NEWSNET99ER

Newsletter of the NET99ER TI 99/4a & Geneve 9640 Computer Users Group

VOL 10 NUM 1 & 2 Dec. Jan & FEBRUARY 1992

Next Meeting: Saturday

MARCH 7th

9:30 AM at the
NRH Community Center
Loop 820 at Rufe Snow Dr.

Club Officers

Barbara Massey	President
Jim Lesher	Vice Pres
Cal Koether	Treasurer
JoNell Thompson	Secretary
Barbara Massey	NL Editor
Tom Collins	BBS SysOp
Gary Owens	BBS SysOp
Jeff Drinan	Librarian
Bill Duncan	M/S Chrmn

Call the SUPERNET BBS
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7E1 - 24 hours

NET99ER HCUG
P.O. BOX 534
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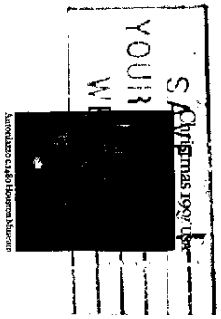

Dallas TI Home Computer Group
PO Box 29863
Dallas, Tx 75229

-----*BAM's BABBLES*-----

Surprise! Surprise! Finally a Newsletter. For those of you keeping count, there was not a Newsletter for the months of December or January.

For me, the month of February, has been one long week. Working seven days a week, 10 to 15 hrs a day gets old...FAST!! My only breaks were the few hours I took off the first Saturday morning for the Club meeting (I refused to miss my meeting!) and then for Church services on Sundays. Lucky me, I get to do this every year! At least next year I'll have some idea as to what I am in for. Hopefully, next year all the bugs and problems we ran up against will have been solved so next year will be easier.

I want to thank KING BELL for all the typing he did for this, and upcoming, Newsletter. I gave King what I thought would keep him busy for a month, and within a week, he had it finsihed! THANK YOU-THANK YOU-THANK YOU!!! I am going to do my best to get back on track and put the Newsletters out monthly. Again, THANK YOU King Bell!!

Jim Lesher will be unable to make this upcoming meeting, however, he did put together a DOM, and will be back again in April. Jim has been a big help to us, and we will miss him.

I want to thank Jim Stewart for coming and giving us an excellent demo on the remarkable WILL program. I don't know about you, but I was eager to print out all the wills and see what type filled our family's need. For those of you who need a Notary Public, yours truly is one. Thanks again, Jim Stewart.

I have been trying to come up with ideas on what to demo. Hopefully we will have a working library soon. There are so many programs in our library that most of us have not seen "in action". Maybe we can find a number of programs and have some volunteers to practice with a particular program for a month or so, then give a demonstration.

Our next meeting is Saturday, March 2nd, at the North Richland Hills Community Center, Rufe Snow Road and 820. We start at 9:30 am - hope to see you there!***BAM***

-----*MINUTES OF NET99er MEETING of Feb 1, 1991*-----

Barbara Massey called the meeting to order at 9:45am. Lee DeForest read the treasurer's report in the absence of the treasurer. Old business was discussed: Prized such as a certificat of money for a year of DOM's, but no decision was made. Barbara had the club library for Jeff Drinan to maintain. Also there was a discussion of a workshop on House contruction, but no decision was made as the NICE had not been purchased. There was no new bisiness.

Jim Lesher demo'd the Sound FX. Then Jim Stewart from the Dallas Club demo'd the WILL program they had worked up and Charline Althar's HERE IT IS program.

A BUY and SELL session was held. Gosh time flew.***Jo Nell Thompson, Secretary***

-----*TREASURY REPORT*-----

A treasury report is unavailable at this time. ED-BAM

-----*RENEWALS DUE*-----

The only member who needs to renew his membership in March is John Nesburg. Please be sure to check your address label, if your membership expiration date is incorrect please let me know.

Cal Koether and King Bell have both renewed, I want to thank all of those who have renewed. However, recently we have had to drop quite a few members who were over three months past due. If you are unable to attend a meeting, you may send your $20.00 membership fee to NET99er HCUG, c/o Bill Duncan, PO Box 534, Hurst, Texas 76053.

Also, be sure to check your expiration date of your MICROpendium subscription.

--*DO YOU KNOW YOUR TI'S BIRHTDAY?*--

If you wish to find out when your TI Computer was manufactured, turn your computer over and read the LTI number on the bottom.

The first two digits are the week and the last two digits are the year that your console was manufactured.

-->from "Trivia For The Month", BUG NEWS, Brea 99ers UG, Southern California<--

-----*ARCHIVING - A HEADACHE?*----
by Andy Fruen, Lima UG

A lot of people are puzzeled by archiving and how to use Barry Boone's Archiver. What follows is both a reference guide and explanation of Archiver III. It is not meant to totally replace the documentation for this program. Actually, I haven't seen a distribution copy that comes with a set of instructions. There may be hidden features of ArcIII that aren't obvious to me (for example, Disk Utilities by John Birdwell has a feature to figure decimal-to-hex conversions).

What exactly is archiving? Putting it simply, when you archive you take a file or a set of files, and group them as one file then compress them so they take up less disk space. Some software comes archived. These ALMOST always include the archiving program. Examples are Jack Hughrue's PLUS! and the Complete Adventure disk set.

What is the purpose of archiving? Well it started out as a money saver for modem users. It is faster, and thus cheaper, to send 90 archived sectors as 1 file, than 120 sectors for 3 programs. Now it is also a means of backing up disks. You can save each of your disks as a one file, squashed archive. You can specify whether you want compressed files or not. The reason you have a choice is that some unusual files actually take up more space when they are compressed. Another useful application of archiving is when you have programs you want to keep, but don?t need ready to use. You can keep archives of all these files instead of taking up disk space.

OK, now that you have the "what", here's the "how". As far as I know, the only archiver is Barry Boone's program. Its operation is completely different from Archiver II. Rather than add new features to past versions, Archiver was completely re-written. It usually contains an XB LOAD program, but may be loaded from E/A. The program's filename is usually ARC1. It can be found on almost all of the bulletin boards, as a commercial version with Geneve utilities, in user group libraries, with other Fairware programs or from the author. Chances are, you can definitely get a copy.

First things first, so get the program loaded. After that, you should see a Fairware notice. Press any key to pass this. You then see a menu. Each menu option is described in detail below.

1) Archive Files - These options are largely self-explanatory. As you may have guessed, this option archives files. Pressing one will deliver a set of prompts. These are "Source Drive (1-Z)". Yes, you can have drive numbered from 1-9 and A-Z. Then comes, "Output Drive (1-Z). You may use one drive. Arvhiver will prompt you to change disks when needed. It is highly recommended that you use a blank output disk, since archives may fill or almost fill a disk. Next comes "Output Filename". This is usually the name of the disk you are archiving, or some related heading. For example, a set of D/V 80 articles may be named "ARTICLES". The following prompt is "Pack all Files? (Y/N)". If you answer "Y" then all the files on the source disk are archived. If you answer 'N", then when Archiver is working, you are asked "Include filename? (Y/N) then that file is archived, otherwise it is ignored. This is a handy feature if you have programs and files for example, and need them separated. This process repeats for each of the files on the source disk. The final prompt is "Compress? (Y/N)". Saying "Y" and "Archiver attempts to squish each file so it takes up less space. Remember that some unusual file types will actually get LARGER if compression is attempted. When all the prompts are answered, press REDO to correct an error in your answers, BACK to return to the menu, or any other key to continue. When Archiver is done performing any operation,

pressing a key goes back to the main menu.

2) Extract Files - This is the opposite of archiving. It will let you pull (extract' files from an ARC file. You are first asked for the source drive. Next you input the source filename. After that, you are asked for the output drive. It must be stressed that the output drive for ALL operations of Archiver should be different than the input drive. You may run out of space or overwrite a file accidently. Output disks should be blank.

   The next prompt asks, 'Extract all files?". If you answer "Y" then every file stored in the ARC file will be taken out. If you answer "N" then when extracting starts, the program asks, "Include filename?" for every separate file in the archive. Again, press REDO (to restart this option), BACK (returns to main menu), or any other key to continue.

3) Catalog Disk - This is fairly self explanatory. Simply input the source drive name. The program will ask if you want a printout. If you answer yes, then you are asked for the printer name, If there are more files than can be displayed, then (more) is printed on the screen and pressing a key advances the screen.

4) Catalog ARC File - If you aren't sure what files are contained in an archive file, then this option tells you. You are asked for the source drive, source filename, and whether or not you want a printout of the list of files.

5) File Copy - This option will copy a file (obviously). Simply supply the source drive and filename, and the output drive and filename.

6) File Rename - Again, this option should explain itself. Give the source drive and filename, then the output filename.

7) File Delete - Supply the source drive and filename.

8) File Un/Protect - You first supply the source drive and filename. You are then asked "Protect?". If you answer "Y" the file is protected. Otherwise file protection is lifted.

9) List Text File - This will display or print a D/V 80 file. Give the source drive and filename. You are then asked if you want the file printed or not.

10) Load FW - This returns to Funnelweb. Simply give the drive number on which the UTIL1 file is located.

NOTE: When and I/O error occurs, pressing a key returns to the main menu. If you have a Geneve, this is for you. Using a sector editor, find the string 04E08C00 and replace it with 08018C00.

I think that this should get people on the road to understanding archiver. Remember that it is fairware; so if you find it very useful, send the author (Barry Boone) a donation.

(This article/item comes from the January 1991 issue of BITS, BYTES PIXELS [Charles Good, editor], the newsletter of the Lima OH 99/4A User Group, P.O. Box 647, Venedocia,OH 45894.)

-----DEFRAGMENTATION-----

by Mark Schafer

In this article I aim to discuss the problem of fragmentation and what you can do about it. First of all, it's only a problem in the way that being messy is a problem; you can live with it, but it would be better if you didn't have it.

Now let's talk about what it is. It exists only on disks. But that's all kinds of disks: floppy disks, hard disks, ramdisks. The disk is divided into 256-byte units called sectors, which is the unit used to express the size of files in disk catalogs. They are numbered 0 to 359 on a single-sided, single density disk.

Each file reserves one whole sector that gives the computer everything it needs to know about the file. That sector is called the File Descripter Record, or FDR. The items we are concerned with is the part that tells where on the disk the file contents reside. If it is split into more than one piece, it is fragmented.

To illustrate this, look at this newsletter. Think of each page as being a sector, and the articles as being files. If an article starts on page 1 and is continued on page 6, it is fragmented. But if it were continued on page 2 it's contiguous and therefore, not fragmented; it's still in one piece.

How newsletters and disks get to be fragmented are two different things. The TI disk controller reserves the first 32 sectors (after sectors 0 and 1 which are used for disk information) for FDR's. When a new file is added, it looks for the lowest sector available to put its FDR. Then it will put its contents starting at the lowest sector available outside of this area and continue writing until it bumps into a sector being used for another file. Then it keeps looking until it finds unused sectors to continue writing in. If it reaches the end of the disk, then it will look for some space in the FDR area. If there are more than 32 files on a disk, then some of the FDR's will not be in this area, and they could be located many sectors away from the first 32. This is because it is likely that the low sectors are already in use by the time the 33 file is added.

When a file is deleted, its FDR and contents are then marked as free which could create "holes" of free sectors on the disk. When a file is rewritten to the disk, it will leave its FDR where it is, but it will still to try to move its contents to the earliest sector available even if its size hasn't changed. So it could get moved into a part of the disk vacated by a deleted file.

So all of this can cause fragmentation. So what? Well, when you're reading an article, can you read it faster if it's contiguous or continued on another page? And then continued on another, then another, etc. It's the same with the disk drive. It can read a file faster if it's all together. Also, it can write a file faster if it doesn't get split up. The more pieces a file is in, the longer it will take to read or write it. The drive can find the next sector faster than it can find any other.

And this leads to my next point. All of this file adding and deleting can cause another problem. Unfortunately, I don't know of any single word that describes it. It is even more common than fragmentation. It occurs when the files on a disk are not in the ideal order.

The ideal order is the first FDR is on sector 2, the second FDR is on sector 3, the third FDR is on sector 4, and so on. Whenever the computer searches for a named file, it has to search the disk catalog. Just like newsletters, disks do not have indexes. But it does know where all the FDR's are because that information is stored in sector 1 in alphabetical order.

So it has to read in the first FDR, see if that's the right file, read in the next FDR, see if that's the right one, and so on until it either finds it or reaches the end of the catalog. This process would go MUCH faster if the disk were in the ideal order, which never happens except intentionally. Also cataloging the disk is much faster in ideal order for the same reason.

Luckily, you can take care of both fragmentation and less than ideal order at the same time. The cheapest, easiest to understand way to do this is to copy all the files from a disk onto a blank disk. All file copiers copy the files in alphabetical order, and there are no files on the blank disk to "bump" into.

Unluckily, this is not guaranteed to work. You could still have one problem or the other (but not both). Fragmentation could result if the disk has less than 32 files on it (the lower the worse) and is full (or nearly full, but especially if it's full). One of the latter files could reach the end of the disk while it's being written and have to be continued after its FDR, which is way up near the beginning of the disk. You could get lucky if the file ends right when it reaches the end of the disk which is more likely to happen if there are short files at the end of the catalog. But if it will happen, there's nothing you can do to prevent it. Oh, you could copy all the larger files first, but then the catalog will not be in ideal order.

The other problem will definitely occur if there are more than 32 files on the disk. This is because when it reaches the 33rd file, all of the space reserved for FDR's is filled, and it will have to go all the way to the end of the disk to find the first free sector. Every file thereafter will get even worse. So the catalog will start in ideal order and then reaqlly go awry.

But you can do something to prevent this from happening, and you even

know IF IF will happen, so you can prepare for it. However, it can be time-consuming, especially if there are significantly more than 32 files on the disk. To do this you have to have a sector editor. What you do is mark sectors as being used starting with sector 34 on the blank disk for as many sectors as there files beyond 32. So if there are 38 files, mark sectors 34-39 as used (6 beyond 32). Then only copy the first 32 files. Then mark sector 34 as free. Then copy the next file; mark sector 35 as free; copy the next file, and so on until they're all copied. This method will keep all the FDR's together and in the right order.

You may notice that the problem occurs if there are MORE or FEWER than 32 files. What if there's exactly 32 files? Hooray! If this is the case, you will encounter no problems!

But if you are talking, say, 36 files or more, this process is probably not worth the trouble. Truth be told, you can actually prevent the fragmentation problem by cleverly marking sectors as used beforehand, but it would be difficult for me to tell you HOW to do it, much less do it. Fortunately, there's another way to go.

Use a defragmenting program. Ever though their cause is to defragment the disk, they will also put the disk in ideal order. Although there were already some on the market, I wrote my own anyway. I like to do things my way, and I didn't see other defragmentors doing everything I wanted. Yes, friends, even defragmenters have features.

I called my program simply, "Defragmenter", it is written in 100% assembly language and offers the following advantages over using a file copier:

1. It only requires one disk. It defragments the disk itself without having to have another disk to write on.
2. I don't remember what this one is.
3. It's guaranteed to work. File copiers don't always work for reasons discussed above.
4. It takes steps to prevent the problems from recurring.
5. I believe it is even faster.

Number 4, I believe, is a unique feature of Defragmenter. Refragmentation could occur if a file grows, thereby slamming into the file that follows it. But this won't happen if there is no file following it, so Defragmenter puts the file most likely to grow (so designated by the user) at the end of the disk.

If a file shrinks and another file is rewritten that follows it (but not immediately following), it will move into the space vacated by the shrinking file and could be split. This won't happen if only one file follows it, so Defragmenter puts the file most likely to shrink (so says the user) next to last.

If a file is added to a defragmented disk, its FDR will be put all the way at the end of the disk, a long ways away from its ideal position. So Defragmenter has the ability to reserve some space after the FDR's for future files to occupy. They will probably still not be in the best place, but they will be a lot closer, and won't slow down searches quite so much.

One advantage you might think a file copier would have is that after the process, you still have all the data on the original disk, so if there's any information in the unused sectors you want to see (like a deleted file), it's still there for you to look at. But Defragmenter has the ability to preserve the data in unused sectors to combat this advantage. So it will be possible to recover deleted files after the process (but not with an automatic file recoverer).

To be fair, file copiers would still have the following advantages:

1. Risk-free. If the process is interrupted, all the data is still intact and usable. You may lose data with Defragmenter (but no more than one sector), and the data you didn't lose may be hard to recover. Also, it's easier to place your confidence with a file copier even if you didn't write it.
2. You know, at any given moment, where in the process a file copier is. One has no idea how close Defragmenter is to finishing. Part of its speed gain is not having to update the screen as it goes.

I had to dig pretty deep just to come up with these. The risk if using Defragmenter is minimal. How often have you had a power failure or a crash while copying files? Since Defragmenter is so fast, it's even less likely to happen to it. And number 2 is just a trade off. If Defragmenter told you what it was doing, it would be slower.

Notice I didn't put "easier to use" on either list. That's because that is a matter of opinion and may depend on the file copier you use. Personally, I think Defragmenter is a joy to use, but beauty is often in the eye of the author. You tell it which disk to defragment, you answer four simple questions, all of which can be answered with a default answer with no ill effects, and it starts right up. It won't let you answer any of the questions wrong.

One advantage Defragmenter offers over anything else is that it comes with complete source code, as I believe all programs should. I'm offering it as fairware, but you are free to modify the source code to suit your own tastes as long as you don't give it out without my permission. The source code isn't documented, but there are some comments.

If Defragmenter sound like your kind of program, send 6 dollars and a disk or 7 dollars to:

Mark Schafer
539 Whitaker St.

Morehead, Ky 40351

It comes with object code, source code, documentation, this article, and the source and object code to the catalogging program that I started with.

Let me say that this article is not "one big sales job". It was also meant to be informative.

----"PRINTB"----
by Jim Lesher

These programs are written on a Star Gemini printer and may or may not work on another brand. This is about the most basic progras for a printer. It could all be put on one line in Extended Basic. "PRINTB" BASIC PRINTING

The printer must first be addressed with the OPEN #1 'PIO". You can use OPEN#2 OR 3 OR 99 as long as you use the same number in the PRINT # line. Notice the to be printed is in quotes.

Last month, I stated you could type in up to 255 characters and spaces. This is incorrect. It is 138. So you want to start a little business with your computer and printer. One way you might do it is to make Return Address labels for people or businesses. Keep in mind, this is not the best address pgm. in the world and it's purpose is for instruction. However there are some address pgms., that when you get done answering all the questions, you could have written it in longhand. At the last minute I put in the option for Emphasized print for those of us who have not changed our ribbons for awhile. So if you want darker print, leave off the REM in line 35. Also if you want to put the address more in the center of the label, you can change the number 12 in line 30 to your liking. Lines 40, 50, and 60 requires 3 lines of your 15/16" by 3 1/2" label. Six lines are available, so we add 3 spaces with line 130. If you remember from the latt newsletter, we used the 1 colon for each line for spacing. Also this time we have a counter to tell us on the screen how many labels we will have whaen the printer finally stops. This counting loop is implemented by lines 70,80,90 and 140. Each time line 140 tells the pgm to goto line 80, it adds 1 to the count. You can use your more printer commands to change the fonts etc., like NLQ, Italic and others. Have fun, make a million dollars.

```
 10 REM PRINTB: INPUT MESSAGE AND PRINT FOREVER AND COUNT THEM.
 20 OPEN #1:"PIO"
 30 PRINT #1:CHR$(27);"M";CHR$(12);
 35 REM PRINT #1:CHR$(27);"E";
 40 INPUT "TYPE IN NAME              ":A$
 50 INPUT "TYPE IN STREET            ":B$
 60 INPUT "TYPE IN CITY, STATE & ZIP ":C$
 70 K=0
 80 K=K+1
```



```
 90 PRINT K
100 PRINT #1:A$
110 PRINT #1:B$
120 PRINT #1:C$
130 PRINT #1:" ": : :
140 GOTO 80
```

If you have any questions or comments, call me at 211 821 9274, Jim.

----PRINTHEAD PROBLEMS?
HERE'S THE SOLUTION!-----
by Terry Priest
Portland Users Ninety Nines
The PUNN Newsletter - Portland, OR - July 1991

Having troubles with your printer? Are the descenders faint or gone? Funny blank lines where they don't belong? Incompletely or poorly formed characters? All of a sudden the ribbons seem to get holes in them and the printhead hangs up?

If you are having any of the above problems your printhead needs servicing. In the old days this meant buy and install a new printhead. That's a pricey choice today, and you might want to consider some options.

OPTION #1

First option is to put in a FRESH ribbon and run the following XB program. This will get your decenders back temporarily.

```
100  OPEN #1:"PIO" :: A$(1)=RPT$(CHR$(239),80):: A$(2)=RPT$("g",80) 110
     FOR X=1 TO 2 :: FOR Y=1 TO 66 :: PRINT #1:A$(X) :: NEXT Y :: NEXT  X
     :: CLOSE #1 :: END
```

CHR$(239) is a 6 by 6 dot block on the Gemini 10X. If you get a different character, consult your printer manual for the number of the correct shape. Run this several times, if necessary, to heat up the printhead and hammer through the dirt that keeps the wires from striking hard enough. Almost all the problems with print quality have to do with just plain dust and dirt!

OPTION #2

The second thing to do is to simply clean the printhead. Follow the directions in your printer manual for removal. Then clean it by spraying liberally with TV tuner cleaner - make sure the label says safe for plastics. Cup it in a paper towel to keep the mess out of your hands and eyes. Blast it from inside to outside and all over. The solvent will run off and evaporate.

Purchase cleaner at Radio Shack and electronic outlets. It is banned in some areas since it's harmful to the ozone layer. (Available in Washington but not in Oregon).

Take care not to blast off the "ruby" on the front of the printhead. If

it comes off you can get it back on by gently rocking and pushing it till the wires line up and it settles in, but you had better be a patient type person! Reinstall per manual's directions. IMPORTANT!! DO NOT USE ANY KIND OF OIL ON THE PRINTHEAD OR THE RIBBON. The ink on the ribbon supplies the correct and sufficient lubrication.

OPTION #3

If this still does not produce a cure (or the repair doesn't last) then you need to replace or rebuild. This is your only option if the printhead is snagging holes in the ribbon, or if there is a consistent blank line where there shouldn't be. Now you can have your printhead rebuilt for about 1/3 to 1/2 the price of a replacement.

The place to get this done is the Dot Shop, 608 SE 181st St, Gresham, OR. 97030. The phone is (503)666-6425. To start the procedure phone them and get an order number to use when you send in your printhead. They repair all the common brands and quite a few more. Return is by UPS ground (extra for air). Turn around time is several days usually.

They will completely rebuild the printhead and put in new wires, pins and solenoids if necessary. The repair is guaranteed for 90 days or they will fix free of charge.

I first used the Dot Shop to rebuild a printhead for a Gemini 15X that was snagging ribbons. The printhead broke a pin on the fourth page of text. I returned it to them --no hassle-- no problem. Two days later I got it back and proceeded to print 300,000 graphic characters (6 dots by 6 dots). It is working perfectly and the quality of regular text is that of a new printer.

-----HOW TO DO A PERSON TO PERSON DOWNLOAD-----

by: Jeff Overton

How many times have you wished that you could get a copy of a program from someone? You could go to their home and make a copy, or you could just wait until the next HUG meeting. But what if you needed that program yesterday?

If you own a modem you can get the program that you need in a matter of minutes. You call the BBS and get programs all the time. Why not call a friend and get the program that you want? I know you're thinking, "I have tried before and it didn't work." Well I also tried it before and it didn't work, but this time it did.

I will try to take you through step by step how it is done using TELCO 2.3.

The first thing you must do is call your friend, (on voice) and tell them what you want to do. Tell your friend what program you want. If that program has more than one file your friend should archive it, or you will have

to transmit the files one at a time.

Each of you must set your terminal to HALF Duplex. If you don't do this neither of you will be able to see what you are typing. FULL Duplex sends or "echos" the received characters BACK to the sender only if the receiving terminal "remote echo" is set on. Let me assure you this is not a good choice!! To go to HALF Duplex, you will press "fctn N" from the terminal screen, or use the Setup Terminal option screen and select option "I".

It is also a good idea to make your Setup Terminal option "C" a CR/LF. Doing this will make your text automaticly advance a line at end of your line width, or every time you hit "ENTER". This is a good way to signal the other user that you are through sending text. Hit enter two or three times and your text will roll up that many lines.

One of you will have to put your modem in Auto-Answer. To set a Hayes compatible modem to Auto-Answer, type "ATS0=1".

This will answer on the first ring. The modem will return non Auto-Answer after it is powered off.

You now hang up and whoever is NOT in Auto-Answer calls the other modem. When his computer answers, you will see on your screen "CONNECT" or "CONNECT 1200" or "CONNECT 2400" (depending on your baud rate). This is just like the way that you call the BBS.

Now you can talk to each other with the keyboards and display screens.

If you are to receive the file, you must press "fctn 4" to select a transfer protocall. Both computers must be using the same protocall (Xmodem or Ymodem) and this should have already been agreed upon. In our tests Ymodem is about three times as fast as Xmodem. On paper it should be 8 times as fast, as Xmodem transfers 128 bytes at a time and Ymodem transfers 1024.

The person sending you the file must press "fctn 6" and select a transfer protocall. The sender must then enter the file name exactly as it is stored on the disk. However the receiver can name the file to be received anything, as long as it follows TI disk file header rules, (not more than 10 characters, no blanks or periods-you know the rules). Just type in the file name and it's automatic from then on.

I am sorry to say, if neither of you have Auto-Answer I don't know how it will work. If only one has Auto-Answer it will still work.

With a little practice this will become as easy as file transfers to a BBS.

From the Feb '91 HUGGER newsletter.

----THANK YOU KING BELL----