FUJI FACTS

The Official Newsletter of the Atari Computer Enthusiasts of Columbus

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"All the news that fits, we'll print!"

The Editor's Column

by Warren Lieuallen

As those of you that come to the meetings have already discovered, there was no July issue of Fuji Facts. Lack of submissions and editorial time conspired to produce this result. Those of you that do not come to the meetings have just discovered that ACEC no longer mails Fuji Facts on a monthly basis (although this service is still available for a $3.00 yearly fee); newsletters not picked up at our meetings will be saved, and mailed three times a year (April, August and December).

The major theme for this month is file "compaction" programs. Anyone with a modem has surely come across one or more of these. In short, these programs' purpose is to take one or more files and combine them into a smaller "package". This not only decreases the amount of disk space necessary to store them, but lessens the time required to download them from bulletin board systems as well. Although having choices is usually a desirable state, the different file compaction programs which currently exist for the Atari computers are mostly a source of confusion. The feature articles in this issue will hopefully clear up some of this confusion.

I've also continued the series on SpartaDOS for beginners; I hope to follow up on this with a more detailed set of tutorial articles from the ACEC BBS.

In the "humor" department, I've reprinted D.F. Neff's fantastic piece on the new ST-emulator for the eight-bit Atari computers – I thought that this was probably the single best computer-related article I've read all year!

Then comes the "Review Department". With all the discussions I've heard about The NewsRoom and The News Station, I thought a review of these programs would be in order. Who'd like to do the review of The News Station (and the Companion?) for next month?

Several very good public-domain terminal programs are out for the eight-bit Ataris and a number of different modems. The three most popular are reviewed and compared for us by J. McCormick. Finally, the long awaited Atari XF-551 disk drive is subjected to yet another discussion (this one quite well written and informative).

Also, please remember that nominations for the ACEC elections are coming up in just another month (also refer to the announcement on the back cover). It's time to think about returning some of what ACEC has given you – run for office! I know you get tired of hearing the same thing over and over, but it's true; being an ACEC officer really isn't very hard, and it's fun!

A Review of File Compaction Systems: A Second Look

Well, today, in GEnie Mail, I had a note that was sent to me by Jeff Kyle for Bob Puff, the author of Disk-Comm for the Atari eight-bit computers. The basic gist of Bob's letter and the note that Jeff sent along was that the reasons that I had trouble with Disk-Comm is that SpartaDOS "has too many bugs for me".

Since I don't want to get into a DOS "war", nor is that the reason for these comparisons, I decided that I would repeat the tests with a more "standard" DOS, namely Atari DOS 2.5.

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The system used is a 256K 800XL with a single Atari 1050 drive with US Doubler chips. I used the standard 130XE RAMDisk set as D8: for a 499 sector RAM drive.

The programs tested were SHRINK XE version 1.00, SCRUNCH 2 version 2.0, Disk-Comm 3.2, and ARC/ARCX version 1.2.

Since I used Atari DOS 2.5, bytes mean nothing. All the file sizes are in terms of single density sectors. The files used for testing were as follows:

Binary load file	65 sectors
SAVEd BASIC file	64 sectors
Daisy-Dot *.NLQ file	15 sectors
Atari font file	09 sectors
Text file	60 sectors
RLE picture file	48 sectors
Koala picture file	27 sectors
AMS song file	52 sectors
TOTAL SECTORS =	340

Note also that the % saved is in terms of the sectors used, which will of course be the same as the reduction in XModem blocks needed to transmit the file.

The following table is a summary of the test results.

program	time cre	time rec.	size	% change
SHRINK XE	1:25	0:50	331	−2.72%
SCRUNCH 2	4:30	5:36	325	−4.62%
DISK COMM	4:08	1:34	326	−4.29%
ARC/ARCX	5:20	6:04	249	−36.55%

So, there is the data. Now, for a few observations made while the test was going on....

SHRINK XE

This is a nice little program. I like it, as I have liked all the past versions of SHRINK. It's fast, in fact, much faster than anything else in the test. It's easy to use with a nice menu. It allows the verification of files without actually needing to recover them. All in all, SHRINK XE is a good option to use. The only problem that I see is that it does very little compaction. I guess you can't have everything, but I sure want it!

SCRUNCH 2

This is another good program, but it is a bit slow. In fact, SCRUNCH was not all that much faster than ARC, especially when you look at the compaction difference.

But, SCRUNCH does seem to work flawlessly in operation.

DISK-COMM

Here we go again. No matter what I say, I'll get nailed for it. But, that's life! Disk-Comm is good. It's faster than ARC, but slower than Shrink. It compacts better than Shrink, but no where near what ARC does. On this test, I had none of the problems loading Disk-Comm that I did in the last test. First try I made, it ran like a champ. Bob also hinted at the idea that my copy of Disk-Comm was damaged because I had gotten it in ARC format.

Well, the copy that I used for this test is the same copy as for the previous test. Sort of rules that out. Now, on to what I really like about Disk-Comm... The menu and use has to be one of the best and most user-friendly that I have ever seen, and I've been in this field for over 25 years now. It is, simply put, fantastic! Bob Puff has put a lot thought and energy and time into the design. It would be very easy to use with no documentation at all.

ARC/ARCX

OK, here it is again. ARC is the slowest, but it also is the one that does the most compaction. The fact that CRC errors happen is real. Jeff, in his note, stated that the CRC errors do not happen because of XModem padding and that the file is, "..damaged in some way. It may not be easily noticeable, but it's there." While that is, in strict terms, true, it still doesn't matter. If a text file has 10 characters on the end that are XModem padding, and the ARC/ARCX process changes one of them, the file has indeed been damaged. But, so what? Does it harm the way the file works? No. So long as a file is not operationally changed, who cares? Not me. Especially if I'm saving 35% of the time/money needed to download the file.

IN CONCLUSION

So, it looks like the data is really unchanged, except that we now see that SHRINK is now the fastest of the bunch.

Bob mentioned that, "And the fact that CIS named Disk-Comm their official boot-disk standard tells me they have no problems with it either." I can't speak for what CIS does or doesn't do, nor can I really speak for what GEnie does or doesn't do. I have no contact with CIS at all. On GEnie, as I have said all along, whatever the RoundTable members want is what I will do. However, in the recent online survey on GEnie, it was shown that the members had the following preferences:

ARC	53%
Scrunch	2%
Shrink	2%
Diskcomm	7%
SCOPY	1%
Other	1%
None	8%
No pref.	25%

While this only reflects the attitudes of the GEnie users that took the survey, it's all we have.

As I said in my prior article, we do need something better than anything that's out there now. I just wish that I had the skill to write it!

View of File Compaction Systems—A Rebuttal

by Jeff Kyle

First off, I'd like to thank Marty Albert for promptly redoing the compactors comparison, and taking a second look at Disk-Comm. However, I couldn't believe you liked SHRINK XE so much, so I decided to load the old sucker up and test it against Disk-Comm.

First: you should note that neither SHRINK nor SCRUNCH can handle double density disks. This is a serious problem.

I went through and compacted and uncompacted the "Awesome #1 Demo" disk using Disk-Comm 3.2 and SHRINK XE 1.00. You say that SXE could compact the disk you used in 1:25. This is quite strange if you were using a normal disk without UltraSpeed, which by the way DiskComm 3.2 supports.

So, here are the times I got. Note that this included all the reading/writing time, and the compacted disk was in a DD RAMdisk. Therefore the "size" will be in double density. To find the single density size, just multiply by two. Also, the input and output disks were in UltraSpeed, speeding up reading/writing by approximately 3X.

Program	Time In	Time Out	Size
Shrink XE	1:57.5	0:48	176
DiskComm	0:58	0:52	152

Obviously Disk-Comm is faster, and creates smaller files. This, plus all the extra features, support of SD/ dual/DD, plus "non-conforming" drives, should make Disk-Comm the clear winner.

Why I Hate Compaction All Together!

by Dominick Palance

Now I'm no great programmer and I don't know assembly and I'm not totally perfect at BASIC, but I'm an Atari user non-the-less. I feel its time for another totally different outlook on compaction.

I started telecommunicating this past summer with my Atari XM301 and now use a SX212. That was the first time I saw ARC. I didn't know what it was at first, but now we all know that it is a program that makes files smaller and links them back. It saves downloading time and takes up less disk space to store on a BBS.

BUT, you must UnARC the file to run. No problem, but it does take time. But better to spend the time off-line so not to run up a bill. I kind-of liked the idea at first and a lot of files are ARCed, so I got an unARCing program. At 300 baud a smaller file is great and is OK even at 1200 baud.

"But where's the part about why I hate it?" you say. Well, hold on.

I've seen many ARCed files and they've always run (well, 99% of the time) and I needed therefore to have an unARC program as I said. Then, I started seeing "other" compactors and some files used them, but not nearly as many that used ARC. Some are SHRINK XE, Disk-Comm, and SCRUNCH. This kind of put a dent in things. I didn't want to spend my time downloading all these compactors/uncompactors, let alone go to the trouble of separating files into groups by which compactor they used.

One compactor was fine for me, two tops if really needed. The second most popular I've seen is SCRUNCH. To make things worse, there seems to be more and more compactors coming out these days. I happen to like ARC because there are so many files using it and its so easy to use. SCRUNCH is faster, but doesn't seem to do as much compacting, so why use it? What's the point? Plus, its not user-friendly and it totally wiped out one of my double density SpartaDOS disks. I've only gotten SCRUNCH to work with DOS 2.x. As for the others, I hardly see any files using them, so why not forget them?

As for ARC, it will support my SpartaDOS disks and does a lot of compacting. I don't mind the wait then. But still, I don't like going to the trouble of going through the process. You have to do download the entire file that may contain files you already have and you have to unARC them all. Plus, some files are called AUTORUN.SYS as if they are gonna be the only file on the disk. That's not too bad. But when ARC ruins the file by adding a byte here and there (or so I hear) then that's not good.

Sometimes, compaction is totally uncalled for and still its used and I have to go through a long, slow and hard process. And with 2400 baud coming, you may not notice the time saved compared to a file not compacted. On larger systems with more memory, okay, maybe compaction could help, but as for us 6502 users, not always.

I downloaded a package of AMS files with a TV theme. I believe it was ARCed. When I looked at all the files separated, I already had half of the files included! BIG waste!

On one system I call, you can upload a group of files related in some way and put them all under one title in the directory. That way, you can either download the file, documentation, or the source code, or all of the files. This only leaves a need for compaction to make the files and time to download smaller, but it does not always matter. Do I make sense or are you asleep already?

I welcome any comments on this; thank you for your attention.

A Different Look At ARC

by Jeff Kyle

OK. So you like ARC, eh? So you like saving time downloading, eh? So you like being able to get all the files in one nice package, eh? Think again. ARC is one of the programs that shall go into legend, but shouldn't go in a positive way.

Believe it or not, that innocent program isn't so innocent. A program this potentially dangerous should never be released, much less into the public domain. (No, I'm not saying sell ARC.) You've probably noticed one of ARCs big problems in that it barely works with any DOSs. ARC will refuse to work in most DOSs, and when it does work, it acts

differently in most. In some, it will print out more than in others, in some (MyDOS) it will somehow manage to lose characters in the directory. It's not easy to code something to work that bad.

And once you get it working, be prepared to be bored out of your skull. Just enter the name, and WAIT. You can't get a directory, it doesn't like problems, and once you've finally got that darn file ARCed, that's it. You can't manipulate what's in it as you can in ARC files on other machines. If you've closed the ARC, that's it, you can't change it. If you do want to change it, you have to start all over. If you get a huge ARCed file, but only want one file out of the middle, tough luck. You've got to wait and wait for it to slowly process all the other files that you don't need. But so far I've just mentioned "extras".

Now for the bad part—yep, it's true, ARC does murder files. You've all seen the messages that say "you'll get CRC errors on this that and the other, but don't worry, they're fine". Well, they're not fine, they are damaged, and some files that don't get CRC errors are damaged also. Each time a file fails the CRC check, it's been damaged in some way. Pictures can have stray bytes in them, text files may get stray letters, binary files malfunction slightly. Anyone who's seen the ARCed "Digital Nosebleed/Atari Wave" knows that ARC can easily do major damage to files. When a local person cleared out the bad bytes and reARCed the clean version of the program, it had the same problems.

ARC tries to justify this by saying that it is removing "XModem block padding". This just doesn't make sense. The only time it ought to have this is at the end of files, but ARC happily changes bytes right in the middle of files. And why is it I've seen much more of the "XModem padding" at the ends of text files that have been ARCed than haven't been?

And of course this can cause many problems. Occasionally a machine language program may refuse to function. Demo programs may be almost unusable, as in Digital Nosebleed. And what if you have an important text file, full of specific data? It would be easy for ARC to change one of those and very much mess up the file.

So what are the alternatives? If you need to compact one file, use SQUISH. It is faster, and has about equal file compaction, and is easily modifiable to turn the screen off while working by anyone with a rudimentary knowledge of Action!. If you have to put many files together, Library will accomplish that quite nicely. If you have to do many things and want them all together along with a DOS, etc, Disk-Comm will do compaction and put the whole disk together as a nice neat file that tells you if you have bad bytes in a file.

So think about this next time you decide to use ARC. There are alternatives. Nothing is as good as it could be, but yes, that is being worked on. (Hint, hint!) So, go on. Go for it. Stop using ARC. Your programs will thank you for it.

If you'd like to further discuss this matter, feel free to leave me E-Mail on GEnie for JEFF-KYLE.

SpartaDOS FOR BEGINNERS—part II

by Ed Bachman

Well hello again. As you recall in the last segment we were working our way through the Atari DOS 2.5 menu. We just finished discussing menu option I so this segment we'll start with section J. But first I'd like to digress for a moment.

In the interest of the beginning SpartaDOS user, I'm only dealing with the Atari similar commands. This is to get you up and running. As to the SpartaDOS commands which have no Atari equivalent, well, once again I recommend the SpartaDOS Tutorials (*watch for them in future issues of Fuji Facts—Ed.*), and perhaps an article with a beginners' look at the non-Atari commands will be out in the future.

J—DUPLICATE DISK

This is a difficult one, simply because there are two Sparta commands that come under this type of operation. The first, "SCOPY" is the most similar of the two SpartaDOS commands. However it is also the most difficult to explain. The second SpartaDOS command is "DUPDSK", a utility to duplicate the contents of a source disk to an already formatted destination disk. This is a good utility for making multiple copies of the same disk. I plan on detailing both of the SpartaDOS commands, but first I want to review just what the Atari DUPLICATE DISK is all about.

DUPLICATE DISK is a disk copy routine that produces an exact copy of the source disk.In addition, DUPLICATE DISK will also check to see if the destination is formatted and if not, will format it for you.

SpartaDOS equiv. = DUPDSK

DUPDSK is another External SpartaDOS command which means you must have a copy of this file in the default drive (note: we covered the default drive, in part 1 of this series). DUPDSK will simply copy the contents of a source disk to an already formatted destination disk. One caution here, DUPDSK does not format the destination disk, and the density of the disk and number of tracks must match. The destination disk does not have to have DOS written on it however, because if the source disk has a bootable version of DOS on it, it will be duplicated here by DUPDSK.

Note that the utility DUPDSK will then ask for source and destination drives and prompt you when, if necessary, to swap disks.

SCOPY in it's simplest form is muck like the Atari Duplicate disk. In that it will format the destination disk. SCOPY will also copy between different densities and sector skews (normal or hi-speed). And Scopy will also copy to or from a RAMDisk. But SCOPY must be told this in its command line. Confusing, eh?

Note: a single drive SCOPY can be slow if you have a full disk. One way around this is to format your disks with DOS and use the Sparta XCOPY command as it seems to reserve a bigger buffer in memory than SCOPY. XCOPY has no Atari equivalent, but I'll go into detail later, when we get down to duplicate file.

Now, above you've seen the simple SCOPY commands but what if we have a disk in hi-speed sector skew? The hi-speed I/O is part of what we got this DOS for in the first place right? Well, SCOPY needs to know this when you issue the Scopy command. Here's a simple two drive SCOPY with both disks in hi-speed format.

D1:SCOPY D1: /U D2: /U

Note th "slash-U". The U stands for "ultraspeed", the slash just appends it to the filespec. Also note the spaces between scopy and D1:, D1: and /U and particularly between U and D2:.

You can also Scopy to or from a ramdisk as shown below.

D1:SCOPY D1: D2: /R

Note the /R stands for ramdisk and needs to passed along in the in initial SCOPY command. Since SCOPY formats the destination disk, I don't recommend using any of these RAMDisk examples unless your RAMDisk is larger than 180K in size.

K—BINARY SAVE

The Atari binary save is similar to the Sparta SAVE command. Note that the binary SAVE differs from the SAVE command in BASIC in that you must be in DOS to issue a binary save command. The file is saved in a similar manner to Atari DOS, with an $FF $FF header followed by the start and end addresses. Even the syntax is the same as Atari, except that you are not asked for an "Init run" vector to create an Atari DOS compatible "load and go" file. You must use the PUTRUN command, which simply appends the run vector to the end of the file.

Before we move on, remember that the start and end addresses are in hexadecimal, not decimal notation!

L—BINARY LOAD

This is just as similar to Sparta as the binary save. The main difference between this command and the Atari version is that in Atari you must type "/N" to load the file without using the init/run vectors. Sparta on the other hand ignores the init/run vectors and just loads the file into it's specified block of memory. How do we get them to run is the next order of business.

M—RUN AT ADDRESS

Give this a hexadecimal address of the binary file loaded into memory and it will run it. There are two ways to run a machine language program in SpartaDos, and both are pretty slick.

There two ways to use the RUN command. The first, with a run vector, the second by just using the RUN command. Suppose you've just got through using XINIT you've formatted three disks, you've exited to DOS and you realize, hey! I need two more disks formatted! So instead of reloading XINIT you simply type RUN and XINIT comes up running! So when RUN is used without a run vector it will run the last machine language program executed, providing it hasn't been overwritten by another memory destructive command like another object file. And when RUN is used with a run vector the file loaded into memory with the Sparta load command will execute.

Now, for the second way to RUN AT ADDRESS in SpartaDOS. If the file is a binary file and has init/run vectors then you can simply type in the name of the file after the prompt hit return and it will execute! Better still if the file name extender is COM then it is only necessary to type in the first name of the file, this is how the Sparta external commands (XINIT, SCOPY,etc) work.

N—CREATE MEM.SAV

One of the true joys of Atari DOS (I hope you understand I mean that sarcastically). Part of why it's so slow. There is no MEM.SAV command in SpartaDOS as Sparta is a memory resident DOS, and many of its commands are internal. You can exit to DOS and your program will be left intact. However there are memory destructive DOS commands, so it's a good idea to save your work if you plan to do any copying, or executing any external commands,or binary loads from DOS.

O—DUPLICATE FILE

Here again, there is no SpartaDOS command like this. However, there is a fine file copying utility called XCOPY. This a menu driven file utility that allows you to tag or untag files to copy. It lets you read and write to the main menu on a disk, but you can specify a read or write or both from a subdirectory. Note that the subdirectory titles are not shown as part of the disk directory. You must specify a subdirectory to read from/or write to. It also lets you configure any drive as a source or destination.

P—FORMAT SINGLE

I don't know why anyone but an 810 owner would want to do this. XINIT will take care of this you can use AINIT, an internal command unless you happen to be using BASIC XE or a parallel device of some sort then this command and the english error messages are disabled.

Well, that's it for this segment. I hope I've enlightened some of you on the workings of SpartaDOS, even though I know it could have been more detailed. The copy commands alone could occupy a whole article. I'd enjoy hearing from anyone who has read these articles and has any comments or suggestions. If there is enough interest, there might be another article on the non-Atari SpartaDOS commands. So, happy computing, and in the words of Mark Bray, SpartaDOS rules!

ST Emulator for the Eight-Bits!

reprinted from Michigan Atari Magazine, January 1988

by D.F. Neff

Last year the Atari community waited while Atari Corporation fought to prevent the release of the eight-bit emulator for the ST. This show of resistance may have been just a smokescreen to hide a secret research project from

the users' groups! If we look back at what was occurring, and read between the lines, all the evidence points to the same conclusion: Atari is developing an ST emulator for the eight-bits!

The Clues

First, Atari began selling stock to the public. Jack Tramiel said he was doing this to get money to pay some bills. Now, Jack has lots more money than you or I have and we don't need to sell stock to pay our bills. But Jack is a nice guy so we didn't ask what he planned to do with the money.

Second, Atari repeatedly says that they are going to continue to support the eight-bit machines. I've never heard them say they're going to continue to support the sixteen-bit machines though! That sure looks ominous for the ST's future.

Third, after a weak fight to prevent the release of the eight-bit emulator, Atari allowed it to be released to a disappointed public. The emulator was a mere shadow of its prerelease image.

Was Atari's resistance to the emulator's release just a smokescreen to divert attention from the expensive research being done on the ST-emulator?

The Motive

When Jack Tramiel bought Atari from Warner, he received thousands of brand new eight-bit machines, already built, just sitting in the warehouse. Now, consider that when Atari sells you an ST, they have to build it, and that costs money. But if they had an ST-emulator on disk, they could just give you an eight-bit machine with the emulator disk, for the price of an ST. Since they already have the machine, the only cost to Atari is the $0.23 for the disk! The term "gross profit" takes on a whole new meaning in this scenario.

Proof

When the eight-bit emulator was demonstrated, Atari quickly pointed out that the eight-bit software was running at half-speed, at best. It was another smoke screen to prevent us from realizing the obvious: the ST can run only half as fast as an eight-bit!

It's logical that any sixteen-bit machine will run more slowly than an eight-bit machine. Let me use the analogy of human speech to demonstrate that. If I start throwing 16-letter words at you, our conversation will proceed very slowly while you try to figure out what I am saying. In fact, you'd probably have to keep referring to a dictionary to figure out the 16-letter words I'm using. Big words just slow things down.

However, if I talk to you in 8-letter words, our conversation will take place much faster and end more quickly. Likewise, if I talked to you in 4-letter words, you'd end the conversation very quickly! It's no wonder the eight-bit machines can run faster than the sixteen-bit ST.

At this point, ST owners are probably thinking that the ST files are too large to fit into the normal eight-bit memory. Well, most of the room used by an ST file is for the Dictionary. That's right, the ST doesn't understand those sixteen-bit words and has to look them up in the dictionary. Once you've stripped the dictionary from an ST file, it'll probably fit into an unmodified 400!

A public domain vaporware program called TICA (Tongue In Cheek Algorithm) translates each sixteen-bit word into two eight-bit words. All timing loops are lengthened during the conversion by TICA, since the ST program will be running twice as fast on the eight-bit machine.

ST graphics conversions are a problem. Users of the eight-bit machines can choose from a field of graphics screens which range from Graphics 0 to Graphics 32. ST users can choose only High, Medium or Low (like on a cheap clothes dryer). TICA changes all ST graphics to eight-bit Graphics 0 so you can see the individual pixels. That eliminates one of the most annoying shortcomings of ST graphics – all the pictures look like photographs. Who's going to believe you created that picture on your computer if they can't see the pixels?

Conclusions

It all adds up to the same thing – Atari is coming out with an ST emulator for the eight-bit machines, and will stop production of the ST line. Still have doubts? Consider this then: why does Antic, the magazine respected and lover by users' groups and SysOps nationwide publish their ST programs on an eight-bit disk?

The NewsRoom

reviewed by Bill Pike

Springboard Software has ported The NewsRoom to the eight-bit Atari machines. The program requires 64K of memory (800XL, 65XE, or 130XE computers), a 1050 or enhanced density-compatible disk drive and a printer; a joystick is optional. By the way you must load the program with BASIC enabled (keepa you fingers off the OPTION key!).

This is a program that has proven very popular on the Apple and Commodore machines. The program is the first desktop publishing system released by a major manufacturer for the Atari 8-bit machine (*As a user of XLent Software's TypeSetter for over a year, I disagree. – Ed*). The cost is $39.95 and it comes in a plastic box containing the program disks, documentation for the program, advertising for other Springboard products and the warranty card. There is an unlimited lifetime warranty on the software for a $5.00 charge and proof of purchase.

Now, "the facts Ma'am, just the facts". Newsroom appears to be aimed at the 7-13 year old market. There are several sections to the Newsroom (the Banner, the Photo Lab, the Copy Desk, the Layout, and the Press). Newsroom uses a series of 8 plates to construct a 8 1/2" X 11" page (two across and four down) or you can have a Banner (headline) and 6 plates (banner + two across and three down). You

can also print on a legal size sheet with 10 plates. Each plate is a single graphics 8 screen.

The clip art disk contains rather "cutesy" line drawings of various aliens, space ships, dogs, cats, birds, and people. There are several maps of various continents some with countries shown. You can take rectangular sections out of any of the clip art files, and position the artwork anywhere on the plate you are working on. You can erase, re-draw, or fill any of these pieces. There is even a magnification option for fine work. However, once you modify the clip art, in any way, you cannot save it back to a clip art disk; you have to save it as a photo. You can create your own clip art, but you are not allowed to maneuver the art around or crop it or change it. Once you start to work with the clip art you must save it as a photo, you can not save it back to the clip art disk.

There are 5 fonts that you are able to print with: small serif, small sans serif, large serif, large sans serif, and large english. The cursor is sized to fit one letter, which is nice for text placement. However, those are all the fonts you get and you can't get any more. The program will fit text around an icon or artwork automatically; however you must type in each letter, you cannot use a text file. This means there is nothing more than simple text editing available. You are unable to use a separate word processor or spelling checker.

The printed output of the program looks acceptable but not exceptional. However, you can fill in shading on the banner and/or clip art for a better look.

The amount of warnings regarding copyright are really something to see. On the front page of the manual you are told that these disks are copy-protected and that trying to copy them can destroy the program and/or your equipment! You are told to send your warranty card, the backup copy order card, your proof of purchase (you are told to make a copy of the sales slip for your files) and include $12 for a backup copy. In the back of the book you are told that you can make one copy of the program for backup purposes but you may only use the program on one computer at a time and that you may not sell the program without the consent of Springboard Publishing. In other words you bought it, you're stuck with it! You are also told that you have purchased the media, disks and documentation, but Springboard retains all rights to the program or any part thereof. However you are allowed to make unlimited copies of the newsletter output.

All in all, the program appears to be designed for the elementary classroom. The commands are, for the most part, icon driven and are relatively easy to use. If you wish to pay $40 to allow your kids to put together a newsletter, this looks like your best bet. But if you are doing serious desk top publishing on a adult level I would recommend News Station and News Station Companion by Reeve Software or Daisy Dot from Roy Goldman (*available in the ACEC Disk Library—Ed.*). They do much more for a lot less money.

Terminal Software Comparison

by J. McCormick

Amodem, DeTerm, Express. All very good terminal programs, all share-ware. But which one is the best? This is my comparison of all three of these terminal programs, showing you the strong and weak points of each.

Amodem is the terminal program written by Trent Dudley. Amodem was one of the first terminal programs ever made for the Atari, and has been with us since the first bulletin boards. Amodem is written in BASIC, using machine language code throughout the program. The version I tested was Amodem 7.5

DeTerm was written by Jim Dillow. Because it's so new, this program is unknown for the most part, and it's main feature is a game that you can play while transferring a file, redialing boards, or when you are online with a BBS! The version I used was the 1.00b, the beta test copy.

Express! was written by Keith Ledbetter. This program is written in ACTION! and seems to be the favorite among most users because it's easy to use. The version I tested version 3.00.

To show the major differences between these terminal program, he is a quick comparison chart:

Feature	Amodem	Express	DeTerm
Key Buffer	3 line	2 line	3 line
Xmodem	Yes	Yes	Yes
CRC	Yes	Yes	No
Ymodem	Yes	No	No
Batch	Yes[1]	No	No
Stick Input	Yes	No	Yes
Key Repeat	Yes	Yes	No
Word Wrap	Yes	Yes	Yes
Scrolling	Yes[2]	No	No
Game	No	No	Yes[3]
Menus	27	38	37
PCP[4]	Good	Little	Excellent
Smartmacro	Yes	No	No
BBS Macros	1	3	4
Timer	Yes	Yes	Yes
Clock	Yes	Yes[5]	No
Bootup[6]	1:07	1:05	1:10
Length	176	254	198
Buffer Size[7]	4352	5504	7168
Docs	Excellent	Excellent	Average
Send Time[8]	2:00	1:58	2:23
Rcvd Time[8]	2:06	1:53	2:23

[1]Amodem has Ymodem batch RECEIVE
[2]Only with XE/XL models
[3]A game of Pong that can be played anytime on or offline
[4]Macro/Program support for P.C. Pursuit by Telenet
[5]A real-time clock is available if you use SpartaDOS's TDLINE.
[6]Time needed to boot the terminal program using SpartaDOS 3.2 in double density with a simple STARTUP.BAT file
[7]Size of capture buffer when using SpartaDOS 3.2
[8]This is the time taken for the terminal program to receive and send an 85 block file at 1200 baud. The program was stored/sent from a 192K RAMDisk with SpartaDOS. The terminal did the transfer with a fast hard-drive BBS system.

Amodem

Amodem was the terminal I choose as being the best. It has features that the other terminals did not, Y-modem, Ymodem batch receive, smart macros, smooth scrolling for XE/XL computers, good documentation, a fast transfer time, and joystick input. The only real argument I had against Amodem was that you have only 1 macro containing your password for each BBS on your BBS list. That problem doesn't seem to big since you have 10 "smart" macros that are always there.

DeTerm

Determ was the clear loser in most areas. It's transfer rate was sluggish (1 block every 1.68 seconds at 1200), which was caused by a long delay in between each block. However, there are two features that make it an excellent terminal. Determ has full P.C. Pursuit support. It will re-dial cities until you reach one, and then it will load the city's phone list for you to dial with! The Breakout game was it's other big feature. The game does seem a bit buggy, but, it actually feels like multi-tasking without any pauses or jerky movement, no matter what you are doing! However, the documentation is only average, and I do not recommend this program for a beginner.

Express

Express had the fastest transfer rate of all of the terminals tested. Downloading at 1200 baud, it averaged one block every 1.33 seconds. It was also very user-friendly. My major complaint against Express is the macros, and the lack of Ymodem protocal. The macros are great, in that you may have three for each BBS. However, these are "dumb" macros. They will not react to input from the BBS. If you are using P.C. Pursuit, three little macros are not going to do much good.

Some things I would like to see in all of these terminals are a Ymodem batch send, where you may mark files in your directory to send. Also, for those of us who don't really want to waste the time seeing what we are downloading, how about an option to turn the screen off and to use the extra speed for the transfer?

That's the end of my comparison. If you do not agree with my results, or my conclusions, call up the Syndicate BBS and tell me your opinion! I'd be glad to hear it.

A Review of the XF-551 From a Programmer's Point of View

by Robert Puff

Atari's new XF-551 disk drive certainly has been quite a suprise to many. I have seen many comments concerning it, and thought I would offer some of mine as well.

The drive is just about the same size as the 1050, but not quite as high. It uses a generic-type double-sided direct drive mechanism which is nice and quiet, compared to some 1050's I've heard. The drive uses the standard 9VAC power supplies used for the other 1050 and 810 drives. The back of the drive does get nice and hot, just like the 1050s, but that did not affect the drive's operation when I left it running for a month solid.

The drive runs a little faster (300 rpm compared to the standard 288), but Atari adjusted for it by clocking the controller a little faster. So there is still the same amount of data in the same format on the disk.

Now we get into compatability. Atari has done a fair job at making the drive compatible with the 810 and 1050. There is only one flaw I found; the missing-sector bit in the status bytes does not reflect a missing sector correctly. This should have been simple enough to do, but they did not. Because of this, there ARE protected disks that will not load on a XF-551. I do not have the titles with me at the moment, but any program that looks for a missing sector status will probably not work.

The next subject is double density. Finally, Atari has come out with a true double density drive, which will read other double density disks. However, there are some problems here also. To determine the density of a disk, normally you read sector 1, and then issue a status request. One of the status bytes will then tell you the density. This works fine for the XF-551 when it is in single or enhanced density, but not always for double.

Instead, double density comes back with a status of enhanced. Once you use the set density commands, the drive may be set to double, and the status will be correct. Just don't go back into single, or you'll have to manually set the density again. To summarize: if you use single and double density disks, the drive will have a very hard time going into double. Since SpartaDOS has no way of forcing densities, this can be a real problem. The only way I've ever seen it do it automatically is when booting a double density disk (Note: I did figure out a way to make the drive reconfigure; it is used in Diskcomm 3.2).

The drive is capable of double-sided operation, giving you a possible 360K storage when using double density. (Of course, you must use MyDOS or SpartaDOS because the DOS 2.5 it comes with supports none of this.) I found it strange that it will not use double-sided operation in single or enhanced density.

Also another thing to think about is that it uses the index hole of your disks for timing. This means you cannot use those cheap hard-sectored disks anymore, and cannot write to the back side of the disk like you did with your 1050, 810, etc. Now this really dosen't matter if you use its double-sided capabilities, but if you want to make up a disk for your club or friend who has a 1050, and wish to use the back side, you are out of luck.

The High-Speed disk I/O the drive boasts is very similar to Happy's 810 warp speed. Although not as fast as ICD's UltraSpeed, it is fast. The set-up is similar to UltraSpeed: you must format with a special sector skew for optimum speed, which will be slow when high-speed software is not used. Strangely enough, the drive only has a special sector skew for double density, even though the exact same command is used for single density. I have been able to read

single density disks formatted with UltraSpeed sector skew quite nicely on the XF-551. As of now, the only programs I am aware of that make use of the high-speed capabilities is my Disk Communicator program version 3.2, and THE ULTRA SPEED + OS.

Unfortunately, Atari did not make the drive for expansion. It uses an MCU chip that takes the place of many chips of the 1050 used. Because of this, and because it's not 6502 based, I don't think you will see any products such as the Happy or Super Archiver available for a while.

Well, I guess that's it. I have confirmed the bugs I found with later models, so it appears they haven't been fixed yet. Once Atari fixes these, it should be a very good drive at a nice price.

June ACEC Meeting Minutes

by Don Bowlin

The June meeting was brought to order at 7:32 p.m. by Warren Lieuallen. After discussing the newsletter mailing schedule and other topics of general interest to the club, there was a demonstration by Don Bowlin of the Print Kit program from Hi-Tech Expressions. The demonstration of the Print Kit was followed by the raffling off of a similar program named Print Power, also from Hi-Tech Expressions.

There was not actually a Disk of the Month for June. Instead, the disk librarian offered for sale some the many uncataloged disks that have been received over the years from various sources, such as other users' groups. These disks were offered at a discount from the normal $5.00 cost.

The club's SysOp, Frank Seipel, was at the meeting to answer questions. Frank also passed out literature about the ACEC bulletin board and his own personal BBS, Pandora. There was a vote taken to establish a new "at-large" position to the board. Norman Knapp has expressed an interest in this position; there will be additional candidates solicited at the July club meeting followed by a vote of the membership. For those who might be interested in participating in a BASIC language course, Norman Knapp is trying to get a group together for this purpose. If you are interested, see Norm at the next meeting. Miscellaneous activities at the June meeting included the sale of some used equipment by one of the members.

Since the club has its 520 ST computer again there were several requests for some ST demo's. As a result, it was decided at the last board meeting to review TimeWorks Publisher at the July club meeting. This is a desktop publishing program similar to Publishing Partner but newer and more powerful. Dave Feeney has volunteered to do the demo. Jim Murphy, our Disk Librarian, has indicated that he will be putting together an ST Disk of the Month at some future date.

An item discussed at the June Officer's meeting was the possible raffling or auctioning off of the club's PowerType daisy-wheel printer at a future club meeting. The printer has not been used much as of late. For the July club meeting the board decided to raffle off the Print Kit program from Hi-Tech Expressions.

July ACEC Meeting Minutes

also by Don Bowlin!

The July ACEC meeting was brought to order by Dave Beck. The treasurer reported that the club has had a loss of $248 for the last twelve months. This consisted of revenues of $2,238 and expenses of $2,486. There was no club newsletter in July, as explained in The Editor's Column. The July Disk Of the Month included several type-in programs from previous issues of Antic Magazine. The raffle prize this month was the Print Kit program from Hi-Tech Expressions. The winner was Paul Rogers.

The July demonstration of Timeworks Publisher was given by Dave Feeney. Norman Knapp was elected to the new at-large board position. Norm is trying to organize a BASIC language programming course. Anyone interested in participating should contact Norm at the next meeting.

Nominations for next year's officers will be accepted at the August meeting. New officers will be elected in September. The question of what to do with the club's PowerType printer has been postponed until after the election.

At the officers meeting it was decided to have an eight-bit versus ST demonstration of the F-15 Strike Eagle at the August meeting. After the demonstration these two programs will be raffled off. Since there are not many ST owners in the club, the ST version should be easy to win! If there is time we will also take a look at The Newsroom program for the eight-bit.

Membership in ACEC is open to all for a $12.00 yearly fee. Newsletters are available at our monthly meetings at DeSales High School, and are mailed to members three times a year.

Wanted: Dead or Alive!

Life goes on, as they say, and once again, "they" are right! Much to my delight, I am about to finish up by Ph.D. degree, and am moving on to greener pastures (I will be moving from Ohio to become Senior Scientist at Ortho Pharmaceuticals in Raritan, New Jersey!). While very exciting for me and my family, this also means that I will no longer be your humble newsletter editor. Luckily, there is a simple solution in sight.

ACEC Elections!

That's right, this is the golden opportunity you've been waiting for! Come on, with all the changes that Fuji Facts has been through in the last two years (remember back to when it was still "The ACEC Newsletter"?), I just know you've thought to yourself at one time or another "Geez, I could do a better job than this Lieuallen-schmuck!". Well, now's your chance to show us what you've got!

In all honesty, preparing Fuji Facts every month does take some time, but can usually be done in a weekend (as long as you've been collecting and hoarding text files from other sources along the way). If anyone's interested, I've got the entire system set up on my 800XL (Until quite recently, I used PaperClip, The Print Shop and TypeSetter exclusively; I've also got Daisy Dot II all worked out with TextPro.).

In my opinion, there's no better way to keep current and informed about **your** Atari computer—the editor receives newsletters from other clubs all across the country, and is usually on of the first to hear all the most recent news and rumors (free review copies of new software are also not unheard of!).

So go ahead and give it a try; you've got nothing to lose but your newsletter!

Fuji Facts Newsletter
Warren G. Lieuallen
1652 Hess Boulevard
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To:

Check your expiration date!