.arc	000f		
analog-clock	0002	printerdrivers	0005	imagewriter ii	0008	fx-80c	0008	geoterm.patch	000f		
convert	0003	getdirectory!	0005	oki 120	0008	read dbl drivers	0008	good.nou89.sda	000f		
analogclock	0003	states n cap.doc	0005	mps-.801	0008	epsonlaser 2.1	0008	geoprintdemo.sda	000g		
blackout	0003	l.matrixedit 1	0005	okimate 20	0008	quicksilver 3	0009	gealabel	000g		
geograph	0003	l.matrix edit 2	0005	scribe	0008	quicksilver 5	0009	printit	000g		
geograph sample1	0003	l.matrix edit 3	0005	star nb-15	0008	quicksilver 10	0009	ruler	000g		
geograph sample2	0003	l.matrix edit 4	0005	star ni-10(com)	0008	quicksilver 11	0009	scantastic	000g		
geograph sample3	0003	l.matrix edit 5	0005	star nx-10	0008	quicksilver 13	0009	scantasimodifier	000g		
getdirectory	0003	ult.stage.doc	0005	star nx-10c	0008	quicksilver 14	0009	scrap it	000g		
musicbox	0003	musicbox.doc	0005	mps 1200	0008	quicksilver 16	0009	paint-scrap	000g		
lasermatrix edit	0003	analog clock.doc	0005	oki 120 niq	0008	quicksilver 19	0009	panic button	000g		
lasermatrix sq10	0003	geosliders.doc	0005	olivetti pr2300	0008	quicksilver 20	0009	quik-top	000g		
custom print	0003	productivity.doc	0005	riteman co	0008	quicksilver 21	0009	autoclock	000g		
text print	0003	geograph.doc	0005	fx80 4/1	0008	quicksilver 23	0009	8/pretty.8	000h		
font editor 2.2	0003	font editor docs	0006	imagewriterds	0008	quicksilver 28	0009	bsa clip art 2	000h		
db_editor	0003	big clipper.doc	0006	epson fx-80 qs	0008	quicksilver 29	0009	business 1a	000h		

geonETRIX PD Library



1990



Hope its a GREAT year.
your friends at Rainbow Software

January

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

March

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

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Telephone Number

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What Type of System Do You Have?

- C-64 or 64c
- C-128
- 1541 Drive
- 1541 Drive
- 1750 RAM
- 1700 RAM
- 1764 RAM
- 1821 Mouse
- 300 BAUD Modem
- 1200 BAUD Modem
- 2400 BAUD Modem

Which Version of GEOS Are You Currently Using?

- GEOS 64
- GEOS 64 2.0
- GEOS 128
- GEOS 128 2.0

Which GEOS Applications Do You Own?

- GeoWrite Workshop 2.1
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- GeoDex
- Graphics Grabber
- GeoTerm
- GeoFile
- GeoCalc
- GeoChart
- DeskPack
- FontPack
- Personal Newsletter
- BackerBasic
- Others Name

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- Desktop Publishing
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- Mailing Lists
- Others Name

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