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March/April 1994

The HUGgers Newsletter

Volume 13 Number 2

OFFICER'S CORNER

Judging from recent uploads and conferences on GEnie's TI SIG it looks like there has been something of a reawakening of the TI community recently. It seems like it has been quite a while since there has been much to write about in regard to new software and/or hardware for either the 99/4a or the Geneve.

First of all as briefly mentioned in the February issue of Micropendium, Western Horizon Technologies (WHT) has finally released their SCSI controller card, and is working on several new hardware projects including an 80-column VGA video card for both the 99/4m and the Geneve; a new 10 slot P-Box and a less expensive "junior" version of the 4a Memex. WHT also has introduced a new keyboard interface that will allow use of an AT style IBM keyboard while retaining the console keyboard; and a cartridge version of Rich Gilbertson's much enhanced version of Extended Basic. The keyboard interface sells for \$65.00 and the Rich XBasic for \$60.00.

The SCSI card has been enhanced and now includes the basic functionality of the Myarc HFDC card plus the ability to control up to 7 SCSI devices including CD-Roms.

NEW SOFTWARE

Several new programs have been released in the last month on GEnie. These include several games that sound interesting; a TI emulator for MS-Dos computers by Edward Swartz;

version 7.0 of MassTransfer (terminal emulator); Version 1.0 of FORTH+ for the Geneve by Bill Sullivan; and Version 2.0 of MDos for the Geneve.

The new games include "War on the Sea" an Xbasic game with a WWI theme from a new programmer named Chris Bodenmiller, and "Astromania" also in Xbasic. Both are described as having impressive graphics.

Ed Swartz's TI emulator is a shareware program that requires a 286 or better PC with a 360k disk drive to run.

Version 7.0 of MassTransfer has been updated by Scott Stasiowski and is a 40-column version for the 99/4a only.

Bill Sullivan's FORTH+ for the Geneve apparently is a sophisticated version of FORTH that can really take full advantage of all the Geneve's features, power and memory. Perhaps with its release we will finally see some software that really takes advantage of the Geneve's capabilities.

Finally, Version 2.0 of MDos has been released. This is the version that will be mailed out to registered Geneve owners. This version combines BOTH the H(ard) and F(loppy) versions into one version and has numerous inhancements including support for 1.44meg floppy drives, 3.2meg Horizon Ramdisks and larger "emulate" files

New commercial products include a new MDos terminal emulator from Ceoure Electronics called MyTerm: and 9640News (Beery Miller) is planning a CD-Rom disk which will contain the "History" of the TI-98/4A and Geneve back to 1982 and will include shareware utilities.

'Tigercub' Jim Peterson dies at 70

James Warren (Jim) Peterson, author of more than 350 programs for the TI99/4A, died Jan. 12 at his home in Whitehall, Ohio. He was 70.

He was retired from the Defense Construction Supply Center. He was a veteran of World War II.

He was the proprietor of Tigercub Soft-

ware, a company he started 13 years ago after he bought a TI99/4A for his then 16-year-old son. He taught himself programming and produced 90 programs in a year and decided to begin selling them at \$3 each. He began a column, "Tips from the Tigercub," as a promotion for his company. The column has appeared in various TI

users group newsletters around the world.

Peterson was a founding member of the Central Ohio 99ers. He contributed articles to MICROpendium.

He was also the former secretary of the National Medal Collectors Association and a member of the Central Ohio Cacti and Succulent Society,

He is survived by his wife, Midori Peterson; a daughter and son-in-law, Marianne Mieko and Daniel Ball; a son, Alan Edwin Peterson; two grandchildren, Randy Michael and Scott Alan Ball; a sister, Marjorie Kubitz of Minnesota; and two brothers, Kenneth and Richard Peterson of Minnesota.

Funeral services were held Jan. 15 at the Evans Funeral Home in Columbus, Onio. Burial was Jan. 17 at Forest Lawn Cemetery in Columbus.

Peterson's son, Alan Peterson, says that Tigercub Software has discontinued by ness and that outstanding orders will be sent back.

Designer of Geneve 'Swan' among Long Island RR slain

Mi Kyung Kim, age 27, was one of six passengers slain in a shooting rampage on a Long Island Rail Road commuter train Dec. 7.

According to a column by Lucie Dorais in the Ottawa T199/4A Group's newsletter, Ms. Kim created the Geneve swan and various Myart pictures,

She was born Sept. 30, 1966, in Korea. She worked as an assistant in the mathematics library at Columbia University in New York City.

A wake for her was held Dec. 10 at the Stutzmann Funeral Home in New Hyde Park, New York. Her remains were cremated after a private memorial service.

A Jamaican immigrant, Colin Ferguson, has been charged with 93 counts of murder, attempted murder and assault in the shootings, in which six persons were killed and 19 wounded.

OTHER NEWS

The date for the 1994 Lima Multi User Group Faire will be the weekend of May 13-14. Also, the TI community has lost a well known personality with the death of Jim Peterson, owner of Tigercub Software.

Hoosier Users Group BBS 317-782-9942 300 - 2400 8NL USING S&T BBS SOFTWARE This news letter is brought to you by the efforts of the officers & members of the Hoosier Users Group.

THE OFFINIONS EXPRESSED HEREIN ARE THE AUTHORS', and DO NOT NECESSARILY REFLECT THOSE OF THE RUBLISHERS.

MEMBERS ARE ENCOURAGED TO SLEMIT ARTICLES FOR PLELICATION.-PLEASE!

FEMBERThis is **YOUR** user group too!

ATTENTION ATTENTION

CHEEKBOOK

With the change of the year I wanted to start using a NEW checkbook program (doing it on a computer is the only thing that keeps me interested enough to do it). While by far the best check book program in the world is by MicroSoft for Windows I wanted to use my TI, to prove to myself and the rest of the world that the TI can do everything the average user needs (although you may have to use a bit more

Earlier I had looked at all the Check Book programs offered here for download and found ALL of them very lacking! I noticed in an old Texamets catalog a program that ran out of TIBASE called Check Track.

With Texamets recent move, I had some problems getting a hold of Steve Lamberti.

(FREE PLUG, STEVE L. OF TEXAMETS, RETURNED EVERY CALL IN A VERY QUICK FASHION, A TRUE RARITY IN THE TI (heck for any computer) COMPUTER MARKET!!!!)

Anyway, in the mean time I contacted Bill Gaskill (the author of check track). Bill said that he had a much better program called Check+ that was written in Extended Basic. He even sent me a copy!

As with any sophisticated program, it took some study and some set up. This program is a small scale accounting system that will classify expenses, compare budgeted to actually amount, allow separate income and checking account... The whole things is quick, well behaved and menu driven.

The manual that came with it was VERY professionally done (as with any of the projects that Bill has done). The program is also very professional in quality, in every respect! The only time I had to "get under the hood" (I guess since the software is written in XB (UNPROTECTED) you could say it comes with source code) was to modify the code to work with my harddrive. This might have been avoidable if I would have used the DSK1. emulation file, but instead, I wanted everything in its own subdirectory.....

This program gets an A+ rating from me. This is shareware software, but isn't very useable without the manual. I would recommend if you want to try the software you send at least twenty five dollars to:

Bill Gaskill 2310 Cypress Court Grand Jet, CO 81508

Ps....

If you are a TI trivia buff, I would also recommend that you purchase another manual that Bill wrote called collecting cartridges. Bill goes into detail on such intricate details as changes in packaging, changes in the color of documentation ect.... This is also priced at twenty five dollars....

Dano L.D.O.M. 02.19.94 If you like program pay Tony McGovern 215 Grinsell St. Kotara, NSW 2289 Australia

FUNNELWEB EDITOR v5 WHAT'S NEW by Jerry Keisler

Obtain Charles Gc for \$2 PO Box 647 Venedocia OH from-> 45894

ADDED CHARACTER SET is in ALL CHARACTERS language mode. When using ALL CHARACTERS you can only print from the editor. Use PF. You must instruct your printer to use the IBM character set. Change files ED/AEH and EE/AEH to ED and EE for this mode. If you want to send a file with added characters to someone who may not have FW v5, first print file (PF) back to a filename using C DSKn.filename to strip the ADDED CHARACTERS.

ADDED EDIT MODE FUNCTIONS

<c-Q> pages up like f-6.

<c-A> pages down like f-4.

<c-2> moves cursor to end of current line.

<c-H> shows first page of file.

<c-J> shows last page of file.

<c-B> breaks line in all modes, no cr's with enter like f-2.

<c-R> rejoins what <c-B> broke. spaces and cr's trimmed from inserted material. <c-1> used

immediately restores. <c-N> inserts new line.

<c-F> freezes bottom of screen under Cursor.

<f-;> marks current cursor line. <c-H> in command line.

<f-=> moves marked line to top of page. If confused goes to line

<c-0> returns to Original line after $\langle f-=\rangle$, RS and FS.

<c-,> toggles IBM 8 bit characters with a beep. Will not print thru formater. Set printer to IBM mode and use (PE) in command line. Use f-SDEX to move or spaces.

<c-,> + <c-u> addes more characters.

Added editor for assembler functions not covered here. But there are lot of improvements for E/A and C programers.

ADDED CHARACTER SET

ctrl-, set

li li li

one line 34ABCDEYZ@? KEY HEI T_{i} by 2 line 1

KEY 7 & F G O P Q R S T U IBM

KEY I BM

two line KEY

9 H I J K L H N ; : < IBM

bločkš KEY 2 ^]

I BM

gzeek KEY abni lfcdeghmj IBM **€ ⁿ 8 µ x £ σ t ♦**

math KEY marstuv

5 2 6 9 4 # 6 2 7 5 2 others

KRY * * ()

IBM 1 : 4 N N N Q 6 B A

KEY . / = y p k IBM

ctrl-, + ctrl-u set

KEY CDEFNO ' @ GBHIJP IBM 4 4 4 6 4 4 4

K L H S T U Y A V W Z x²⁸ KEY

Ī 1 1 1 0 8 6 8 8 9 9 9 IBH

KEY QR()~

I BM BEVR If you like program pay Tony McGovern 215 Grinsell St. Kotara, NSW 2289 Australia

FUNNELWEB EDITOR V5 WHAT'S NEW by Jerry Keisler

Obtain Charles Good for \$2 PO Box 647 from-> Venedocia OH 45894

We now have 3 editors: a new 7 bit editor (handles normal TI writer files), a new editor/assembler editor and an ALL CHARACTERS/EUROPEAN HODE using an 8 bit editor. 40 column editor covered here. 80 column system, I have non.

The new editor and formatter load into the current v4.4 Funnelweb system.

The system loads and saves files faster and in general operates faster.

ADDED COMMANDS FOR THE COMMAND LINE

The command line shows current line number being loaded, saved or printed.

<T > allows tabsets 1-3.

<H > produces help screens that can be paged using <Q> and <A>. and exit using escape.

<QQ> exits to Funnelweb. If you edited the file since the last save, you will be given a warning.

<LT> LoadTemporary allows loading all or part of another file into the current file without changing the current filename. Pile may be marked in SD with <T>.

<DP> allows the changing of the show directory printer name.

<HK> Marks the file at the line number you indicate.

<c-H> marks the file at the top line on the screen.

<WC> lets you select a WildCard for PindString (PS) and ReplaceString (RS).

> blank line returns to the original exit point.

<number> moves that line to the top of screen.

<c-1> exits to the current top of page.

<c-2> returns to the original exit point.

<c-Q> pages up.

<c-A> pages down.

<c-2> moves up one line.

<c-X> moves down one line.

<PF> PrintFile

PIO> sends printer start codes.

Q PIO> sends printer stop codes.

<P Q PIO> sends both, as configured.

<P DSK1.0> saves DF/80 to DSK1.0.

<A DSK1.F> appends to end of DV/80 file DSK1.P.

<M DSK1.F> saves to DSK1.P in DF/128 using MS-DOS format.

<U DSK1.F> as DF/128 in UNIX format.

<RS/FS> ReplaceString FindString. use one, two or three numbers. 2 numbers - start and finish

column. 1 or 3 numbers, first = occurrences to skip.

<c-0> returns to start position.

Delimiter can be any key (-/ab etc). Delimiter can not appear

in search string. <WC> wildcard can be any key.

<SD> all new format. Also tells bytes left in editor.

PRINTED FROM EDITOR USING IBM CHAR SET 4 ALL CHAR EDITOR. set KX-P1180 printer to c-u+f-r+c-u+t+c-u+s-A+f-r+c-u+6. FW v5 on Oct DOM.

BUGS 7 bit and all char: do not use RS with word wrap off. Have 3 or more lines at top when usin split screen c-F.

WHY DSKU REFUSES TO BOOT FW

DSKU V 4.2 was distributed by the Lima User Group with FW v4.40 and v4.31. There is an item on the main DSKU menu that says "Load FW". It usually doesn't work. The reason is that DSKU searches the drive you specify for a file named UTIL1 which is what the main Funnelweb title used to be called. The main Funnelweb file is now called FW.

It is easy to modify DSKU to boot FW every time you ask DSKU to "Load FW". Here's how. Use Fullelweb's Disk Review other sector editor to search the third DSKU file (named either DW or DSKW for the ASCII text "UTIL1". You will find "DSK1.UTIL1". Change the UTIL1 to "FW" and put blank spaces over the IL1. Then change the screen display to (CTRL/H if using Disk Review) and move the cursor to the left the left to the first appearance of "OA". This is at byte >DD in my file, DW. Change the OA to O7 and write these changes back to disk (CTRL/W and then CTRL/A if using Disk Review). This change shortens the length of the text the computer expects to find since DSK1.FW is shorter DSK1.UTIL1. DSKU will now properly boot Funnelweb when you select "Load FW" DSKU's main menu.

By Charles Good, Lima User Group

<<<<ATTENTION SEEKING OFFICERS>>>>

Hoosier User's Group ELECTION of officers process will start April 17, 1994 with the slating of officers. Elections will be May 15, 1994. Fred Edstrom, Jr. has stated he will not seek office. Anyone desiring to run for office contact Fred Edstrom, Jr. Secetary-Treasurer. Contact Fred at 317-898-7300 or leave E-mail to user #10 on the HUG BBS 317-782-9942.

SEVEN SECRET SUBROUTINES by Mark Schafer Bluegrass 99'ers

This is an article I've been wanting to RRAD for a long time. Then, out of the clear blue sky, the information fell into my hands, so instead of reading this article, I am writing it. Or you could say that I finally will get a chance to read it; only I'm the author as well.

Let me spiral in on the subject. First of all, how many people know where the code is for the FILES subroutine that is executed when you do a CALL FILES command? Is it in the Extended BASIC cartridge? No. Is it in the console? No. It is in the disk controller card. So if you try to do a CALL FILES command when you don't have one at all), it won't know what you're talking about because it can't find the subroutine.

Are there any other subroutines in the disk controller card? Yes, I've known about one of them for years thanks to Super 99 Honthly. It's the one that allows you to read and write sectors, and I used it extensively in my two fairware assembly language programs, Defragmenter and Sectorial.

Surely, that can't be all. Using some kind of memory visuer, I was able to see that there were six more subroutines in the disk controller card! I didn't really know what any of them did—until now. And that's what I'm here to talk about.

That explains the "seven"; what about the "secret"? Well, TI probably did not intend these subroutines to reach the masses. Because using a sector editor, which uses the sector I/O subroutine, it's trivial to remove TI's pathetic disk and file protections. So it looks like only professional developers were allowed to know about them. They should've known there's no way to keep secrets like this from the public for long.

Before I go any further, let me warm you that this is a VERY TECHNICAL article. These subroutines can only be called from assembly language. So in order to keep this article within reasonable limits, I'm going to have to assume some competence on the part of

the reader. I'm assuming that you are an assumbly language programmer (dime a dozen, right?). Even if you're not, you might still get something out of this article, as I tend to go off on tangents now and then (like this one). And it helps to know what your computer is capable of even if you aren't going to be the one to tap it.

Let me start my giving you a handy, dandy chart showing the seven secret subroutines and their characteristics. Each one has a single character for a name, and it's not even displayable (more evidence of their secrecy). So their names are in hex.

The table shows its name according to the DER, a simple memorie to help remember what they do, and what they use scretch ped RAM for. The slashes indicate that the left byte is used for one purpose while the right byte is used for another. The vertical line means that that byte is split into nibbles (4 bits) each with a different purpose. "dsk" means disk number in the form of >1, >2, or >3. Pointers are addresses that contain more data.

I got the information for this article from a TI document I downloaded to my Internet account and from experiments I conducted with these subroutines myself. My research isn't done, yet, but I thought I'd at least let you know where I am so far. Next month, I hope to have more information.

>834A is only used to return data. The others are used to pass parameters to the subroutine. Some of them require additional information to be set up that the pointers (ptr) indicate. The ones that return FDR in >834A do so because they each call >10 which returns the sector number accessed here. Therefore, these subroutines—also—return the YDP address of the sector used in that transaction in >834E. Also, all of them return an error code to the first byte of >8350. However, it's not always in the same form, but >00 here always means no error occurred.

Now that I've mentioned what they have in common, let me take each of them one at a time;

>10 is used to read and write sectors from and to a disk. You set up an area in VDP memory for the sector to be read or written and use >834E to give its address. Put the sector number in >8350. After you call the subroutine, check >8350 to see if it went correctly. The error endes were not given in the document I have, so I had to experiment to find out what they were. Here is what I came up with:

code magnings

>06 drive door open, no disk, no drive, bed sector number

>07 bed drive, so sector

>11 mot imitialized, illegal track #

>34 write protected

As you can see, the masning of the error code is not very clear. I'm not sure what "illegal track number" is, but I've seen Disk Utilities give that error for a bed disk, and this was the error code I got when I tried to use this routine to access it. The only one with a clear meaning is >34.

Subroutine >11 is meed to initialize a disk. So it's the disk controller that actually does the formetting andnot the utility program! To call it, put the DSR version number in the first mibble of >834G. This is what I was given as the meening of this parameter:

DER version meaning

>0 can be done by any version
>1 double sided or different
number of tracks required
>2 cannot be handled by the TI
version of the DSR

By different number of tracks, it means other than 35 or 40, which are the standards supported by the TI disk controller. I suppose you would use >2 for a non-TI disk controller that supported double density.

)10 >11 >12	Mnemonic Sector 1/0 Format Protect	>4A sector sectors FDR	<pre>>4C dsk/operation ver!dsk/tracks dsk/operation</pre>	tracks VDP ptr stion file ptr	>50 sector dessity/sides
>13	Rename	PDR	dsk/zazsed	new ptr	old ptr
>14	Input	PDR	dak/sectors		
>15	Output	FDR		file ptr file ptr	isfe ptr isfe ptr
>16	Buffers				

The track count goes in the second half of >834C (more specifically, the byte at >834D). Upon return, >834D will contain the number of sectors per track. This routine needs to have an area of VDP namory to use which is pointed to by >834E. It needs to be 3300 bytes for SSSD and up to 8K for double density. Density is >01 for single and >02 for double and likewise for number of sides.

This routine fills the disk with >R5's, so it is up to the utility program to initialize sectors 0 and 1 with the expected information. It returns the same kind of error code as >10 with these additional possibilities:

oode meaning >06 controller incapable >07 bad DSR version

Subroutine >12 is used to modify
the protection status of a disk file.
The operation is >00 to remove protection or >FF to place it. This is the
kind that protects against accidental
erasure or modification. Put the file
name in VDP mamory and use >8348 to
point to it. The file name is 10
characters fixed length with spaces
pedded to the end if its length is
shorter than that. The error code is
returned to the first three bits of
>8350. Shift it to the right 5 bits and
read it as a standard I/O error code.

Subroutine >13 is used to change the name of a disk file. Both pointers point to the name in the same format as >12 above in VBF memory. The old pointer points to the current name, and the new pointer points to the new name. Be careful, the reutine does not check to see if the new name is legal or not. It returns the same kind of error code as >12. It also returns the VDP address of where it put sector 1 in >8342.

The next two subrectines get more complicated, and I have not yet fully explored them, but let an share what I know so far. Subroutine >14 is used to directly access input files. Specify the number of sectors you want to read in at >834B. Since the sectors are read into VDP number, the fact that this is only a byte is not a factor. If you put zero hare, it will cause it to transfer file parameters. That means it will find out what kind of file it is for you and how big it is. This routine is governed by the additional information

area located in CPU RAM pointed to by >8350. This area is 10 bytes long and looks like this:

Bytes description

0-1 VDP pointer to reed buffer

2-3 first relative sector # to read

format of file (byte >C of FDR)
records per sector (byte >D)

6 bytes used in last sector (>10)

7 maximum record size (byte >11)

8-9 sectors or records (bytes >12->13)

Bytes 8 and 9 are reversed from normal sense. So if the file is >0102 sectors long, they will be >0201. This is the same format used by bytes >12 and >13 of the FDR. All of the actual file information comes directly from the FDR. When you're reading in a file, you have to supply where the reading will start in the file in bytes 2 and 3. When you're transferring file parameters, bytes 2 and 3 will be the total number of sectors in the file, so you will need to change that before reading after transferring parameters.

This is what this subroutine is SUPPOSED to do. I have not notion it to work successfully even though it returns no error. I haven't yet finished my research, though. Although, if it does not work, it may explain why some programs, specifically CHARALEDIT, don't work norrestly on my system if indeed there is something wrong with this subroutine in my disk controller!

I haven't done anything with the >15 subroutine, yet. It is supposed to access output files directly. Its parameters and error order are identical to those of >14. Therefore, it can be used to write to a part of a file. Specifying >00 as the number of sectors to write is used to create a file using the parameters in the additional information area for its formst. In this case, the file name is not checked for legality.

Right when you think each subroutine gets more complex, the last one is quite simple, but I heven't fooled with it, yet. Subroutine >16 seems to be assembly language's answer to GALL FILES. It takes only one persenter, which is the number of disk files you want to be able to open at a time. RASIC can only go up to 9, however, while this routine allows up to 16. You will get an error if you try to specify 0 or go higher them 16.

In case you're new to assembly language programming and don't know how to call a subroutine in the disk controller card, let me go over that real quickly. Put the name of the routine to be called in VDP memory preceded by a langth indicator. So to call >10, put >0110 somewhere in VDP memory. Then put a pointer to that address in >8356. Then do this:

BLWP (DSRLINK -DATA >A

The ">A" means that you are calling a DGR subroutine rather than doing standard file input/output.

Ok, so chew on all that for a while while I do more research. If you find anything interesting that I left out, be sure to let me know.

MONTHLY MEETING LOCATION
LITTLE HOUSE NEXT TO THE
ST. ANN'S SCHOOL
2839 S. McCLURE
INDIANAPOLIS, IN
NO MEETING
AT 2:00 P.M.
MARCH 20, 1994

HUG OFFICERS

President Warren Barnes 542-6568 Vice Pres Bryant Pedigo 255-7381 Secretary Fred Edstrom Jr 898-7300 Treasurer Fred Edstrom Jr 898-7300 Librarian Bryant Pedigo 255-7381

Backup Miser Optimization By Dan H. Bicher

After rebuilding my harddrive for the third time in a week, I finally have most everything put/together the way I like (o'ya I am now using the new image command in HMOS:), I did a full backup, with backup Miser (only took 4

Here is the optimum configuration for me....

Run an AUTOEXEC file with no TIMODE and NO RAMDISK. I had both of these established and the program died with a not enough page kind of error on the second disk....

Also in your AUTOEXEC for Backup Miser, do a SET VERIFY OFF, if your disk are are capable of a fast head step time, do a SET DISK XOZ where X equals the drive number and 0 is the head step time and Z is the number of tracks.

Then I ran VIDEO ON for fast access.

Then I ran WIN-DRIVE (no need to load the whole windows package).

Other things to do to speed up backups....

Have preformatted disk handy. (To speed up this process use Hyper Copy). While you are at it, format them for optimal write access by adjusting the interlace and skew for your system.

The above tips should speed up your Backup Miser session!

Dano L.D.O.M. 02.19.94

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HOOSIER USERS GROUP P.O. Box 2222 Indianapolis, IN 46206-2222

Make check or money order payable to cation to:

Below you will find an application for memberatip to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to voting rights at regular club meetings, access to young trights at regular club meetings, access to young trights and special guest speakers for one year.

APPLICATION FOR MEMBERSHIP



HOOSIER USERS GROUP P.O. Box 2222 Indianapolis, IN 46206-2222

Forwarding and Address Correction Requested



TIME DATED

March 20 1994

MATERIAL

May 1994

Dan H. Eicher 2720 Palo Verde Ct. Indianapolis, IN 46227

Hoosier Users Group BBS 317-782-9942 300 - 2400 8NL USING S&T BBS SOFTWARE