

The LIAUG Lighthouse

The newsletter of the Long Island Atari User Group

January 1989
Volume 5 No 1



L I A U G Man Of The Year

Long Island Atari User Group

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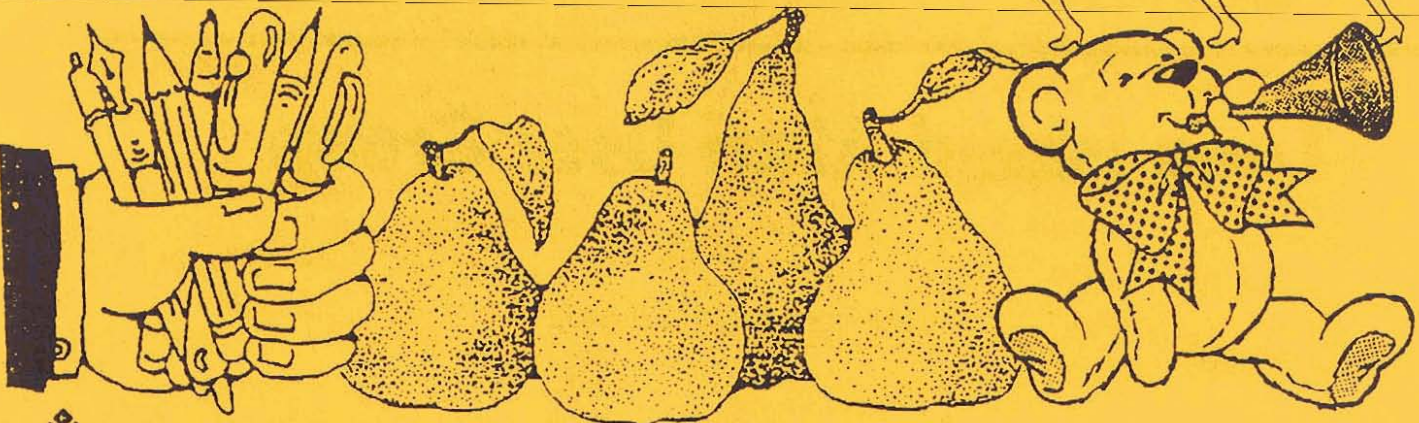
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Directions to the library: From the Long Island Expressway: Take exit 58 North (Old Nichols Road), continue north for approximately two miles and make a left (west) turn onto Smithtown Blvd. Continue west for 1 1/2 miles to the Nesconset Plaza on the right hand side of the road. The library is located in the west end of the plaza.

From The Northern State Parkway: Take the Northern to the end where it continues east as Veterans Memorial/Nesconset Highway (routes 347/454). Go east approximately two miles and take the left fork (347). Continue for another three miles to Terry Road. Make a right turn onto Terry Road and take the left fork (approximately 3/4 mile) onto Smithtown Blvd. The library will be in the Nesconset Plaza on the left hand side approximately one mile from the fork. Meetings are open to all those interested at no charge. The meetings begin at 12:00 p.m. in the library's community room and end at 4:00 p.m.

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- Librarian 8 bit Jim Harris
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- BBS Sysop Patrick J. Mulvey
- Librarian Video..... Neil Trenk
- Int'l correspondentHorst DeWitz

Club Meetings

The Long Island Atari User Group Meets once a month at the Nesconset branch of the Smithtown Library. Membership dues are \$15 per year plus \$5 for the mailing of the newsletter.

The newsletter is currently being produced on a 520ST with 1mbyte memory and a 20mbyte hard drive. Software is Timeworks Desktop Publisher.

If you have any questions or comments about The Lighthouse or LIAUG, please write to our mailing address or post on our BBS.

Our address is:

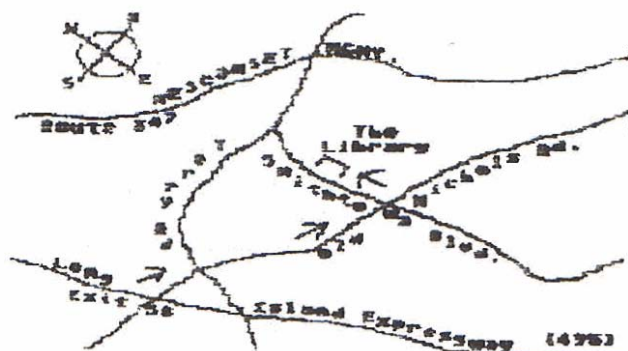
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Our BBS number is:

(516) 221-8462

If no answer call:

(516) 221-2964 and leave a message.



SIG HARTMAN VISITS PAC By Bill Pike (PAC)

On December 5th Mr. Sig Hartman joined the PAC for their first ever Christmas Party. Mr. Hartman brought the latest news from Atari to our user group along with quite a few other goodies for the raffle.

This project started back in August when David Moore (Special Project Director) paid a visit to Atari in Sunnyvale.

As we drove to the airport we still were not convinced that Mr. Hartman would arrive. We felt that we were still working with the old Atari that would promise anything but give little if nothing.

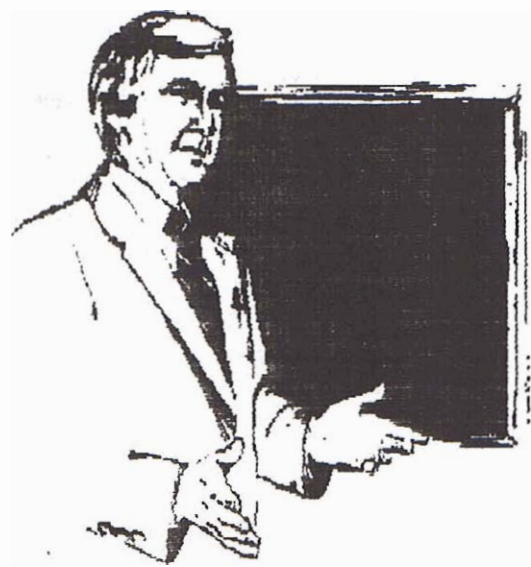
After a lot of running around to get things ready for the Christmas Party in the morning, and massive cleaning of a car both Dave and I were more than a little nervous. There we were in our "I Speak Atari" hats trying to find out where the Short-Term parking was and checking our watches every few minutes.

We finally got to the gate and still were discussing what to do if Mr. Hartman was a No-Show. Then surprise, surprise, surprise, who came walking out of the boarding ramp but a white haired gentleman with a brown garment bag and attache case. There were also two cardboard boxes waiting for us in the baggage area with the Fuji symbol on them full of goodies for the raffle. ATARI HAD COME THRU. As it turned out Sam Tramiel could not have picked a better spokesman than Mr. Hartman.

Most of the trip to the hotel was spent in a three-way discussion of the lack of support for USER-GROUPS as well as the lack of support for Atari owners. Sig replied to our questions, admittedly some of them were rather pointed, stating the new policy of Sam Tramiel and Atari of MUCH greater support for User Groups and Atari owners. Also brought up during the trip was Sam

Tramiel and Atari's support and lack there of for the 8-Bit systems. Sig said that Sam Tramiel was anxiously looking to support the 8-Bit but that there is a lack of software being written. The new Diamond (ST Jr.) was

mentioned to him and he said that Sam Tramiel and Atari had received several copies of this program but it still had some bugs in it. He said that if Atari can get a bug free version of the program that Sam Tramiel would consider including it with the XE series computers as well as helping advertise and market the product. There wasn't much time left after the previous grilling to discuss much else except what time we would pick him up from the hotel to go to the meeting.



The meeting started out with, what else, food. There were sandwiches, soda, potato chips, and cake with the Atari symbol on it. After the eating slowed down it was Mr. Hartman's turn.

The first thing that Mr. Hartman said was to assure us of a fundamental change in the policy of Atari. Sam Tramiel and Atari is going to give much more support the User-Groups. Some of this support will be in the form of a much closer contact between the user groups and Sam Tramiel and Atari. The

support will also come in the form of donated, by Sam Tramiel and Atari, equipment and software. There was also discussion of a published list of all the User-Groups in the United States and a listing of all the Atari User-Groups worldwide. Another thing was mentioned was that the Federated Stores that Atari purchased would be giving out lists of local User-Group information and the possibility that Atari might pay for 1 years membership to a local User-Group with each computer purchased. Sam Tramiel and Atari was also interested in assisting user groups to have shows and public events, Atari would loan front money as well as assistance in contacting other groups who have put on shows. We were assured a number of times of the support of the 8-Bit machine as well as the ST machines. Several times Mr. Hartman ask, almost pleaded for those who were writing 8-Bit software to please submit the programs to Sam Tramiel and Atari for possible purchase and royalties.

There were questions regarding the lap-top ST. Mr. Hartman said that it was still in unfinished form and that Atari was still working on it. The questioning moved to

the TT machine (68030 processor based, True Thirty Two bit machine). He stated that the machine would be upward compatible with the existing ST's and Megas. Also that the TT would be able to run either the standard ST operating system or UNIX 5.3. There were questions regarding the lack of ST's and Megas in the USA and why were all the machines being shipped to Europe. The reply was that the machines were selling faster than they could be produced, however that Sam Tramiel is committed to shipping many more machines (ST's and Megas) to the U.S. In the coming year even though this might cut into the European market. The DRAM shortage was discussed and we were informed that this had alleviated to some degree.

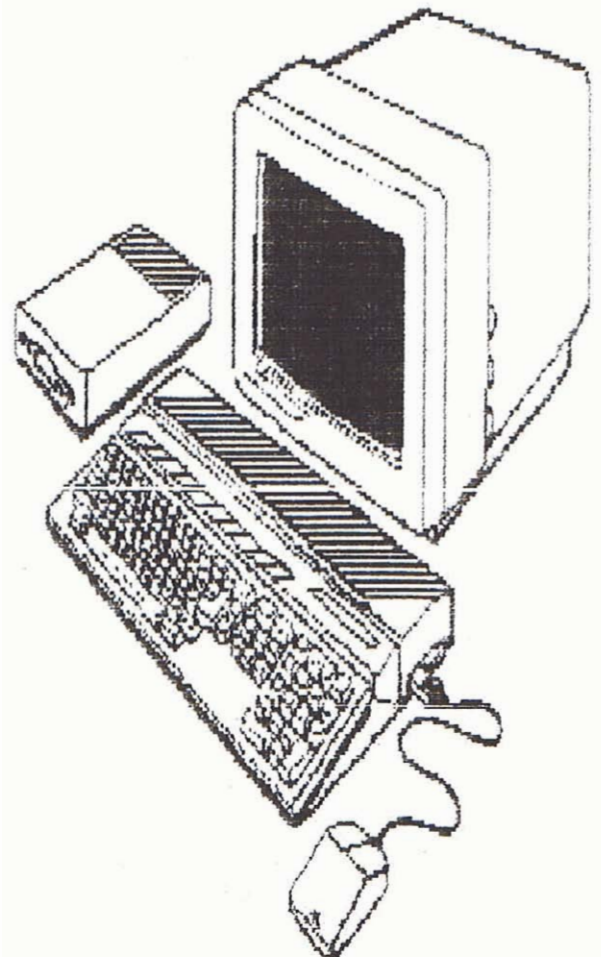
The possibility of a 16-Bit Game Machine was brought up. We were informed that this is in the works. The long talked about Atari PC was asked about. Yes, Sam Tramiel and Atari is in the final stages of preparing to market this in the U.S. Yes, the machine is basically what the advertising has said. The Transputer (Abaq) was spoken of and that it still was under development as a stackable unit to the Mega machines. The machine would have true multi-processing capability as well as a expansion port to daisy-chain several Transputer units together for added speed and memory. The possibility of a add-on math co-processor for the ST and Mega machines was asked about. The reply was that nothing was immediately in the works for this. Several other questions were adeptly handled by Sig then the meeting went to the distribution of goodies, by raffle. There were two XEGS's (XE Game Machines), copies of the new word processor, for the ST, Microsoft Write from Atari, about a dozen educational programs, and about a dozen game cartridges for the 8-Bit machines. All of this was donated to the club by Sam Tramiel. There was also a \$15 dollar Gift Certificate donated to the raffle by Portland Computer Accessories.

We would like to express our thanks to Sam Tramiel for the opportunity to meet with Mr. Hartman. We also appreciate the donation of all the software and hardware that made the meeting so successful. We look forward to a much closer relationship with Sam Tramiel and Atari than in the past.

Sam Tramiel and Atari was willing to send one of it's most able executives to meet with a SINGLE User-Group. We hope that this foreshadows a much greater support of the User-Groups by Sam Tramiel and Atari, possibly a rotating schedule of Atari people meeting with User-Groups. Atari is still supporting the

8-Bit machines. In fact, during the trip back to the airport Sig asked us to share the upgrade information on the 130XE machine. He was also taking some of our suggestions as far as a new 8-Bit with a 65816 microprocessor and 320K of memory as well as a expansion bus and the possibility of emulation modes for the other popular 8-Bit 6502 based systems. We hope that this event will prove to be the rule rather than the exception in our contacts with Atari.

We look forward to the release of the Diamond operating system.



Copyright Law

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(continued from December 1988)

1.7. Licenses may change the rules

At this point, let me remind you that we have assumed that the program you got at the store was sold to you, not licensed to you. Licenses may change the rules.

1.8. Can you modify the program?

Now, you're a clever programmer, and you know the program could run faster with some modifications. You could also add graphics and an interactive mode and lots of other stuff. What does copyright law say about your plans? Well ... several different things, actually. First, recall that the copyright owner has the exclusive right to make derivative works. A derivative work is a work based on one or more preexisting works. It's easy to recognize derivative works when you think about music or books. If a book is copyrighted, derivative works could include a screenplay, an abridged edition, or a translation into another language. Derivative works of songs might be new arrangements (like the jazz version of Love Potion Number 9), a movie soundtrack, or a written transcription, or a long version, (such as the fifteen minute version of "Wipe Out" with an extended drum solo for dance parties). In my opinion, you are making a derivative work when you take the store-bought word processor and modify it to perform differently. The same would be true if you translated a COBOL program into BASIC. Those are copyright infringements -- you've horned in on the copyright owner's exclusive right to make derivative works. There is, however, some breathing room. The Software Act generously allows you to adapt the code if the adaptation "is created as an essential step in the utilization of the computer program in conjunction with a machine" For example, you might have to modify the code to make it compatible with your machine.

1.9. Can you break the copy protection scheme?

Moving right along, let's assume your store bought program is copy protected, and you'd really like to make a backup copy. You know this nine-year-old whiz who can crack any copy-protection scheme faster than you can rearrange a Rubik cube. Is there a copyright violation if he succeeds? There's room to argue here. When you try to figure out if something is

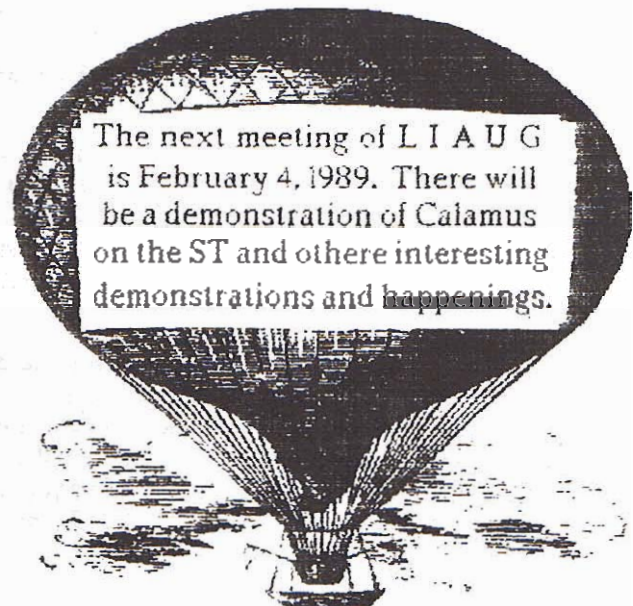
an infringement, ask yourself, what exclusive right am I violating? In this case, not the right to make copies, and not the right to distribute copies. Public performance and display have no relevance.

So the key question is whether you are making a derivative work. My answer to that question is, "I doubt it." On the other hand, I also doubt that breaking the protection scheme was "an essential step" in using the program in conjunction with a machine. It might be a "fair use," but that will have to wait for another article. Anyone interested in stretching the limits of the "fair use" defense should read the Sony Betamax case.

1.10. Summary

Let me summarize. Copyright means the copyright owner has the exclusive right to do certain things. Copyright infringement means you did one of those exclusive things (unless you did it within the limits of the Software Act, i.e., as an essential step....).

To be continued.



The next meeting of L I A U G is February 4, 1989. There will be a demonstration of Calamus on the ST and other interesting demonstrations and happenings.

COST-Talk

ASCII Version of the Official Central Ohio ST User
Group Newsletter National Release-November 1988

COST-Link: NEW COST BBS UP AND RUNNING

INTRODUCING COST-Link! (614) 864-7234

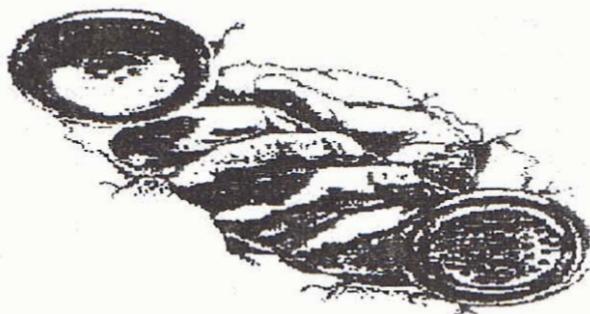
COST-Link, the new COST BBS is up and running. The name is a derivative of the word "cross-link." According to Webster, a cross-link is a "connecting part that connects parallel chains in a complex chemical molecule." In layman's terms, if you've ever seen the little linker-toys that chemists use to show molecular structures, a cross-link is the little wooden stick that connect the two round things!

The point is that our board connects individual members of a complex (and diverse) group.

COST-LINK will feature multiple databases that will include: a profile of COST, BBS rules and information, the latest issues of ST-Reports and information on BBSing in general from Joe Lombardi. We will also be introducing FOREM-Net soon. This will allow us to communicate with other FOREM boards across the world. COST members (and only COST members) will soon be able to play online games again as we attempt to re-open the game doors. Non-members will now have an upload/download ratio of three-to-one, to get them to support the board by either sending in \$15 to join the group or by uploading files of their own.

The board will continue to feature multiple message bases as well as an ST News section and electronic versions of past COST newsletters for access by COST members only.

So give COST-Link a call tonight! COST-Link runs at either 1200 or 2400 baud - now the choice is yours!



FILESPY

ST public domain software review by Byron Johnson
(GLASS)

FileSpy is an improved text viewing program that's installed as an application on the desktop. It replaces the GEM dialog box that usually appears when you double click a text file from the desktop. It adds the ability to "page up", search for "keywords", view a file very quickly since it loads it into memory and print a portion of a file. Along with all the options available under the original GEM view/print/cancel function. You do lose the ability to scroll down one line at a time. This program takes up little memory (10.7 k) and is only loaded if you need it.

Here's how to install FILESPY.TTP: WITH NO HARD DRIVE

1. Copy FILESPY.TTP to your boot disk in drive A:
 2. Open a window on A:, single click FILESPY.TTP
 3. Go to the Options menu, single click on Install Application
 4. A dialog box will appear, asking you to type the Document type: type TXT or DOC or INF or ME
 5. You may click on FILESPY.TTP and Install Application as many times as you want to install as many file extensions (TXT DOC INF ME) as you want. But you can only type one extension at a time.
 6. Now save the desktop.
 7. Load a word processor capable of saving a ascii file.
 8. Load your new desktop.inf file and modify the application (FILESPY.TTP) like this: from: #P 03 04 FILESPY.TTP@ *.TXT@ #P 03 04 FILESPY.TTP@ *.DOC@
to: #P 03 04 A:\FILESPY.TTP@ *.TXT@ #P 03 04 A:\FILESPY.TTP@ *.DOC@
 9. Now save the desktop again as an ascii file and reboot the computer.
 10. If done correctly, you should be able to double click any TXT or DOC file and the desktop will load FILESPY.TTP and your text file automatically. You'll now be able to view a text file very quickly. This could make viewing those 80k ST Reports much easier.
- WITH A HARD DRIVE Just put FILESPY.TTP on drive C: and set the path in the DESKTOP.INF file for C:\

Here's a list of commands available from FileSpy:

[F1] search for string _____ [F2] search for next occurrence of string [F3] mark page (for printing or finding later) [F4] return to marked page [F5] print marked page [F10] print entire file [ctr/nome] go to top of file [Insert] go to bottom of file [help] displays menu of commands [undo] exit FILESPY

I would like to see block functions added to this program, but only if they don't take up too much memory. Being able to mark off a certain portion of a file and print it is a valuable function. A START and END BLOCK would allow printing exactly what I need to print.

An improvement on this technique, would be adding a text editor like TEMPUS or PRO ED as an installed application. This would give you many more features including editing but would use up more memory and take longer to load.

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MAGIC SAC TIPS by: Douglas Hodson:

Columns extracted from the MVACE NEWS Official newsletter of the Miami Valley Atari Computer Enthusiasts P.O. Box 24221 Huber Heights, OH 45424

Edited by Bruce B. Hansford MVACE NEWS Editor

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MAGIC SAC TIPS #3 -Setting up the Hard Disk-

So you finally did it, you forked out the big bucks for that new 20 (or larger) megabyte hard disk. You can now completely configure your ST system to not only emulate a Mac, but emulate a very, very fast Mac.

The addition of a hard disk to the Magic Sac is like adding a turbo to a car. Naturally to emulate the Mac you need the Magic Sac cartridge from Data Pacific plus the Apple Mac's ROM chips from Apple (these ROM chips can be picked up just about anywhere). Also before we get into the nitty gritty, I would advise (in fact demand) that you backup any software that you currently have on your hard disk! This is in case you make a mistake (or I make a typing mistake).

In order to setup the hard disk we need to plan ahead. First you must ask yourself some questions. Do you plan to use the Magic Sac often? If you answered no, use the section entitled "Small MAC Setup" for your configuration. If you answered yes, Do you plan to use a lot of different software for the Magic Sac or did you buy it to run one or two packages only? If you plan to use your Magic Sac often but only for a couple of software packages also use the section entitled "Small MAC Setup" for your configuration.

The only people left should be the people who are truly taking advantage of the Magic Sac with running lots of different Mac software and using it often. These people are truly turning their ST's into full blown Macs. For all of these people, read the section "Full Blown MAC Setup" for your configuration. Don't take these questions lightly, you can store all of your Mac programs on your Atari hard disk but not intermixed with standard ST programs. In other words, you must dedicate hard disk space to the Magic Sac. After this space has been reserved the ST no longer "sees it". If you dedicate 10 megabytes of hard disk storage, well you only have 10 megabytes left for the ST. There is no sharing! In order to change it, you must reformat your hard disk (you don't really have to, but I'm not getting into that right now). So as I say, don't take these questions lightly, I change my hard disk setup often

because I also don't plan ahead (there are other reasons, read "Hard Facts about Hard Disks" in this newsletter).

The Magic Sac reserves space on the hard disk by taking over complete control of a hard disk partition. So if you have 4 partitions setup on your hard disk and you tell the Magic Sac to set one of them up as a Magic formatted partition, after the formatting is complete you will find that you can no longer access this partition with the ST. You can only access it from the Mac. In principle setting up the hard disk for the Magic Sac is simple, just format one of your partitions on the hard disk in Magic format, any way you go. That's just about it, except that there are 2 different Mac formatting schemes remember? (See TIPs column in February newsletter issue) There is MFS and HFS.

The MFS formatting scheme is by far the simplest to use when setting up the hard disk, but as with anything else in life it is also very limiting. MFS (Macintosh Filing System) does not have provisions for creating folders. All files are located in the root directory. So if you use a large number of files, your hard disk access time drops considerably (believe me I know!). MFS does support a function that emulates folders. In fact it emulates folders so well that you might not even notice that these folders are not real. The apparent folders on the desktop is only an illusion to the computer user. If you're not convinced that this is only an illusion, create 2 folders and give them names. Then copy some file, any file, into one of the "folders". Then copy the same file into the other "folder". Did you get a message saying something like "name already exists or replace file?". There's your proof. If true folders were created by the computer than this message would never have shown up.

So how do I create real folders? You guessed it, use the HFS (Hierarchical Filing System) formatting scheme. How do I use HFS? First you need to format the partition (wait don't do it yet! read on) into Magic HFS format. Then you need to load a program called Hard Disk 20 on bootup (that is, when the Mac boots). The file is placed in the folder called System Folder,

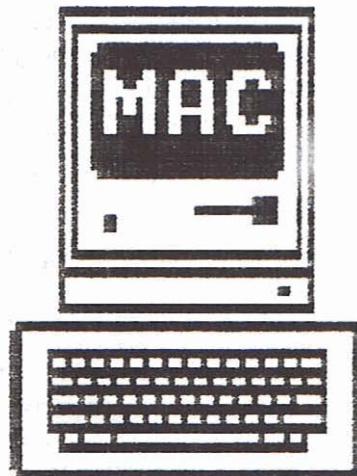
which also contains the Finder and System files. When this disk is booted, Hard Disk 20 will be loaded.

Note: The name "Hard Disk 20" makes the program sound as though it is used with hard disks only. This is not the case, HFS can be used with floppies. If you think of the "Hard" part as being real folders or "Hard" directories you can eliminate the confusion. I don't know if this is what Apple meant when they named it but it's easy to remember.

About this time you're probably asking yourself, why does Doug keep saying HFS is hard to install? I thought you would never ask. Well, its not hard to install, but some more ground work does need to be covered.

First of all, if Hard Disk 20 is not installed, the Macintosh can only read MFS format. You say no big deal, just install it. Well not quite, remember when the

Sac boots, all it knows how to read is MFS. This means that the boot disk or boot partition must be in MFS format. After the System and Finders are loaded, Hard Disk 20 is loaded. After Hard Disk 20 is loaded, the Magic Sac can read both MFS and HFS format. This means that you can format a hard disk partition in Magic HFS format but you must boot the Magic Sac with something that is in MFS format (as it can't read HFS format until Hard Disk 20 is loaded). Notice I said, you must boot the Magic Sac with something! What is some-



thing? Something can be a floppy disk formatted in MFS format or a hard disk partition formatted in MFS format. What does all this mean? It means that in order to boot the Magic Sac off the hard disk you have to have 2 partitions dedicated to the Sac. The first partition is in MFS format which is where the Magic Sac will boot from and the second is in HFS format which is the partition the Mac can now read and write after the MFS partition has been booted. Understand?

Your fingers are probably getting itchy for that mouse button but bear with me just a little longer before we start clicking on programs. We now know that the Magic Sac needs 2 partitions to be booted off the hard

drive if we use HFS. If we use MFS we just need one partition. One of your next questions will be, how big should the partitions be? Glad you asked. It depends on how you answered the questions at the beginning of this article. Another way of asking the question would be, How much room on the hard disk are you willing to give up to the Magic Sac? Here's how I answered these questions for myself. If I was to setup a Small Mac configuration I would set aside 3 or 4 megabytes for the Magic Sac, and I would format it in MFS format. Why? Because 3 or 4 megabytes is small enough so that the Sac won't slow down due to massive file storage and large enough to be more useful than sticking with floppies.

Secondly the chance of creating files that have the same name is reduced compared to a huge (7 Meg) partition. If I were to create a full blown Mac setup, I would first create 1 partition that is 1 megabyte in size and a second that is 7 megabytes in size. Then format the small partition in MFS format and the large in HFS format. The Sac would boot off the small partition which contains System, Finder and Hard Disk 20 (all three located in System Folder) then continue reading from the large partition which only contains System and Finder (no Hard Disk 20 here). If Hard Disk 20 was on the large partition it will be loaded again and start looking for something else to boot. Notice that after Hard Disk 20 loads it asks for the current disk (or partition) to be ejected, then wants a disk (or partition) that is in HFS (or MFS) format to be inserted. You will not see this effect if you boot off the hard disk, but you will if you boot from floppy. OK READY?

******* SMALL MAC SETUP *******

1) Create a partition that is 3-4 megabytes in size and contains no files (up to 5 megabytes is allowed).

2) Run the program called MAGICHD.PRG that came with your Magic Sac. Its on the disk that contains the startup programs for the Magic Sac.

3) Click OK, then highlight the partition that you want to give to the Mac. I always use the last partition (E,F so forth).

4) Click OK, then click on MFS format, then click OK. The hard disk will spin awhile.

5) Now you have a Magic MFS formatted partition on your hard disk.

6) Notice that you can no longer access this partition from the ST desktop (try to get a directory listing).

7) Now boot your Magic Sac in the normal way (if you don't know how read TIP column #1 and/or #2).

8) Press the key combination SHIFT-F3.

9) See another disk icon show up on the Mac desktop?

10) Now copy the System Folder that contains the System/Finder combination you prefer onto the hard disk (do not copy Hard Disk 20 to the hard disk).

11) Shut down the system (SHIFT-F3 to eject hard disk partition).

12) Reboot the ST and run the startup program for the Magic Sac.

13) Click on the options indicating hard disk present and boot off hard disk.

14) Click on the Data Pacific icon and away you go!

******* FULL BLOWN MAC SETUP *******

1) Create 2 partitions on you hard disk. The first 1 megabyte in size. The second 7 megabytes in size.

2) Run the MAGICHD.PRG program that came with your Magic Sac.

3) Click OK, then click on the 2 partitions that you just created. Highlight both of them.

4) Click OK, then for the 1 megabyte partition just created format it in MFS format. For the 7 megabyte partition just created format it in HFS format.

5) You now have 2 partitions dedicated to the Magic Sac. One in MFS format and the second in HFS format.

6) Boot your Magic Sac in the normal way, except select hard disk enabled option.

7) Press SHIFT-F3. You now have access to the 1 megabyte hard disk partition.

8) Copy the System Folder from your boot disk onto that partition (do not put Hard Disk 20 in the hard disk yet!).

9) Now copy Hard Disk 20 into the System Folder on your normal Mac boot disk (not on your hard disk).

10) Now shut everything down (SHIFT-F3 to eject hard disk partition).

11) Reboot the ST. Then reboot the Magic Sac, but this time click on the option in the startup screen called "hard disk enabled". Also click on Atari hard disk

installed if your hard disk is an Atari.

12) Now start the Magic Sac.

13) Your boot floppy should have loaded System and Finder, then Hard Disk 20 is loaded, then you should be prompted to eject the floppy. Eject it!

14) Now your small 1 megabyte MFS partition is being accessed and when the desktop appears you should see the Magic MFS hard disk icon as the startup disk.

15) Hard Disk 20 was loaded, so now you can access the HFS formatted partition. Press SHIFT-F4.

16) Copy the System Folder from MFS partition to the HFS partition.

17) Copy Hard Disk 20 from your floppy into the System Folder on the MFS partition only, not the HFS partition.

18) Shut everything down (SHIFT-F3 to eject MFS partition, SHIFT-F4 to eject HFS partition).

19) Reboot your ST. Reboot your Magic Sac, but now click on the "boot from hard disk" selector. Click on save configuration.

20) Exit program.

21) Double click on JUSTGO.PRG, and off you go!



A Look at ARC

by Marty Albert

October, 1988

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OK, I know that the last time I did this, I said it would be the last. Well, I lied. So sue me! <grin>

The reason for another look at ARC programs for the Atari 8-bit is the arrival of two new programs for us to use!

The first is the SpartaDOS X cartridge from ICD, Inc. with its built-in ARC program. Next, we have the new Super ARC and Super Un-ARC from Bob Puff, the author of Disk Communicator and other fine programs.

This time, I am sure, will be the last test and comparison that I will do for the Atari 8-bit ARC programs since there seems to be little room for improvement, but I'll get to that later. Since I do believe that this one is really the last, I have gone into more detail and the article is a bit longer than its predecessors, but trust me, it is worth reading!

Those who have read the older articles that I have done on this subject will note the absence of Disk Communicator, SCOPY, and other "boot-disk" programs. The reason that I have dropped those is that comparing them to ARC is like comparing apples and oranges <or IBMs>.

Just What is ARC, Anyway?

ARC is short for ARChive. It is, basically, a way to reduce the size of a file, or group of files, so that they may be more efficiently stored or transferred by modem.

The original ARC was written for the IBM by SEA <System Enhancement Associates> and has been around in various versions for quite a number of years. It has since been ported to the ST, Amiga, Macintosh,

Tandy, CPM, and other machines. ARC is very efficient, reasonably fast, and extremely reliable. <note that Commodore, Apple, and a few other machines have "ARC" programs, but they are +not+ compatible with the SEA ARC> The mark of the "real" ARC is compatibility from one machine to another, that is, the ability of, say, an ST to recover a file ARC'd on an IBM. <note that all three

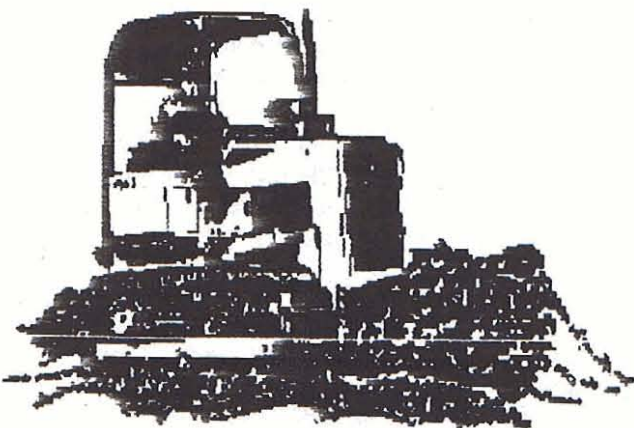
of the ARC programs for the Atari 8-bit pass this test perfectly>

ARC, when compressing files, will use one of five compression routines. These routines are:

STORED -- No compression used. This is seen mostly with small files.

PACKED -- Strings of repeated values are collapsed and replaced with "tags" that tell where what string goes on recovery. Note that all files are packed before the heavier compression routines are called.

SQUEEZED -- This method uses what's called the Huffman system. Usually only beneficial for large binary files.



CRUNCHED -- This is the famous Lempel-Ziv compression. It is the most effective of all compression routines in general. There are some files that MAY do better with Squeezed, but most will be Crunched.

SQUASHED -- This is a modified LZ compression and is used by the PKARC program for the various 16 bit machines. Because of the size of the needed buffers, it may not be possible to ever do this type on the Atari 8-bits.

ARC 1.2 uses only the first three methods of compaction, but ARCX 1.2 can indeed recover

Crunched files. The only disadvantage to this is that ARC 1.2 could not make the smallest possible files.

AlfCrunch uses a modified Crunch system as its only method of compaction. Because of this modification to the LZ routines, ALF files can not be recovered with ARCX 1.2 nor can ARC'd files be recovered with AlfCrunch.

Super ARC uses STORING, PACKING, and CRUNCHING. Just as with SEA ARC 5.21, the SQUEEZED routine was dropped because it was so seldom used and not checking for SQUEEZED files increased the speed of ARC. I have yet to see Super ARC STORE a file.

SDXARC uses all four routines. You could easily have one file in an ARC that is done in each of the routines.

ARC 1.2, Super ARC and SDXARC will test each file before compacting it to see what routine will result in the smallest possible file with the least chance of error. This all takes time to do. Super ARC does have an option that allows you to force it to a Crunch Only mode where all files are Crunched and no testing is done. This option greatly increases the speed of Super ARC.

All this talk about Packing and Crunching is really moot --it is not really needed to use ARC but may help you to understand what is really going on when you ARC a file or recover one that you have downloaded.

So, the bottom line is that ARC is intended to save you time in transferring files, and space when storing files.

A Little History

For many years, we in the Atari 8-bit world had nothing to compress a single file with. We had a number of programs to do "boot-disks" with, such as Masher, Crunch, Shrink, Scrunch, etc., but they were all unsuitable for doing a single file because they did no compression of the data. Then, from Bob Puff, came Disk Communicator. While still a boot-disk program, it did do compression. But, alas, we still had nothing to really work with.

For a few years, we all stared longingly at the IBM and ST with their great ARC program, but had to live without it. Then, thanks to Ralph Walden, there was an ARC for us to use! Atari ARC is slow and has a number of bugs, but it was the best thing going for the past 2 years.

1988 saw an explosion in the Atari 8-bit ARC world.

First, there was AlfCrunch, by Alfred, that taught us all a lesson in humility. Yes, the 8-bit CAN run faster than an ST! Next, there were "rumors" of a new ARC coming from the Rochester area, and then, "rumors" that ICD would put ARC into the SDX cart.

Well, those rumors are true! Super ARC/Un-ARC and SDX ARC are both here for you to use, right now. At last, we have a "real" ARC, and not only that, but we also have a choice. What more could one ask for?

Time is Money

Anyone that uses one of the online data services, such as GENie or CompuServe, can tell you this - time is indeed money! They can also tell you just how addictive the services are and how expensive all

that "free" software can get! How can you save money online? That's easy to answer...make things faster! How? Well, you can go to 1200 bps, or even 2400 bps. You can do Ymodem batch downloads of files. You could even use MNP protocol at 2400 bps to go even faster!

But no matter how fast you get your system, you still have a certain number of bytes to transfer, and that is really out of your control.

"Well", you ask, "can't we reduce the bytes that I need to transfer to get a working program?" You sure can! That's where ARC comes in.

Since I am the Atari 8-bit SysOp there, I'm more familiar with GENie, I'll just talk about that. At 1200 bps non-primetime, GENie will cost you about \$0.083 per minute. Using Xmodem CRC, you can transfer about 79 characters per second.

What all this means, in everyday terms, is that if you want to download a file, or group of files, that is 80K bytes long at 1200 bps on GENie, it will take you over 17 minutes and cost you \$1.44 to do it.

Now, if we ARC the file and reduce its size by 30% <not an unreal figure> we would only need to download 56K bytes, which it will take only about 12 minutes and cost a mere \$1.01 to download.

That 43 cent difference doesn't sound like much, but add it up. In a GENie survey earlier this year, it was found that, of those answering the survey, over 300 users downloaded at least 500K total bytes per month in files. That works out to be a savings of nearly an hour of GENie time per month! If you happen to be at 2400 bps or use Ymodem/1K-Xmodem, the savings

are even greater.

Just to clear things up, most users will not see a decrease in their GENie bill. They will simply download more files and make GENie an even better value for their money.

What Was Tested?

The programs that were tested were:

AlfCrunch version 1.4 by Jeff Williams <GENie address ALFRED>

Super ARC/Un-ARC version 2.0 by Bob Puff <GENie address BOB.PUFF>

ARC/ARCX version 1.2 by Ralph Walden <GENie address WALDEN>

SpartaDOS X cart ARC version 4.16 by ICD, Inc. <GENie address ICDING>

These are the latest versions that I am aware of. Any use of a non-current version is an oversight.

To be continued...



LIAUG 1989 Meeting Dates

Jan 7	July 1
Feb 4	Aug 5
Mar 4	Sept 9
Apr 1	Oct 7
May 6	Nov 4
June 3	Dec 2



In The ST Library

✓LIAUG Disk #32: CN263 XFORMER V 2.1

Upgraded version of the 8-bit emulator. All the files required to run the program are on this disk as well as a sample 8-bit disk. Includes ATARI 8-bit BASIC.

Requires 1mb memory, color or mono

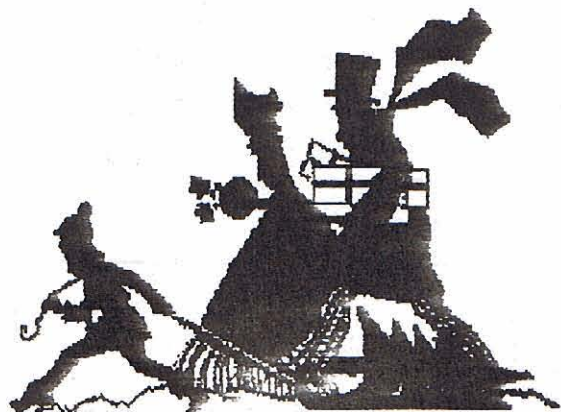
✓LIAUG Disk #33: CN264 XFORMER - Turbo BASIC and DD DOS

Two disk files used by ST XFORMER V 2.1. One is a patched version of Atari DOS to support double-density and the other is Turbo BASIC.

✓LIAUG Disk #34: CN239 Clip Art #5

Holiday and Headers, 28 screens full of excellent clip art. Disk includes the display program Dslide and printout program Picswitch .7.

Just one of the many clips on Disk 34.



Date: September 09, 1988

From: DataQue Software P.O. Box 134 Ontario, OH 44862

To: All Atari 8-bit Developers, Users and Supportive Organizations

Re: Turbo Power without getting Burned!

***** PRESS RELEASE *****

There have been many mentions in the almost decade since the original Atari 400/800 Personal Computers hit the dealers shelves about there being a future upgrade to meet the user's needs, and new and more challenging applications. Finally that upgrade is available..... The Turbo-816 by DataQue, for the Atari 400/800/XL/XE.

DataQue Software is pleased to announce a powerful new upgrade which was co-designed by Ron Shue, and Chuck Steinman. This upgrade will be available in two forms. There will be a replacement CPU board for the original 400/800 Computer system, and a plug in module for the XL/XE series. In either case, there usually is no need for any modifications to the existing hardware. The only exception to this is with XL/XE systems which have their CPU's soldered in place, which will require the removal of the existing CPU, and the addition of a standard 40 pin I.C. socket is suggested. Also included is the Turbo-OS, by DataQue for use with the Turbo-816 CPU boards.

The Turbo-816 will not only increase the potential speed of the computer, but also break the 64k memory barrier of the existing systems. Not with the awkward paged memory, but with a fully linear decoded address space of up to 16 megabytes. Benchmarks have put the Turbo-816 into a performance range ABOVE many of the 'other' PCs!! Special memory boards will be available to take advantage of the new extended addressing range. These will be mounted internal to the computer cabinet, and in most cases require no hardware modifications.

And here is the amazing feature..... While adding all this power and all this expanded addressing, the Turbo-816 for the Atari 8-bit computer systems will maintain compatibility with most currently available commercial and user written software. Using the Turbo-816 even those older programs will enjoy a speed increase!

The Turbo-OS is a replacement operating system for use with the Turbo-816 which will release the 16-bit

processor to its full power. Increased speed will be the most obvious change, but hidden in its code, will be an advanced new floating point library that will speed even the original Atari BASIC to new levels of performance. Again, on most systems it will be just a matter of replacing the existing ROM(s) with the Turbo-OS.

The future holds many more products for the Turbo-816 systems including:

- 1) a real-time multi-tasking operating system kernel
- 2) a new assembler-editor-debugger package which supports the new assembly level instructions and addressing modes
- 3) a new BASIC which will speed past the fastest of the current BASICs for the 8-bit machines
- 4) a new K&R compatible C development package
- 5) a new Turbo-GOS operating system (graphical based)
- 6) a developers development kit for new applications.

The NEW Atari Turbo-816 should be available by November of 1988. For more information contact your local Atari Dealer or, write:

DataQue Software
Dept. T-816
P.O. Box 134
Ontario, OH 44862



YOUR 8-BIT COMES ALIVE

by Bill Pike PAC

review copy loaned by IB Computers

Here is a old fashioned hackers program. The program retails for \$24.95 (why couldn't they just say \$25.00?) and comes with a disk of demonstration programs including a library of basic and machine language routines to implement the various sections.

The handbook is published by Computer Spectrum Inc.

These sections include: Basic electronics, from how to read resistor color codes, on to how to build power controllers and interfaces. How to build and use your own light pen. How electronic switches work and how to use them. What serial data is and how to use it in programming and interface it to the outside world, such as house lighting controllers etc. How to extend the frequency range of your 8-bit computer. How to make your computer into a music synthesizer. How to control a lighting display with a 8-bit, from Christmas tree lights to commercial displays. Other subjects discussed include 120v power controllers, data encoders, data decoders, event detectors and many others.

The book is written on the High School Graduate level and assumes that you know how to solder and assemble breadboards. Most of the basic information on hardware is reviewed rather than instructed until you get down to the meat of the book. The book includes hardware construction as well as programming. I wouldn't recommend this for a child, but with help a highschooler should be able to handle it without much problem.

If you want to see what hacking really was, in the early days of computing, rather than the piracy, phreaking, and what hacking has since been equated with, this is the book for you. The book also teaches how to make a computer work in the real world; not just how to get the highest score on PACMAN. I feel that in itself is enough to highly recommend the purchase of this program.



Closing by the editor (Harvey Schoen)

Our cover this month pays tribute to our outgoing president and current BBS sysop. Pat Mulvey has given his time and energy to this club beyond the call of duty.

Not only was he tireless in fulfilling his duties as president, but he edited this newsletter for most of his term.

And now, retired from the presidency, he refuses to rest on his laurels and has taken up the job of Sysop of our BBS.

Thank you, Pat. It is members such as yourself that make this club a helpful and interesting group.

SUPER 3D PLOTTER II

By: R. Constan © 1985

★ ★ BEYOND BELIEF! ★ ★

If you have any interest in 3D computer animation and image design, get ready to watch your so-called "game machine" out-perform every 8-bit machine on the market today! SUPER 3D PLOTTER II is a complete 3D image design, display, and animation package for your Atari computer. Thanks to some new and very powerful "natural" algorithms developed by Elfin Magic, detailed hi-res images can be rotated and maneuvered at an amazing projection rate of 3 to 6 screens per second! This is the kind of animation that was considered impossible for an Atari. Believe it!! THIS PROGRAM ALLOWS MORE REAL TIME CONTROL THAN ANY CURRENTLY AVAILABLE 3D SYSTEM FOR ANY 8 BIT MACHINE. SUPER 3D PLOTTER II also contains two full-featured, memory-resident editors: Enter your images via numeric data, or right on the screen with a joystick! Here are just some of the truly amazing features of this package.

- UNSURPASSED 3D PROJECTION SPEED
- TRUE HIDDEN SURFACE ELIMINATION AND SOLID (COLOR-FILL) PROJECTION.
- SUPER HI-RES PRINTOUT TURNS YOUR DOT-MATRIX PRINTER INTO A PEN PLOTTER!
- PRICE: ONLY **\$29.95**
N.Y. RESIDENTS ADD SALES TAX
- 2 EXTENSIVE EDITORS, PACKED WITH UTILITIES, FOR ULTIMATE DESIGN FLEXIBILITY.
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- SCREEN "OVERLAY" AND "SAVE" FEATURES FOR INFINITE IMAGE EXTENSION, AND TOTAL COMPATIBILITY WITH MOST DRAWING PROGRAMS.

Don't be fooled by the low price! This package is usable in professional 3D C.A.D. applications, and this ad does not permit space for a fair description! Send S.A.S.E. for more info, or send check or money order to:

Elfin Magic

23 Brook Place, E. Islip, NY 11730

FOR ALL 8-BIT ATARI COMPUTERS
WITH 48K AND DISK DRIVE.
PRINTER OPTIONAL



—SOFTWARE WITH IMAGINATION—

CIRCUIT DATABASE II

This is an enhanced version of the electronic circuit (SCHEMATIC) drawing program I presented in the Nov. 1984 issue of **ANALOG Computing**. This program allows easy design and editing of electronic circuits, and storage of up to 60 complete, labeled diagrams on a single side of a disk! This new version includes several added circuit symbols, plus a special "TEXT TO HI-RES" converter, which produces neat, *vertical* printouts on any dot-matrix graphics printer having a vertical printhead. The editor is so friendly, you can almost draw your circuits on screen faster than you could scribble them out with pencil and paper. And, it's written in plain, listable Atari BASIC, with full documentation on all machine language routines (USR calls), so you can use them in your own programs. CIRCUIT DATABASE II is a must for anyone concerned with the electronics field, from weekend hobbyist to professional. In fact, in today's world of fast-moving technology, it is almost unthinkable that you (or your children) will never be exposed to electronic circuits in some form. Now, you can be ready—and at a price you can't resist.

ONLY **\$12.95!**

OR SEND S.A.S.E. FOR MORE INFO AND SAMPLE PRINTOUTS!



LONG ISLAND ATARI USER GROUP

MEMBERSHIP APPLICATION

To apply for **LIUG** membership fill out the following application and bring it to the next meeting, or mail it (including check or money order) to:

The Long Island ATARI users group
P.O. Box 836
Lindenhurst, N.Y. 11757

The current dues are \$15.00 yearly, plus \$5.00 additional to receive all mailings, including the newsletter). Make checks payable to "The LIAUG".

First name: _____ Last name: _____

Address _____

City: _____ State: _____ Zip: _____

Phone #: _____

Your system (please be specific):

Computer: 400 600 800 800XL 66 130 520 1040 MEGA

Memory: _____ K Cassette: _____ Disk drives: _____

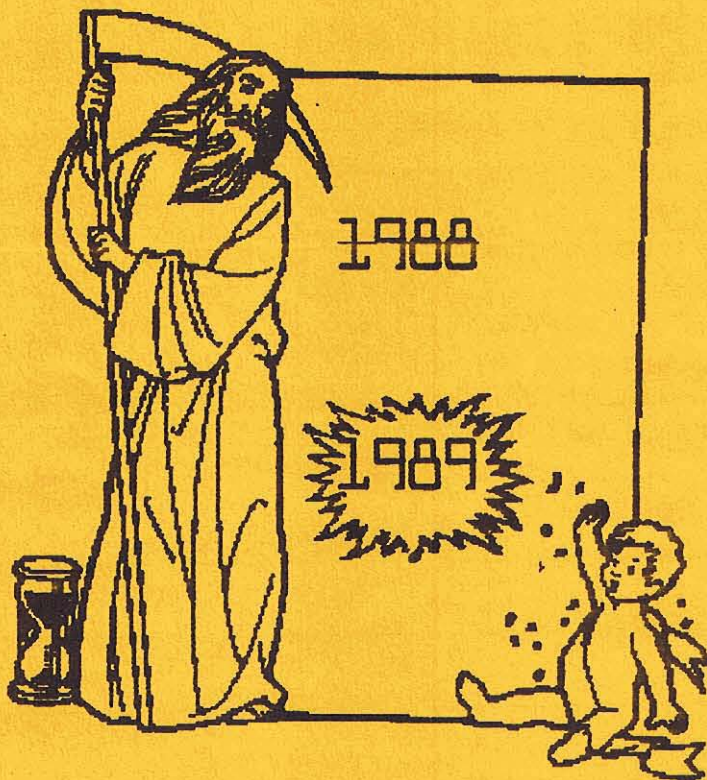
Modem: _____ Interface: _____ Printer: _____

Other: _____

What languages are you familiar with? _____

In what areas would you like to learn more about your computer system? _____

HAPPY NEW YEAR



The LIAUG Lighthouse
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First Class Mail