

31 JUL 87

Boston Computer Society
TI-99/4A User Group Meeting Newsletter
July 1987

THINGS MY MODEM (and other sources) TOLD ME - JULY 1987
by Walt Howe

After a bit of a lull while the TI world waited for the 9640 and its operating system, new 99/4A software has started to appear again. There are three major programs to report on this month - Mass-Transfer, versions 4.2 and 4.3; Travis Watford's new terminal emulator, OMEGA; and 99FORTRAN, a major advance. In addition, I will clarify the copyright status of the adventure games from RI that I mentioned a couple of months ago, say a few words about setting up your floppy disks, and report on the latest threat by the FCC to telecommunications.

99FORTRAN by Al Beard brings a major new capability to the 99/4A. It is a subset of FORTRAN 77 with added commands to take advantage of TI sound and graphics. FORTRAN is an abbreviation of FORMula TRANslation, and the language is, as its name suggests, handy for dealing with mathematical and scientific applications. It is by no means limited to those applications, though. It is an easy to learn language like BASIC with commands that look a lot like English. It shares a number of commands with BASIC. And best of all, it comes with a compiler! Programs you write in FORTRAN can be compiled into assembly language and run at assembly language speeds. Programs written in 99FORTRAN are already starting to appear on CompuServe. It sells for about \$50 and is available from TENEX.

Stu Olsen has brought out two new versions of his fine terminal emulator Mass-Transfer. Version 4.2 added ymodem transfers to the existing xmodem and text transfers. Xmodem transfers send 128 characters and then an error check. Ymodem transfers send 1024 characters before error checking. On good noise-free lines, the less frequent error checking speeds up the transfers quite a bit, particularly with PC Pursuit, which adds more delay at every error check. Only on noisy lines where errors are frequent, does ymodem send slower than xmodem. Every error causes the flawed block to be retransmitted. The problem is, that both ends must be using the Mass-Transfer ymodem protocol. Ymodem is used on some information services, but there are differences. In Mass-Transfer's version, the first block is 128 characters and then the following ones are 1024. Others use different formats and there is not much standardization at this point. Right now, the only places I know of where you can use ymodem with the 4A are Stu's bbs in Arizona and his old bbs in Chicago.

Version 4.3 includes all that is found in earlier versions and adds the capability to use it with multiple RAMdisks. If you have more than one RAMdisk in your system, you want this one. If you don't, there is no particular reason to get the newest version. The biggest change in Mass-Transfer recently came with version 4.1, which added multiple autodial files and better text transfers. If you have 4.0 or earlier, you should probably upgrade. If you already have 4.1, judge whether to upgrade by the added capability. The documentation also changed with version 4.1. 4.2 added a supplementary doc file to those with 4.1, and 4.3 added no documentation as the changes are invisible. 4.2 and 4.3 are often distributed without any documentation but the 4.2 addition. Be sure you get the 4.1 docs, too. If all these changes don't seem absolutely clear, don't blame me. It will not run with the 9640.

Travis Watford brought out the first version of his long-promised public domain terminal emulator OMEGA. This one adds two new capabilities not found in other emulators. It will display on screen RLE graphics files as you download them.

It also includes MACRO commands that you can program for yourself. You can program a keystroke to send a series of characters such as user number and password to log on to a bbs, or to dial the numbers for you, or whatever you want them to be. This program, like Fast-Term includes a lot of FCTN and CTRL key combinations that are hard to remember until you have used them a lot. A text file is included to print out a command summary card for yourself, but the documentation itself is skimpy at this early stage. If you like to try out new programs or if you want the MACRO or graphics capability, get this one. If you don't care about those things and want your programs as simple to use as possible, don't get it. It will not run with the 9640.

Summarizing the three fairware or public domain emulators, Fast-Term is the first to bring us xmodem transfers, and still the most reliable and versatile. It has problems for some people with GENIE downloads, and it is not by any means easy to learn. There are versions around which add autodial capability and which solve the GENIE problems, if you need those. I still use Fast-Term as my primary emulator, and only switch to Mass-Transfer when I particularly want its repeating autodial capability. Mass-Transfer is by far the easiest to learn and use, as it is all menu prompted. This is the one I recommend to beginners just getting started in telecommunications. OMEGA is too new to pass final judgment on. Where the other programs have been through many revisions to build up to their present form, OMEGA is in its first release. It holds great promise, and Travis Watford, who brought us the first assembly RLE graphics program, is a first rate programmer.

If you have a 9640, the only working emulator at the moment is Paul Charlton's modified Fast-Term Geneve (FTG). It is not in general release, but most people who have 9640's seem to have it. If you want it, Paul has not given permission for us to pass it along (it isn't a finished program yet), but if you send him \$15 for a fairware contribution, I'm sure you will get it. Don't consider that if you already paid him for your 4A program, you have a right to it. With fairware, you are expected to pay for each computer you use it on, particularly if they are different computers.

While I have been mentioning autodial features, how many have discovered that PC Pursuit includes an autodial capability? When you have connected to the area code you want to call and you run into a busy signal, do the following. First enter ATZ. Then type control E and enter it. You will see an asterisk prompt (*). Type D at the asterisk. You will be prompted for a phone number. Type and enter the number. It will say DIALING and after an appropriate pause will either connect or say BUSY. If the latter, type R at the *. It will ask how many times to dial. Type any single digit number up to 9, and it will proceed to dial and redial until it reaches 9 calls or connects. You can then type R again as many times as you have patience for.

In my last regular column, I reported on the fine adventure games from Lucille Rock of Rhode Island. I questioned the copyright status at that time, because there was a partially blacked out copyright statement on the disk sleeve. I received letters both from Rock and Hank Randall, RI group president clarifying the status and asking me to straighten the situation out. I am glad to take the opportunity to do so. The adventure programs and text file on the disk are copyrighted by Lucille Rock, and deserve all the protection that goes with that status. The Rhode Island group complained in their newsletter that I should have checked more carefully before publishing anything. I understand their concern, but the copyright laws are clear enough in this case. The disks were not properly marked, and lacking the proper marking, they also lack any copyright protection until the situation is corrected. For a program to have protection under copyright laws, it must as a minimum have a statement in the

following form prominently displayed. First comes either the copyright symbol (c in a circle) or the word "Copyright", the year, and the name of the copyright holder. In other words, the statement, "Copyright 1987 by Lucille Rock" would have been fully sufficient to protect the programs. Without that marking, they may still be copyrighted, but they have no protection under the law. You can copyright your own program by simply adding that statement to the wrapping and the title screen. If you say it is copyrighted and mark it, it is, providing you can demonstrate your authorship, of course. I'm sorry I didn't check first, Rhode Island, but I had a newsletter deadline to meet, and the obligation was yours, not mine.

I recently learned a few tips for setting up disk drives that I had wondered about for a long time. Most people who have set up their own drives have no trouble figuring out how to set the jumpers or dip switches that number the drives. The only problems are that some drives begin numbering with 0 and some with 1 - and that if you use TI's extender card with your cables you have to subtract one from the number you would expect to use, since the extender card adds one to subsequent drives. Less well known is how to set the jumpers marked HM or HS or XM or the like. Not all drives have them, but if they do, you can save some problems by setting them correctly. The first thing to remember is to set either HM or HS (and no other) and be consistent in your setting with all your drives. Paul Charlton says that HM is best for the 4A, so if you can, set HM on all drives. Thus, set only two jumpers or dip switches - the drive number and HM. Another thing that people often do wrong is set up the terminal resistor packs. Only the highest numbered drive should have a resistor pack (it looks like a socketed IC, usually near the edge connector). The pack should be removed from all other drives. Your drives may work without any resistor packs or with too many packs, but they can be the source of some of those unexplainable things that go wrong with drives at the worst time. Even if your drives seem to work all right, do it correctly.

My last item concerns a renewed threat to telecommunications from the FCC. The telephone companies are lobbying for an access surcharge for the packet switching networks like TELENET, TYMNET, PC PURSUIT, the CompuServe network, and the like. If adopted, it would add something like \$4.50 an hour to connect charges that would have to be passed along to users. PC Pursuit, which accesses public lines on both ends of the link, would cost twice as much. Instead of a flat \$25/month, PC Pursuiters, if any are left, would find themselves paying \$8 or so per hour to use it. Public response defeated (or at least deferred) the proposal last time, but it has to be done again soon. It is not quite time to write your letters yet. The FCC will not read any letters this time that arrive before they call for them or do not list the correct docket number. We will try to spread the information when we receive it as quickly as possible. If you want to keep up to date and you have a PC Pursuit number, call PC Pursuit's Net Exchange using the following sign-on procedures:

```
C PURSUIT, YOURID(cr)
```

```
PASSWORD=YOURPASSWORD(cr)
```

If you have never called the Net Exchange before, it will take you a while to learn to navigate it, but on-line help is available. Search Files for the string FCC and you will find all the downloadable information available. This may be superfluous information, since PC Pursuiters have received a letter that explains most of this.

As a final note in case you haven't heard, our redoubtable world electronic traveller, Cynthia Becker has left Boston to live in Seattle. She is well known all around the continent for her frequent calls to TI BBS wherever they are. She hasn't exactly left us completely, since she calls back to Boston regularly - perhaps almost as much as when she lived here. She would like us all to go

the Seattle Faire in September to see her and what she says is the most active TI area in the country. Seattle has two full-time TI-99/4A computer stores, so there must be something to it. In addition to Seattle, there are Faires coming up this fall in Dallas, Washington DC, Central Pennsylvania, and Chicago. I haven't heard if Providence plans one this fall or not.

That's all for this month! I'll leave the fast-breaking 9640 news for Peter's report.

C.COLUMN

by Donald L. Mahler

It is now over a year since I started to write these c.columns. (Actually, the first program was in the January'86 Newsletter). We started with v1.0 of the c.compiler and are now up to V3.0! During this time we have covered the following topics:

Jan'86	Integer conversion
May'86	Graphics
Jun'86	Arrays
Jul'86	Arrays and functions Optimizer
Aug'86	Graphics-Sprites
Sep'86	String functions
Oct'86	Sprites
Nov'86	Floating Pt Numbers
Dec'86	Graphics & Float Pt
Jan'87	Pointers
Feb'87	Extern statement, I/O
Apr'87	FW and c99- FWSAVE

This month we are again using the "extern" statement, introducing the control structure "for", using two dimensional arrays, and showing the string function "strcmp".

```
/* Test program for two dimensional arrays
*/
#include dsk2.atoi
/* or conv;c ;I have split atoi
   off from conv;c */
#include dsk2.strptime
/* this compares two strings */
extern printf();
/* sets up REFS to printf */
char st[10][10]; char buf[8];
/* two dim array, so we can have
   10 strings of 10 letters */
main()
{ int i,j,a,b; a=b=i=j=0;
  for (i=0;i<=10;i++)
/* init i, sets limit, and
   increments all in one step */
  {printf("Input a name:\n");
   gets (&st[i][0]);
/* &=address of first letter of
   string array st[i][0] */
```

```

    if(st[i][0] == '\0')
        break; }
/* lets us stop by hitting ENTER*/
printf("ok, lets look at list\n");
for (j=0;j<=i-1;j++)
    {printf("%s\n",&st[j][0]);
/* if we have starting address, we
can print string ! */
printf("address=%u\n",&st[j][0]);
/* u=unsigned number of address */
printf("first letter is %c\n",st[j][0]);
    }
printf("Remember, first element of an \n");
printf(" array is number zero!\n\n");
printf("Enter number of first name:");
    a=atoi(gets(buf));
printf("Enter number of second name:");
    b=atoi(gets(buf));
printf("%s\n",&st[a][0]);
printf("%s\n",&st[b][0]);
printf("The first name is: ");
    if(strcmp(st[a][0],st[b][0])>=0)
/* compares first letter of two
names we have selected */
    {printf("%s\n",&st[a][0]);}
    else
        printf("%s\n",&st[b][0]); }

```

In case you do not have it, here is "strcmp":

```

/*
** Compare 2 strings; returns a # <0 if s<t, 0 if s==t,
** >0 if s>t
*/

strcmp(s,t)
char s[],t[];
{
    int i;
    i=0;
    while(s[i]==t[i])
        if(s[i++]==0 )
            return(0);
    return(s[i]-t[i]);
}

    OR

strcmp(str1,str2)
char *str1,*str2;
{ while(*str1==*str2)
    {if (*str1=='\0')
        return (0);
        str1++; str2++; }
if(*str1>*str2)
    return(1);
return(-1);}
/* this version uses pointers
instead of arrays and returns
0, +1, or -1 */

```

If you need any of the earlier columns, we can get them for you.

Random Whatever
By J. Peter Hoddie

Fortunately this month there was plenty of material from Walt and Donald so I won't have to fill too much in here. Since it is about 5 hours before the meeting is scheduled to start, I think that's best.

Walt said that he would leave the discussion of the MYARC stuff to me. Quite honestly, I don't really want to write any more about that for a while. In a nut shell: right now there are units shipping, they work essentially like a glorified 99/4A in that they can do about everything that a /4A can but faster, with built in print spooler and RAM Disk and some other goodies like 80 columns and a really nice keyboard. The DOS proper is not available and will probably not be for a couple more weeks. We will endeavor to bring copies of the latest versions of the software being made available by MYARC so that owners can keep up to date. I will also attempt to set up an area on BBS #2 which will contain such files. If you have questions, leave me note on the BBS, write me a quick letter, but please try to avoid the phone - I've mostly given up on answering it.

There are 5 (yes FIVE!!) new disks in the library. I think they are a pretty decent collection. Not in any particular order these disks are: South Pacific - selections from the musical programmed by Ken Gilliland so that your TI actually sings them to you; BASIC Builder by Paolo Bagnerasi (the same person who brought you BA-Writer), this program lets you write Extended BASIC programs using TI-Writer and then it quickly converts them into a runnable XB program, very well done with excellent docs; Textload/EA5Load is a combination by Curtis Provance, president of the New Hampshire 99'ers, Textload is essentially a batch file processor for Extended BASIC and EA5load is a really powerful program image loader for use in Extended BASIC, complete source code to both is included, strongly recommended program; OMEGA and Archiver II is a telecommunications disk featuring an excellent new terminal program by Travis Watford and a very fast archiver utility by Barry Boone; finally is SORT and WORD COUNT, both are fairware type programs written by yours truly, complete source code to both is provided, SORT is one of the most capable and fast sorts written for the /4A and WORD COUNT is a really quick way to count words and lines in a TI-Writer file. That does it for the new disks, hope you enjoy. Should be another few new ones next month.

Meeting in August is on the third Wednesday (the 19th) at 7:30 PM at the Mass. College of Art in Boston. The meeting location for September is undetermined so please check if you can't make the August meeting. The August meeting topic will include a demo of Multiplan by Donald Mahler, your requests, a look at some very advanced debugging tools, and a look at whatever wierd programs I have managed to turn up or out by then (possibly a terminal program with a complete MACRO facility that blows OMEGA away, and a copy utility I'm playing with).