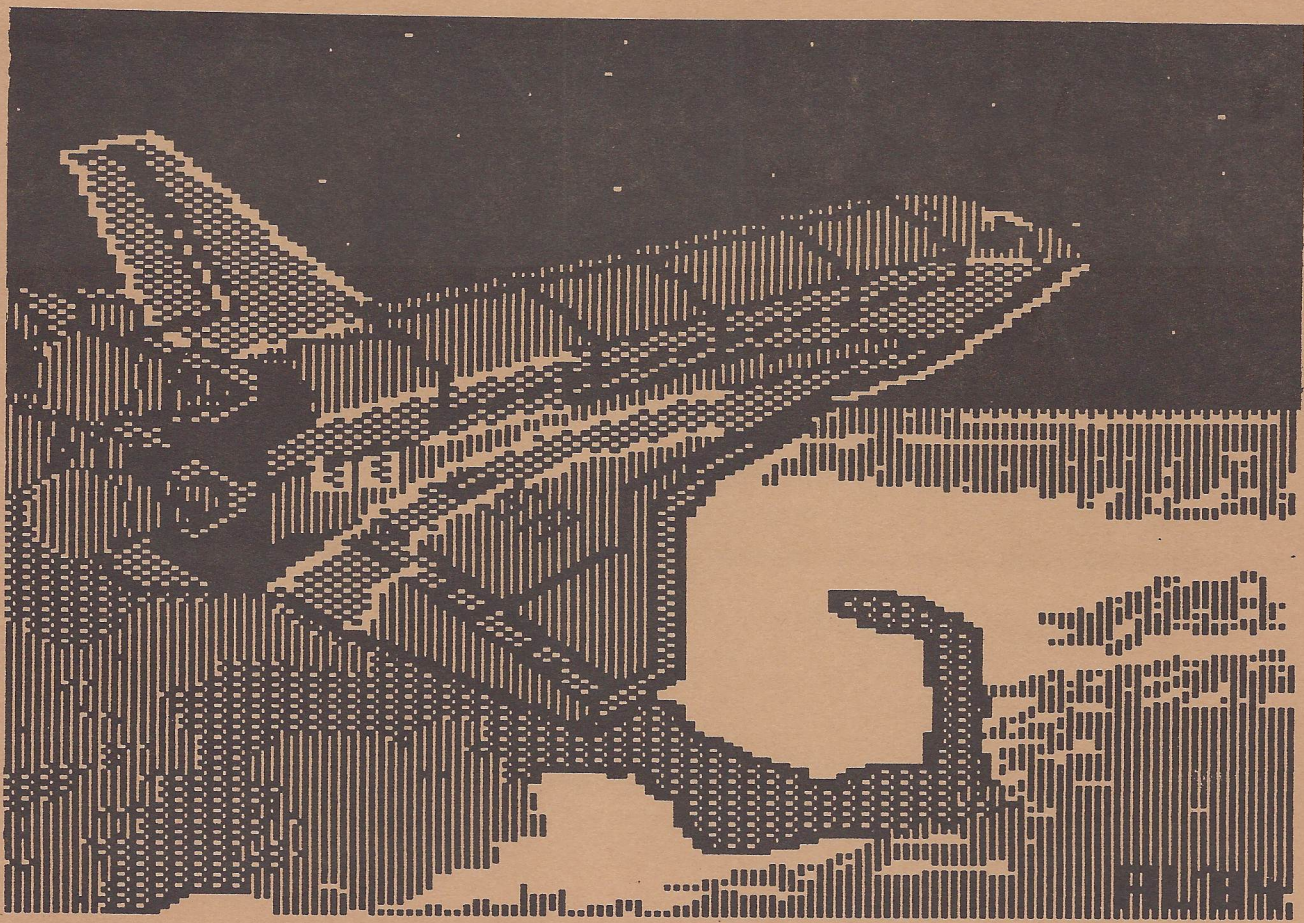


DALLAS ATARI COMPUTER ENTHUSIASTS

VOLUME 5 ISSUE 9 SEPTEMBER 1984



PRESIDENT'S PERSPECTIVE

The Friday night meeting was a huge success! All of the seminars were well attended and the software clinic provided many valuable tips to our programmers. David Young conducted a very interesting demonstration of the RAMROD system for the XL computers. This add-on board (you must disassemble the XL computer to install this board) allows you to install your own operating system, OMNIMON, OMNIVIEW, or whatever! Your customized operating system can have all the "nice" features that you had with the original 800 RAMROD. Look for it at the next meeting (suggested retail is about \$99.00, but look for some good discounts). Several people requested copies of the Sector reading routine that was used in the DOS seminar. It too, will be available at the next meeting (the price will be under \$10.00, with documentation). AND, the Adventure seminar went over so well that a new SIG has been started. The new ADVENTURE SIG will be headed up by our local hero, Ed Kobus.

DEEP BLUE C

Gary Sewell has been in contact with the author (John Palevich) of the APX implementation of the SMALL C language. Gary has arranged for the club to publish this program through the DAL-ACE library (along with documentation). We are hoping to have this ready by the next meeting. The cost should be minimal (we think about \$10) due to the most gracious nature of Mr. Palevich (many thanks, John). In addition, we are trying to set up a SIG for the C language. If you would be interested in this SIG please contact me (231-4402) or Gary Sewell (1-214-727-6567). The SIG would start out by teaching the C language and then build modules for particular functions. It will not matter too much which "C" you have (DEEP BLUE or the C/65 from OSS). Personally, I think that "C" is THE language of the future (due to its portability).

SOFTWARE SALES TAX

Beginning October 2nd, all software (except coin operated arcades) will be subject to state sales tax. The big impact to DAL-ACE is in the area of the club library. Why? The collection and reporting of the tax; the odd money amount sales are time consuming, extra change to be kept on hand, accurate record keeping (we never keep track of the "fourth one free"), and finally, the quarterly tax reports. Yes, we are a non-profit organization, but anything we sell is taxable! This subject was considered at the last board meeting (yes, we had a quorum) but no final resolution was found. (We looked into "renting" the disks, but found that such fees are taxable.) One possibility is: eliminating the "fourth one free" and absorbing the tax in the \$5.00 price (\$4.71 plus \$0.29 tax). We don't know how this would affect total revenue because we don't have a record of how many "fourth free" disk are handed out each month. However, if we took this approach, we could use an inventory system to determine how many we sold each month (eliminating the record keeping). But there is no apparent way to escape the quarterly reports. We will probably have to pay someone to fill these out (if someone, having that experience, would like to volunteer, call Ed Kobus or Jim Chaney). Please contact your members-at-large if you have any suggestions or

this subject.

DISK LIBRARY COPIES

At the last meeting, we tried a slightly different approach to disk library copying. We had three dual drive systems set up to copy library disks onto members' blank disks. Between 6:30 and 10:00 p.m. we copied approximately 50 disks. The one dollar per disk fee brought in \$50.00 (I told you I was good at math). This compares to a "normal" library income of approximately \$500.00 per month. WE NEED THE INCOME! All other considerations aside, this one aspect dictates that we revert to the old way of doing it (professional duplication, etc.). In addition, this "new" way did not meet the demand. We simply could not fill everyones request with only three systems available. This aspect also dictates a return to the original system. Again, if you have suggestions, speak with your members-at-large or drop me a letter (which will be presented to the board).

NEWS FROM ATARI

Anyone heard anything?

SEMINARS

Last month's seminars were well received. We will have more. BUT, to be sure that the subjects you need/want are covered, contact Doug Verkuil with your suggestions.

BULLETIN BOARD

Lance Nelson is still trying to get all the equipment and software back together and hooked up to a telephone line. At this point, Lance is using his own equipment, his own telephone line, his own tears and labor to get SOMETHING up and going as soon as possible! At this very moment we are very near to having it all together. The BBS access list will be telephoned to pass out the new phone number as soon as everything is up and ready. Please be patient, Lance is doing all that is possible to get the system up!

RESPECTFULLY Jim Chaney

EDITOR'S STRING\$

Well summer is over. I hope ALL of us can spend more time with our computers instead of things like vacation, going to the lake and other fun things like that.

I don't beg very well (I don't have the patience for it). I will try it this one time. ARTICLES AND PROGRAMS FOR THE NEWSLETTER ARE NEEDED!!! About six members are producing everything you are seeing in YOUR newsletter. Share your "trick" programs and utilities. SHARE your opinion of the program you recently bought, good or bad. Believe me no one wants to hear, "Ya, I bought one of those and it was worthless" after they have paid for the same thing the day before....EOL

Product Review: OSS C/65

By Dave Gillen

Over the past several issues, you've seen me write about all kinds of topics. Today's excursion will be into the realm programming languages. In particular, I'd like to talk about the language "C" and one implementation for the Atari, C/65 by OSS. Now for a little background.

The C programming language was developed in the early 1970's by Dennis Ritchie of Bell Laboratories. Although the "C" doesn't stand for anything in particular, it is purported to have been based on the language, "B", which was an adaptation of the BCPL (basic combined programming language) language. All the dry stuff aside, C is a structured, low-level language. It looks a bit like Pascal (or, rather, Pascal looks something like C). You can do anything in C.

One implementation of C for the Atari is C/65 by OSS. This is one of two implementations that I know of. The other is the "Deep Blue C" by John H. Palevich (see an article elsewhere in the newsletter about "Deep Blue C").

C/65 is marketed by OSS. It is a C compiler. What that means is that each line of source code is converted into the necessary 6502 instructions to carry out the intent of that line. The 6502 instructions must then be run through an assembler (in this case, MAC65, also by OSS). Although this may not mean anything, let me explain further.

The other technique for processing computer languages is to interpret them and the software that takes each source line and calls needed subroutines (that it keeps inside) to carry out the intent of the source line (Atari BASIC and Deep Blue C are interpreters). In general, interpreters execute a source program slower (than a compiler), do not allow easy inclusion of an assembly routine, but do provide fairly good debugging tools and easy use. It is generally easier to fix a program that is interpreted since you can simply type in a new line (like BASIC). Compilers force you to reload a text editor to make changes.

At any rate, C/65 is a compiler. It requires use of an editor to enter or change the source program. MAC65 can be used for that purpose. You must also use MAC65 to convert the assembly language into an executable program. If you're wondering why I go through the extra trouble, it is because I want fast code (which a compiler can produce). Another feature is that I can write routines in 6502 assembly language and combine them with the C/65 program. And lastly, C/65 is supported by OSS (well, to a limited extent anyway). The Deep Blue C isn't supported.

It should be pointed out that C/65 isn't a complete version of Kernighan and Ritchie's C. It is a subset based on "Small C". Here is a brief listing of some of the features that were omitted:

- floating point numbers and double-precision floating point numbers

- structures, unions and bit fields

- FOR and DO WHILE statements

There is enough in C/65 that you can still do anything. One of the (interesting?) things about C/65 (or just about any C implementation) is that there is very little protection for the programmer (unlike BASIC or Pascal). If you want to trash any memory location (intentional or otherwise), C will let you do so. Hey, wanna see my system lock up?

Who should use C/65? Well, C/65 is NOT for the novice. You will quickly become confused and frustrated. C/65 is intended for the intermediate to advanced programmer that wants some sense of structure to their programs. If you are using C/65 you should know 6502 assembly language as well!

I am still learning the nuances of C and sometimes make very obscure mistakes. I have found that the only way to solve some of those mistakes is to pursue the assembly code generated by C/65. It has answered many a question.

The documentation for C/65 is fair. It presumes that you have some other reference guide for the C language. If you are seriously going to write in C, bite the bullet and buy Kernighan and Ritchie's "Programming in C" book. The documentation covers the C/65 implementation (with a few observations for the uninitiated) but it isn't written for the novice.

C/65 does include a graphics library to access some of the Atari's features. The functions included are: COLOR, DRAWTO, GRAPHICS, PLOT, POSITION, and SETCOLOR. As you can see, the names look very familiar to BASIC graphics commands. There are no commands to access the sound or game ports. For that you'll have to access the memory locations where the hardware registers reside.

My general impressions? Well, I like C/65. I do have some reservations, though. If you have grown use to formatted I/O, character manipulation, or floating point numbers, you're out of luck! Those facilities do not exist. However, as my first exercise, I constructed a set of functions that work just fine. So, I've overcome that hurdle.

It also gets annoying to go through the process of loading an editor, compiling the program, and then running the assembler to make one small change. There are shortcuts that can sometimes be taken but it still somewhat time consuming.

A final shortcoming is the price. C/65 costs about \$60. Since you also need MAC65 (supposedly you could use other assemblers but it is a non-trivial task since C/65 generates MAC65 assembly directives). MAC65 costs about another \$60. Yes, this isn't cheap!

If you are serious about developing some software and you want to use a high-level language (aside from BASIC) then I think C/65 is a worthwhile investment.

PROGRAMMING

by Jeff Golden

Howdy. This is a continuing discussion about programming techniques and styles that was originally started in the July newsletter.

The topic for today's discussion is "Structured Programming", what it is, and what it is not. Let's start with what it is not.

First off, structured programming is not a ten-level nested IF with neatly indented statements. I was amazed to discover at least one programmer who thought that writing pretty-coded nested IFs was structured programming. Apparently that person picked up her information in a computer science class. But then, you know what they say, "Those who can do, and those who can't teach".

In the early 70's a survey was conducted in an attempt to discover the leading causes of program bugs. At the top of the resulting list was the multi-level nested IF. This is definitely a no-no that you want to avoid, whenever possible. Structured programming was invented to make life easier for programmers, not more difficult. Multi-level nested IFs are not structured programming.

Structured programming does not require the use of a particular language such as PL/I or Pascal. You can write structured code in any language including BASIC.

And, there is one last school myth that I would like to dispose of. It is a very important one that may generate some dissent. GOTOs are allowed in structured code.

The inventor of structured code had absolutely no intent of eliminating the use of GOTOs. He did intend, however, to limit the use of GOTOs, and that has been corrupted into not using any GOTOs at all.

To those who claim they write code without any GOTOs, let me say that your code is riddled with GOTOs. You may call them DO-WHILES, PERFORMs, CALLs, or what have you, but under each of these instructions is a JUMP instruction. A rose by any other name is still a GOTO.

For added emphasis, let me repeat once more, what structured code is not. Structured code is not a multi-level nested IF. Structured code does not require a special language. Structured code does

not eliminate the verb GOTO.

Now, for the reasons why everyone should be using structured code.

Structured code came into vogue in the 1970 to 1975 time-frame. By 1975, every programmer in my corporation had been required to attend a structured programming class, but few of them had been required to use the technique. The corporation believed in giving each individual some freedom of choice.

Personally, I was very skeptical at first. I was proud of my ability to write compact, fast-running code, and it appeared to me, that the new technique would add more lines of code, and it would also increase the path length, making the code run much slower. But what the heck, we'll try anything once.

Imagine my surprise when my first structured program came out one-third smaller than I would have expected for a similar linear-coded program. It also ran faster than expected. That first structured program, about 5000 lines of complex COBOL, sold me on the value of this technique.

My conclusions as to why the program was smaller and faster are these: The structured technique was compelling me to spend more time thinking about the layout of the program. As a result, there was a greater tendency to concentrate the code associated with a given condition in a single place. This in turn resulted in fewer conditional tests and branches. It was simply, cleaner code, so it was smaller and faster.

So much for why you should use structured code. Now for what it is.

Structured coding is the practice of writing your code in small segments. The segments are arranged in a hierarchy or tree-like structure, hence the name structured program.

Each segment is characterized by having only one entrance point and one exit point. The only acceptable deviation from the one exit rule would be a properly documented conditional GOTO that terminates the program in the event of a fatal error. Such a GOTO would not be part of the normal data flow in and out of the segment, and should probably never be executed.

A segment is permitted to CALL, GOSUB, or branch-and-link to a lower level segment. The single exit of the

lower segment should return to the next statement in the calling segment. Such a CALL should be properly documented in the calling segment so that it is not necessary to actually go to the lower segment to determine what the result of that call will be.

Internally, a segment is made up of one or more code-structures. Again these code-structures should only have one entrance and one exit. An example structure might be a DO-WHILE, FOR-NEXT, or IF-THEN-ELSE type of structure. Some languages may require a forward or backward GOTO in order to complete these sub-segment structures. Using a GOTO that does not jump off the page, and does not create a mess that is intertwined with other GOTOs, is acceptable.

Note, that this use of GOTO is contrary to some of the popular academic teaching, (no GOTOs), but, it does meet the intent of the inventor of structured programming. It does not tie the programmer's right arm behind his back, and it does allow the programmer to code structures in any language.

A segment should be small. The recommended maximum limit for a segment is one page of code or 50 lines. When a segment exceeds this size then one or more of the code-structures should be broken out and made into a lower level segment.

A complete program is made up from segments that are arranged in a tree structure with the uppermost segment containing the entrance and exit to the program.

The uppermost segment also controls the program flow and the use of the lower level segments. One of the secrets in dealing with a structured program is that, to gain an understanding of the program's data flow, it should only be necessary to read page one of the program. Page one should be a road map to the program. If it is not, then you do not have a structured program.

Page one is important to the maintenance programmer. He needs to make a change, but may have no prior knowledge of the program. If page one is laid out properly, the maintenance programmer can easily find the section of code that needs changing.

Ease of maintenance is one of the prime advantages of structured code. As stated earlier, structured programming is also easier on the original programmer, and that is what this column is all about.

We could talk about this subject for a week, but I have to break it off somewhere. Next month, we will take it up again, along with top-down design.

*** SOFTWARE REVIEW ***

by John Pellet

ARCHON II: ADEPT

ARCHON only more so! Electronic Arts and Free Fall Associates have done it again. ADEPT takes all of the spectacular facets of the original ARCHON, improves them, and goes on from there. The setting is the final battle between Order and Chaos. Four powerful Adepts for each side join the fray, each with the ability to fight, move, and cast spells. The battlefield is divided into five realms: Fire, Air, Water, Earth, and the Void. The goal of the game is to gain possession of the six power points - one in each corner of the playfield (rotating through the four realms) and two in the Void. The figure below (c 1984 by Electronic Arts) shows the playfield and the starting position of the Adepts. Each Adept has the ability to summon two types of beings by magic: Elemental or Demon. Each side has one Elemental for each realm except the Void and there are four types of Demons. Chaos Elementals are: Behemoth, Siren, Ifrit, and Firebird while Order can summon Giant, Kraken, Thunderbird, and Salamander for Earth, Water, Air, and Fire respectively. The Demons are: Juggernaut, Wraith, Gorgon, and Chimera. Each being has different abilities and vulnerabilities. Elementals and Demons require different amounts of magical energy to be summoned and retained. Each Adept gains magical strength depending on its position. Adepts have available the following spells: Summon, Heal, Weaken, Imprison, Release, Banish, and Apocalypse. The continuing spells (Summon and Imprison) take magical energy to maintain as well as cast. Apocalypse causes a final battle with each player's strength based on the magical energy of the two sides.

The actual game play is similar to ARCHON. There are several enhancements that improve game play. Most importantly, the skill level of the two participants may be selected so that even a novice can beat the computer after a couple of games. Also, the final battle can be joined at any time, meaning game length is up to either player. The most unusual feature I have encountered is that during combat, Adepts' missiles can be steered with the joystick - and the computer rarely misses. The capabilities of the combatants are considerably more varied than in the original as are the effects of the playfield on characters' abilities. Also, movement rules are much less restrictive than in the chess-like original.

I know of no better game anywhere (not to be confused with adventures - a different kettle of fish). If you liked the original then you will love the sequel. ARCHON II: ADEPT is a 10 in every respect.

ARCHON II: ADEPT, for 1 or 2 players, from Electronic Arts, is available at Videoland for about \$36.

IN SEARCH OF THE MOST
AMAZING THING
Spinnaker Software, \$30-\$35

Review by Jeff Golden

Let me state right off the bat, that I was disappointed with this piece of software, or at least with the Atari version of the program.

That is a real shame, because under all the program errors and the excruciatingly slow response times, there are some really neat ideas that have a lot of potential. I sure wish I had a copy of the source code and an invitation to do something with it.

The program was purchased to give to my kids who live in Arizona. They have their own 800XL with an INDUS-GT disk drive. First off, the program would not boot on the Indus drive, apparently because of some sort of silly copy-protection scheme. Scratch my present to the kids.

I brought the program back home to Texas, where it did boot on my trusty old 810 that was also connected to an 800XL. (Note, that the XL was not the problem. It did not even need the translator disk). The program checks, that I will describe later, occurred with about the same frequency on my 400 as they did on the 800XL.

The object of the program is to explore a giant tar pit called the Darksome Mire and to find the Most Amazing Thing.

There are 25 tribes of traders living on the mire. You trade with these people for money and for clues about the M. A. T. Each tribe has a different language and places a different value on the red, green and yellow chips that can be used to purchase things for your vehicle. By visiting the right tribes and by trading red for green, green for yellow, and yellow for red, you can become quite wealthy, that is until you meet up with a unscrupulous trader who asks an astronomical price for a clue that turns out to be worthless.

Remember that the Spinnaker programs are supposed to be teaching programs for the children.

Your vehicle is a combination All-Terrain-Vehicle and hot-air balloon. You have to drill for oil to fly the balloon, but the ATV part of the vehicle is solar-powered and can be slowly driven about on the surface of the mire while you search for the oil and

for the traders. An occasional bad guy, called the Mire Crab, chases you when you are on the ground. But, when he catches you, he only puts you to sleep for awhile. This is an improvement over the usual mayhem of the shoot-em-up games.

The balloon is controlled by a burner switch and a drop panel switch. Since the wind blows in different directions at different altitudes, you can move to the distant parts of the mire by controlling the height of the balloon. The balloon has a delayed reaction to the controls, like a real hot-air balloon, and it is difficult to steer with any degree of accuracy. Landing within 10 miles of your target is an accomplishment.

Spinnaker recommends the game for ages 10 to adult, and suggests that the parent use the game for a little one-on-one contact with their children.

The game is written in BASIC which should tell you something about the speed of play, and the number of possible errors that may occur. Error 3 at line xxxx showed up five or six times at different locations. There were also several trapped errors that produced useless "Notify Spinnaker" messages.

All of the errors throw you off the machine. Thanks to "no-copy", the keys are disabled, and it is usually not possible to type in CONT and then resume play.

The save-game feature worked some of the time, but much of the time it did not. Trying to restart a saved game quite often resulted in a program check.

Being able to restart is very important because of the terribly long time that is required to play the game. For example, it required 42.2 seconds to load the balloon control panel. The bird's eye view of the driving surface required 30.6 seconds to load. When searching, it was desirable to swap back and forth between these panels quite frequently, and the panels were only simple line drawings that should have been loadable within five or six seconds.

I never did find the Most Amazing Thing. I guess the most amazing thing was that I messed with the game for as long as I did before trash-canning it.

The scenario behind the game was interesting, and it could be a real winner if Spinnaker would only do something about the multiple errors and the slow loading of the graphics screens. In the meantime, save your money, or at least ask for a demo before you buy.

DAL-ACE VOLUNTEER EXPERTS (HELP WHEN YOU NEED IT MOST)

Need help with a computer question or problem? That's one of our functions as a club! SHARING KNOWLEDGE And there is no need to wait till the next club meeting. Listed below are volunteers to help with simple or simply staggering problems. If you need help, call one of our EXPERTS!

Select a name from the list below. In order to somewhat equitably distribute the workload, we suggest that you select the name that is closest in the alphabet to yours. You will notice that each listing includes a letter in parentheses; (B), (I), or (A). The letter B indicates that the volunteer is willing to help users at the Beginning level. The letter I indicates help for users at the Intermediate level. And the letter A indicates Advanced help.

Most of these people work during the day, so we suggest calling during the evening. Also, please don't call after 9:00 p.m. unless you have already made such an arrangement with one of the volunteers.

DAL-ACE RESOURCE EXPERTS

Bailey, Bill	271-4784	(B)
Chan, David	495-8207	(B)
Clarke, Tim	960-7372	(B)
Davis, Bo	270-5544	(A)
Dunayer, Adam	680-9018	(I)
Gillen, Dave	245-2732	(I)
Gonser, Bill	642-1430	(B)
Hafele, Harry	348-7745	(I)
Maxham, Mark	238-5949	(B)
Mullens, Dow	272-3004	(B)
Nelson, Albert	357-8436	(A)
Newell, Wes	423-1781	(I)
Oradat, Cecil	690-3155	(I)
Parker, Travis	840-9586	(I)
Penn, Tandy	276-8796	(I)
Pennington, Jerry	223-8132	(B)
Rabinek, Tom	681-2280	(I)
Runyon, Ernie	817-485-0871	(I)
Rush, Jeff	661-1289	(I)
Sadow, Phil	644-3325	(I)
Sagor, Fred	424-0291	(I)
Scott, Ron	436-0297	(B)
Sladeczek, Joe	276-1443	(B)
Taylor, Frank	242-4958	(B)
Wiant, Jim	690-4188	(I)
Williams, Edmund	286-3934	(I)
Zegub, Tom	234-1958	(B)

[List updated as of 8/2/84. Please help us keep the list current by phoning corrections, additions, or deletions to BO DAVIS, (214)270-5544. And if you would like to join the list, please feel welcome.]

SBM BUSINESS SOFTWARE

If you run a business that deals with any type of inventory, then SBM for the ATARI computer is for you. This is not a new program, we have been using it ourselves for about a year. We have included all the features that we needed in a business package, plus a lot more that you might use. This is a package that does what it says. Written in Basic XL from Optimized System Software provides speed and COMPLETE user modification ability.

FEATURES:

- Point of sale (cash or account)
- Invoicing (with automatic stock reduction and sales totaling)
- Inventory control (unlimited part numbers, 12 char. alpha-num)
- Accounts
- Unlimited vendors
- Mail labels
- Plus many more

THE MENUS:

MAIN:

- REPORTS
- INVOICING
- MAIL LIST
- ADD/EDIT INVENTORY
- ORDERING RECEIVING
- SYSTEM SETUP
- QUIT

ADD/EDIT INVENTORY:

- ADD INVENTORY
- INVENTORY EDIT
- EXIT TO MENU
- PRINT INVENTORY
- RECOVER FILES

INVOICING:

- SALE
- INVENTORY
- EXIT TO MENU
- RETURN TO STOCK
- TOTALS
- CLOSE OUT DAY
- QUOTE

REPORTS:

- ALL
- OUTSTANDING
- EXIT TO MENU
- SELECTED
- RECOVER FILES
- CREDIT ACCOUNTS
- NEW ACCOUNTS
- LIST ACCOUNTS
- UPDATE/EDIT

MAIL LIST:

- ALL
- OUTSTANDING
- EXIT TO MENU
- SELECTED ACCOUNTS

ORDERING RECEIVING:

- ORDER
- RECEIVING
- EXIT TO MENU
- TURN REPORT
- SALES REPORT

We don't believe you will find another package that will provide this many features for the price. \$99.95. \$169.95 with Basic XL cartridge. Requires 40K min. Atari computer, Basic XL, two double density disk drives (will support up to 4096 sectors per disk), interface and printer.

RAMROD XL IS HERE

RAMROD XL is a printed circuit board that goes inside of your Atari 800XL computer. It gives you 48K of bankable rom space. Switch between three complete operating systems easily. Now run most of your software without the use of a translator.

Features OSNXL operating system, FASTCHIP XL floating point routines, plus OMNIMONXL.

OPTIONAL: OMNIVIEWXL, 80 columns for the 800XL. Plops into the RAMROD XL.

RAMROD XL \$119.95 OMNIVIEWXL \$59.95
Contact your nearest dealer or Newell Industries, 3340 Nottingham Ln., Plano, TX. 75074, 214-423-1781 (no collect calls).

FRACTION FEVER
Spinnaker Software, \$35

Review by Jeff Golden

Cartridge, Atari 400/800 and XLs.

Fraction Fever is a learning game that is fun to play.

Spinnaker recommends the game for ages 7 thru 11. I'm a half-century older than that, but I found it very difficult to tear myself away from this game. I think the game should have been labeled 7 through adult as it teaches more than just fractions, and it could have very well made it, as a plain old arcade game. Why limit the marketplace.

At any rate, your child should be old enough to understand simple fractions, such as $1/2$, $3/4$, $7/8$, etc. In the beginning, Mom or Pop should probably stick around and help the younger kids.

Fraction Fever is played on a series of platforms that are 20 stories high and are several screens wide. Only a portion of one floor or platform appears on the screen at a time. You ride a pogo stick that can be controlled from a joystick or the keyboard.

The up-connection between platforms is an invisible elevator. To find the elevator, you move across the platform until you find a fraction beneath the platform that matches the fraction that appears at the top of the screen. Pressing the fire button activates the elevator, or it puts a hole in the floor when you make a mistake.

In the meantime, down in the lower-right corner, a clock is furiously counting down. When it gets to zero, the elevator leaves without you.

When you miss the elevator, scoring stops, and you are stuck on the platform. You have to make a hole and fall through, to get to the next lower level. Play continues from there with a fresh start on the clock. Falling ten times ends the game, and falling into the basement also ends the game.

If you catch a ride on an elevator, that takes you to the roof, your score is doubled, and you get a free fall to the fifth floor. The elevator normally stops at the next platform above, but it does not stop when there is nothing above but empty space

Points are scored by shooting bad fractions. This leaves a hole in the floor, thereby increasing the

difficulty as your score gets higher. Bad fractions are distinguished from good fractions by their position along the platform. i.e. $1/2$ should only be in the middle of the platform. If it is anywhere else it is a bad fraction and worth a point if you shoot it. You do not get points for shooting good fractions or for catching the elevator.

A platform is several screens wide, so a long range view of the platform is given at the bottom of the screen. This assists in determining your position on the platform. You have to convert your position on the platform into a fraction to compare with the fraction under the pogo stick. Remember, if you do not shoot the bad fractions, you do not get any points, but shooting good fractions only puts more holes in the platform. This game exercises your mind as well as your trigger finger.

To add to the fun, fractions are sometimes presented in numeric form, and sometimes in graphic form. The most common graphic form is a vertical string of beads, with the length of the string, in beads, being the denominator. The numerator is expressed by the number of colored beads in the string.

One alternate form is a partially filled vertical bar. To recognize the value of this fraction, the child has to estimate the relationship between the filled and unfilled portions of the bar. There are no beads or indexes to measure by, however what $3/4$ ths of something looks like has already been socked home by the beads. The child is also expected to know, (or learn), that $3/4$ is the same as $6/8$ ths, etc.

Conclusion: This is a valuable learning game that teaches a basic concept that many children have found hard to grasp. The computer gives them something to hold on to, while at the same time, it provides the incentive to exercise their minds in this area.

Fractions are very important. A large portion of mathematics is based upon fractions, and they are a part of our every day lives in such ordinary things as measurements and money. Could the failure to learn and understand fractions be the reason why so many children are having problems with algebra and trigonometry? You have to learn to walk before you can run.

EDITORIAL STAFF

By Myron Walters

The Newsletter has several editors who will be sharing the responsibilities and who will be working as a team to assure that the DAL-ACE publication continues to be one of the best in the country. Below is the list of staff members and a description of their responsibilities. If anyone would like to help in any of these areas, please call one of the editors for information.

Art Editor: John Henson. John will be responsible for preparing the cover art each month. Also, he will help with the overall Newsletter design and layout.

Software Editors: Myron Walters and John Pellet. John and I will be responsible for writing or obtaining reviews of software. We will be encouraging DAL-ACE members to write software reviews, and we will also be examining other user-group newsletters for appropriate articles to reprint.

Hardware Editor: Mark Maxham. Mark will be contributing articles and reviews about hardware. If you have any suggestions or comments about what he might want to include, please get in touch with Mark.

Programming Editors: Jeff Golden and Dave Gillen. Jeff and Dave are looking for good articles about programming. Also, they welcome submissions that contain even the briefest of programming tips. Remember, even though you may be very familiar with a particular programming technique, other members, especially the new members, may not know about it. Please give Jeff or Dave a call if there's anything you'd like to contribute.

Books and Magazines: Jeff Rush. Thousands of computer books and magazines are now available, and it's often difficult to know which ones are worth taking a look at. If you'd like to do a review of a particular publication, give Jeff a call.

Production Managers: John Pellet and Jeff Golden. John and Jeff will be working with the Senior Editor on production day to help prepare the copy for press. We prefer to have all of the copy "camera ready" before this session begins but, we accept submissions on disk (ATARIWRITER or WORDMAN files preferred), typed or handwritten. If you'd like to submit something, take a look at a recent Newsletter to see how it is formatted.

Distribution Managers: Roger and Steve Markeley, Cathy Barros, and David Miller. This committee will be helping with the distribution of the Newsletters at the meeting, and will also be responsible for the mailing. In addition, they will be updating the mailing list of Newsletters which are exchanged with other user groups.

Senior Editor: Myron Walters Jack of all trades, master of some.

NEWSLETTER SCHEDULE

October Newsletter: Copy should be turned in by September 22nd. The production meeting will be September 22nd.

November Newsletter: Copy should be turned in by October 20th. The production meeting will be October 20th.

NEWSLETTER STAFF

If you would like to assist with the Newsletter, or if you have a submission or suggestion, please contact the appropriate staff member listed below.

ART: John Henson, 691-4154

SOFTWARE: Myron Walters, 691-3401; John Pellet, 792-3175

HARDWARE: Mark Maxham, 238-5949

PROGRAMMING: Jeff Golden, 252-3268; Dave Gillen, 245-2732

BOOKS AND MAGAZINES: Jeff Rush, 661-1289

PRODUCTION: John Pellet, 792-3175; Jeff Golden, 252-3268

DISTRIBUTION: Roger and Steve Markeley, 231-6918; Cathy Barros, 368-8499; and David Miller, 391-1926

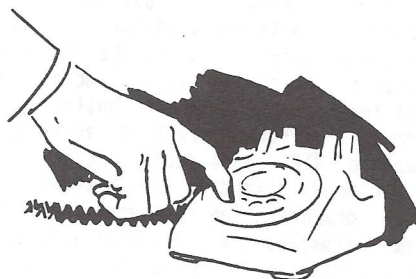
HELP WANTED!!!

There are still a few unfilled positions on the Newsletter staff. Please let us know if you'd like to help out. Here's what we need:

ADVERTISING MANAGER(S). Recruit advertisements for the newsletter. Collect payment. Deliver camera ready copy to the Senior Editor.

SIG EDITOR. Contact SIGs each month to find out about activities and meeting schedule.

Call Myron Walters 691-3401 to volunteer for one of these exciting positions. The pay isn't great, but there are a lot of intangible rewards that come from making contributions to the club.



*** HARDWARE REVIEW ***

by John Pellet

HAPPY ENHANCEMENT

Are you tired of your slow, slow 810? Are you worried about your large investment in "protected" disk software from companies that provide no support or are no longer in business? Would you rather have one superb drive than two acceptable ones? If you answered yes to the above questions, then you should look at the Happy Computers, Inc. "Happy Enhancement" modifications for the Atari 810 and 1050. The Happy modifications add two extremely useful features to the 810 and three to the 1050.

A "Happy" 810 will backup almost all disk software on the market. HCI revises their software about twice a year to include the latest protection schemes (the only disks I have that the latest version of the Happy software will not backup are "WORDMAN" and "ARCHON II: ADEPT" and they say they are working on them). Updates are available at a nominal cost (\$5-15). HCI warrants that if they cannot backup a commercial program after examining the original disk the purchaser may return all Happy materials and receive a full refund - evidence of considerable confidence in their product. The backup software is very easy to use and is menu-driven. In addition to the backup program, HCI supplies a fast sector copy utility and a compactor program that allows multiple protected booting disks to be put on a single disk that boots from a menu in a "Happy" drive. All of the software works whether the modified drive is D1 or D2 (except compacted disks must boot in a Happy D1). The only significant drawback is that a Happy drive will not boot many of the current protection schemes without first running a slow down program to lock out the modifications. Not a major problem but an irritation, rather like the translator disks for the new machines. This problem can be bypassed in the copies but if this is done then they will not boot in an unmodified drive.

The second feature added by the "Happy Enhancement" is a large increase in data transfer rate. For programs that run under DOS 2.0, the "Warp Speed" software increases data throughput by as much as 30-40%. For example, if a program reads in under DOS 2.0 in 45 seconds, it will warp in in about 30 seconds. VERRRY NICE! However, TANSTAAFL (There Ain't No Such Thing As A Free Lunch). The program must be compatible with DOS 2.0 (no ATR, DD, boot files, etc.) for use with the 810. This, obviously, limits the usefulness of the feature. Even without the fancy software, the modifications offer a noticeable improvement in disk access because the Happy 810 is track buffered and the buffer is retained until a sector on a different track is requested from the drive. A standard 810 uses a sector buffer that is cleared as each sector is passed to the computer. The speed gained is very dependent on the type of data being read. Two extreme examples are: 1) a boot file gains no advantage since all data is sequential and interleaved, but 2) a standard speed check program which reads the same sector over and over will show an almost 200% speed increase.

It will show a drive speed of about 750 rpm instead of 285-290 rpm and the drive will turn off after reading the track once.

The "Happy Enhancement" is now being advertised for the 1050 with the capabilities above plus true double density. I have not seen it so I cannot give a hands-on report, but it will, hopefully, allow the use of the "Warp Drive" software in a double density DOS.

In summary, I like my "Happy" 810 much better than the original 810 but at the time I bought it the only double density drive available for the Atari was the Percom at about \$500. Then, modifying an 810 for \$250 was more reasonable to me than now when complete DD drives are frequently priced under \$300.

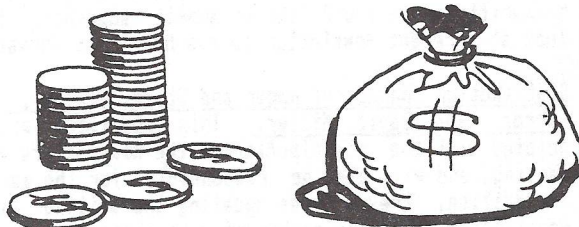
NOTE: "TANSTAAFL" is from The Moon Is A Harsh Mistress by Robert A. Heinlein, c 1966.

*** PERSONAL ADS ***

Personal Ads are printed free of charge for any paid up member of DAL-ACE. If you have something to sell (COMPUTER ORIENTED PRODUCT) or need something for your system, send your "copy" to the newsletter address by the 15th of the month for publication.

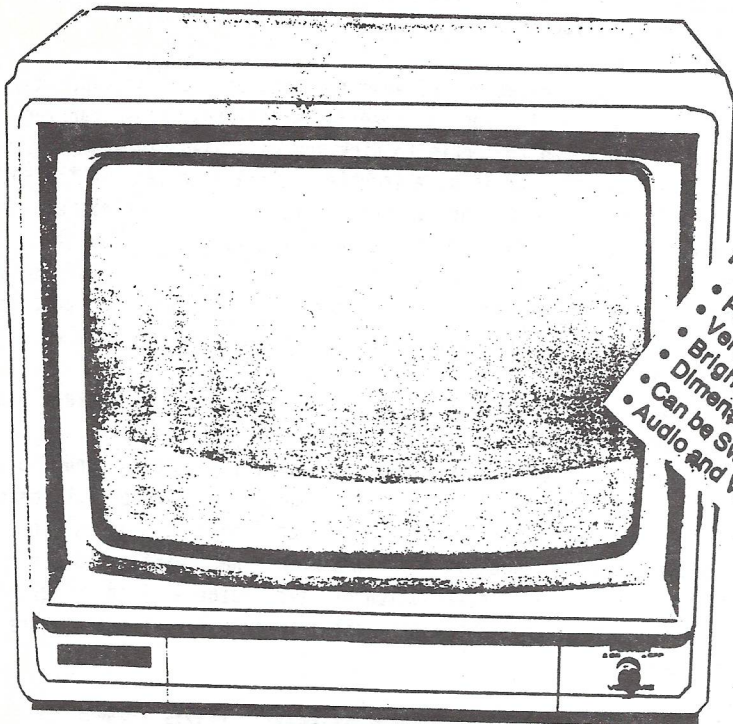
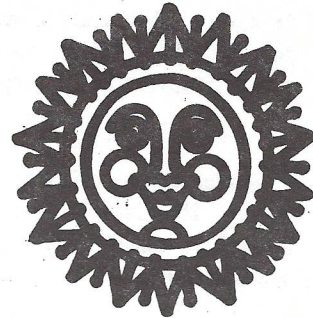
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- ALIEN Voice Box \$ 40.00
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- 80 Track disk drive \$150.00
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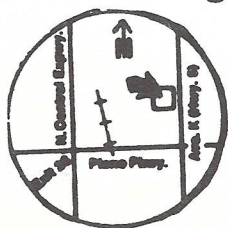
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*** Software Review ***
Rescue at Fractalus
from Lucasfilm
review by Mark Maxham

Understandably, I was dubious after hearing about a game from a film maker. What would a movie designer know about software design? Well, I have no doubts now. The touch of Lucas from his movies must carry into his programmer's designs.

Simply put, Rescue at Fractalus is one of the best action games to date. It combines amazing graphics animation, detailed controls, and strategy, not to mention a few surprises along the way.

Scenario: you are the pilot of an armed rescue ship in a carrier orbiting the planet Fractalus. Your mission: rescue your pilots who have been shot down while making raids on key military strongholds down on the surface of the planet. The carrier must break orbit to avoid fire from the ground, so don't count on any support. You're on your own, see you later. WHOOOSH! You then plummet into the atmosphere of the planet and begin your mission. After being dropped into the heart of enemy territory, you set about your rescues.

The view is through the cockpit window of your ship. In front of you is your instrumentation: a target scope for enemy units, a long range scanner for friendly units, an energy level indicator, an artificial horizon, engine level, and altimeter. You also have three numerical indicators: range to downed pilot (assuming you have one in your scanners), number of enemy units destroyed, and number of pilots left to rescue. Through the window you see the terrain of Fractalus: mostly mountains, with laser turrets on some of the peaks, and flashing points in the valleys where the pilots have turned on their landing beacons. Occasionally even a missile or two is launched. However, your ship is armed reasonably well with a cannon capable of wrecking both turrets and missiles.

The ship is reasonably intelligent itself, and will not crash into mountains unless you are completely determined to. For skimming the tops of peaks the ship uses repulsor beams for levitation; however, if you power dive into a cliff your shield energy is reduced somewhat. This energy is also sapped by the numerous laser beams which strike your ship, as well as seeking missiles.

To rescue a pilot, you must land your ship within a range of "two", indicated by your long range scanner. After your descent, you must power down your engines and open the airlock. The pilot will run to the ship, hop in,

close the airlock, and make a generous offering of energy drained from his now-defunct vessel. Unfortunately, the Fractalans have been able to duplicate the friendly homing beacon, and have set up decoys to lure you into a trap. Watch out for the pilots with green skin! If one gets in your ship, too bad, we'll notify your next of kin. If you are cautious, and leave the airlock closed, a real pilot will knock--on the airlock door. Aliens, on the other hand will knock on the windshield in a desperate attempt to get in at the pilot (you). Fortunately, your engine heat is fatal to aliens. And pilots too, so be careful who you fry.

Upon completion of your mission, or near the end, anyway, you will hear a beep--a signal that the carrier has returned to orbit to pick you up. When finished rescuing pilots, or in dire trouble, (like an alien in the ship), type 'B' to boost into orbit back to the mother ship. Fortunately, again, vacuum is fatal to aliens also. At the carrier you will be refueled and advanced to the next level, where you are sure to meet more pilots, more lasers, more aliens, and a slimmer chance of survival.

In summary, once again on the one-to-five scale, I give this game a 5 for graphics, a 4 for game play, as it may get dull after a long session, 4 for sound, 5 for complexity (it's as bad as Star Raiders when it comes to the controls), and 4 for originality. It is sort of another shoot-em-up, even with a new twist. I'd say this game is a combination of Star Raiders, Solo Flight, and Choplifter--and well worth a trip to the software store.

*** PERSONAL ADS ***

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 - 80 Track disk drive \$150.00
(DS/DD with power supply and case)
- CALL Wes Newell at 423-2697

- FileManager 800+ (new) \$ 35.00
- CALL Myron Walters at 691-3401

ATARI REINCARNATION

Bruce Atkinson reports in the July issue of the Omaha Atari Computer Enthusiasts newsletter, that he was able to reincarnate his broken-down 800, one that had been relegated to the closet, for a total cost of \$55.

He found a message on Compuserve from a California firm that offered the complete insides for an 800 at the above price. The parts offered included the mother board, the CPU board with GTIA, power supply board, OS board with the B ROM, a bare memory board, speaker, and RF cable all for \$55.

He called up, found out they were for real, ordered and received the parts, COD, in about a week and a half.

His old 800 had been beset with numerous problems that he attributed to his long-term use of an 80-column board that created excessive heat and overloaded the power supply.

From here, it sounds like that 800 was the perfect candidate for a complete replacement of the electronic boards and chips. He reports that his 800 now has a new life and that everything is now working perfectly.

It occurred to me that some of our DALACE members may own closet computers with similar problems, and would like to have the following address:

B & C Computer Visions
3400 El Camino Real # 8
Santa Clara, Calif. 95051
(408) 554-0666 Hrs. 10-5 PST

The club has also received an advertisement from another outfit that offers similar kits for both the 400 and the 800 at a slightly higher price. The company also has other Atari parts in stock including 810 disk drive parts, individual chips, cables, and memory boards. However, we do not have any first hand reports from someone who has contacted this vendor. Their address is:

Centurian Enterprises
P.O. Box 3233
San Luis Obispo, Calif 93403
(805) 544-6616

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Hardware News
Reviews of the R-Verter and RAM Expansions

review by Mark Maxham

For those of you who are interested in the world of tele-communications, but not the high price of an 850 interface, some good news comes from Advanced Interface Devices. This company has introduced their new RS-232c interface called the R-Verter. For a mere \$49.95, (though I've seen \$39.95 in Compute!) you are supplied with a serial cable, which plugs into the I/O port of the Atari, and disk with RS-232 device handler program and smart terminal program. Simply plug the modem into the 25-pin cable, boot the handler, and you're ready to go. It works with all standard and XL computers. For ordering or further information, write:

Advanced Interface Devices, Inc.
P.O. box 2188
Melbourne, Florida, 32902
Or call: (301) 676-1275

And for you 600 XL owners who are sick of merely 16k of memory, both Atari and Microbits are reportedly making 64k RAM expansions for the 600. List price is \$125, according to the ads I found in Compute. I have heard rumors, though, that more expansions are planned by other companies, and for other RAM amounts, so the prices for a decent amount of memory should be dropping in the near future.

AHL'S BENCHMARK

Below is a benchmark routinely published in Creative Computing, complete with some times for various Atari systems. If anyone out there wants to try compiling it or rewriting it in Action! we'll be glad to publish any or all results

```
10 REM AHL'S SIMPLE BENCHMARK
14 REM FROM CREATIVE COMPUTING
16 REM JULY 1984 ISSUE
20 REM FORMAT:TIME/^ACCURACY/RND DIST
24 REM 800/ATARI BASIC
26 REM 6:48 0.012959 2.8
30 REM 800/MICROSOFT BASIC
32 REM 1:35 0.150879 2.1
36 REM 800/FASTCHIP/ATARI BASIC
38 REM 2:23 0.006875 7.2
42 REM AS ABOVE W/ BASIC XL
44 REM 2:12 " "
48 REM AS ABOVE BUT A*A NOT A^2
50 REM 1:18 0.013649 "
52 REM
54 For N=1 TO 100:A=N
56 For I=1 TO 10
58 A=SQR(A):R=R+RND(1)
60 NEXT I
62 FOR I=1 TO 10
64 A=A^2:R=R+RND(1)
66 NEXT I
68 S=S+A:NEXT N
70 ? ABS(1010-S/5)
72 ? ABS(1000-R)
74 END
```

*** Software Review ***

Track and Field
from Atari

review by Mark Maxham

From the popular arcade game by the same name comes Track and Field. Comprised of 6 athletic events, this game has an excellent combination of graphics, game play, and competition. You may test your skills in the 100-yard dash, long jump, javelin throw, 100-yard hurdles, hammer throw, and high jump.

For each event, you are given a minimum passing score--whether it be a time, in the case of a running event, or distance, such as the long jump. In either case, you must qualify, that is, pass, the event to proceed to the next one. If you do well, you may even set a world record (set in the program, I believe, by the author's research into the real Olympic records.) If you surpass a record, your initials are entered into the record position along with your time/distance. The computer player provides reasonable challenge, but it's much more fun to play with a friend/foe.

In each event, the controls are basically the same: move the stick back and forth for running, and press the button for jumping and throwing. Believe me, your wrists will be tired after a good round of 100-yard dashes. Upon completion of every event, you move up to the next level, where the minimum scores are higher and your computer opponent "better trained".

On the usual one-to-five scales, I give Track and Field a 5 for graphics, a 5 for originality (not another space-shoot-em-up), a 4 for durability (you'll want to break those records!) and a 3 for playability. I couldn't play any more after two games--my wrists were too worn out! Overall, a very good piece of programming.

*** Software Review ***

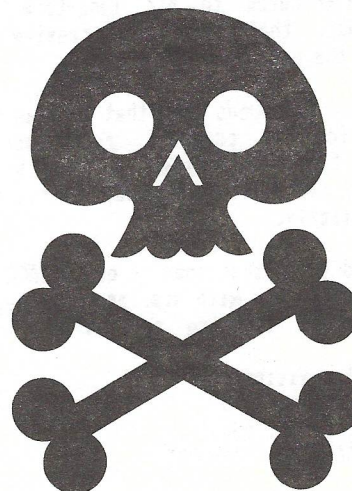
Disk 'D Link

Review by Mark Maxham

For those of you with 835 and 1030 modems, I imagine you were a bit upset with the quality of the software you were supplied with. Not too bad, but no disk access? No protocol for foolproof up- and downloading? Well, it seems others with this same view have done something about it.

From CompuServe Mr. John Pellet was able to acquire a program called Disk 'D Link, a very good terminal emulator with many enhancements over Telelink II. Though a bit slow at times, this is a program worth having if you have an Atari modem. It has pull-down menus, accessible from the START key or the joystick button. You can load phone numbers to dial off disk, allowing you any number of stored numbers on disk. And if you have a question or get into trouble, it will display a help file. Overall a must for the 835 or 1030 owner. I believe it is public domain, and I will submit it to the club library. Contact either myself or the librarian.

YOUR Article here

YOUR Program
hereOtherwise this is
just

DEAD SPACE

NEXT MEETING OCTOBER 6, 1984

--> SIG <--

"SIG" is the acronym for "Special Interest Group". These groups are composed of members having a common interest in a specialized area of the general computing field. These specialized areas range from languages, to applications and special features of the ATARI. Join in with one of the groups listed below and get more out of your computer! If you would like to start a new SIG, send your name, phone number, and a description of the subject to Jim Chaney, DAL-ACE, 916 E. Berkeley, Richardson, Tx 75081. Deadline for all SIG information is the 15th of the month.

--> FORTH <--

The next meeting of the FORTH SIG will be held in September. Contact Eric Weern at 245-7429 or Fred Sagor at 424-0291 for further information.

FORTH SIG meetings usually consist of two parts: (1) an exchange of information about the FORTH computer language, especially on ATARI computers, and (2) a general show-and-tell discussion about anything relating to ATARI computers.

--> EDUCATION <--

The next meeting of the EDUCATION SIG will be held the Wednesday prior to the regular DAL-ACE Saturday meeting at 6:30 P.M. at PARKWAY COMPUTING, 14400 Dallas Parkway (across from Ewing Buick).

--> GRAPHICS <--

Members interested in the GRAPHICS SIG, please contact Sandra Stephens, 827-0493.

--> CP/M <--

The next meeting of the CP/M SIG will be held Tuesday, September 4th, at 7:30 P.M. in the home of Jim Chaney, 916 E. Berkeley, Richardson. Any questions you might have, please contact Ed Bohemann at 495-1803. Hope to see some new faces at this next meeting.

--> ADVENTURE SIG <--

Contact Ed Kobus at 492-2922 for additional information on this BRAND NEW SIG.

--> "C" SIG <--

"C" is a language SIG. Contact Gary Sewell at 214-727-6567 or Jim Chaney at 231-4402 for more information on this BRAND NEW SIG.

RICHARDSON CIVIC CENTER - RICHARDSON, TEXAS
DIRECTIONS: From LBJ (635), take Central Expressway (Highway 75) North to Arapaho Road in Richardson. Turn left (West) on Arapaho Road. The Civic Center is on the left between the Hwy 75 service road and the Richardson Public Library. Guest are WELCOME!!

MEETING AGENDA

- NOON TO 1:00 SALES (VENDORS & CLUB) DEMONSTRATIONS NEWSLETTER DISTRIBUTION NEW MEMBER REGISTRATION GUEST REGISTRATION SOCIALIZING
1:00 TO 2:00 SPECIAL PROGRAMS DEMONSTRATIONS
2:00 TO 3:00 BUSINESS MEETING
3:00 TO 4:00 SIGS

VENDOR RESERVATIONS

Vendors may reserve table space prior to the meeting by calling Jim Chaney (231-4402). Fee collections and table assignments will begin at 11:45, after which the vendors may begin to set up their areas. Those tables which have been reserved but not yet claimed by 12:30 may be purchased by other vendors at that time. Prepaid reservations will not be released. Space assignments will be on a "first come, first served" basis, unless prepaid. The current meeting facility allows for approximately 30 vendor tables.

NEWSLETTER ADVERTISEMENT

Personal Classified ads will be published free of charge for current members. Commercial rates are \$35.00 per full page (7 1/2" horizontal by 9" vertical), \$25.00 per half page (7 1/2" horizontal by 4 1/4" vertical), and \$15.00 per quarter page (3 1/2" horizontal by 4 1/4" vertical). Commercial ads must be camera ready. The deadline for all ads is the 15th of the month. Mail or deliver copy to DAL-ACE Newsletter, 4033 Southwestern Blvd, Dallas, Texas 75225.

** DISCLAIMER **

The articles and advertisements contained in this newsletter reflect the opinion of the respective author. Members are encouraged to offer opposing opinions on any subject (relevant to computing) at any time. We will not, knowingly, publish fraudulent or malicious material. The purpose of this newsletter is to present information for your consideration ... you, the reader, are the final judge on any product or advice presented.

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 EDUCATION..... TANDY PENN 276-8796
 BULLETIN BOARD..... LANCE NELSON 733-0431
 DISK LIBRARY..... JOHN CANEDY 790-4425
 PUBLIC RELATIONS..... SANDY PARK 680-3120

DAL-ACE BULLETIN BOARD NEW # -----> 931-1046

DAL-ACE
DALLAS ATARI COMPUTER ENTHUSIASTS

DAL-ACE is an independent, user education group not affiliated with ATARI, INC. This is the official newsletter of DAL-ACE and is intended for the education of its members as well as for the dissemination of information concerning ATARI computer products.

DAL-ACE membership is \$16.00 per year. This newsletter is written, edited, and published by club volunteers. Its availability and/or distribution may, at times, be subject to circumstances beyond the control of the club officers. Members will note that their membership renewal month appears as the first three (3) letters on the address label.

Other ATARI user groups may obtain copies of this newsletter on an exchange basis.

ALL MATERIAL IN THIS NEWSLETTER MAY BE REPRINTED IN ANY FORM, PROVIDED THAT DAL-ACE AND THE AUTHOR, IF APPLICABLE, ARE GIVEN CREDIT. LIKEWISE, PORTIONS OF THIS NEWSLETTER ARE REPRINTED FROM OTHER NEWSLETTERS AND ARE SO NOTED.

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