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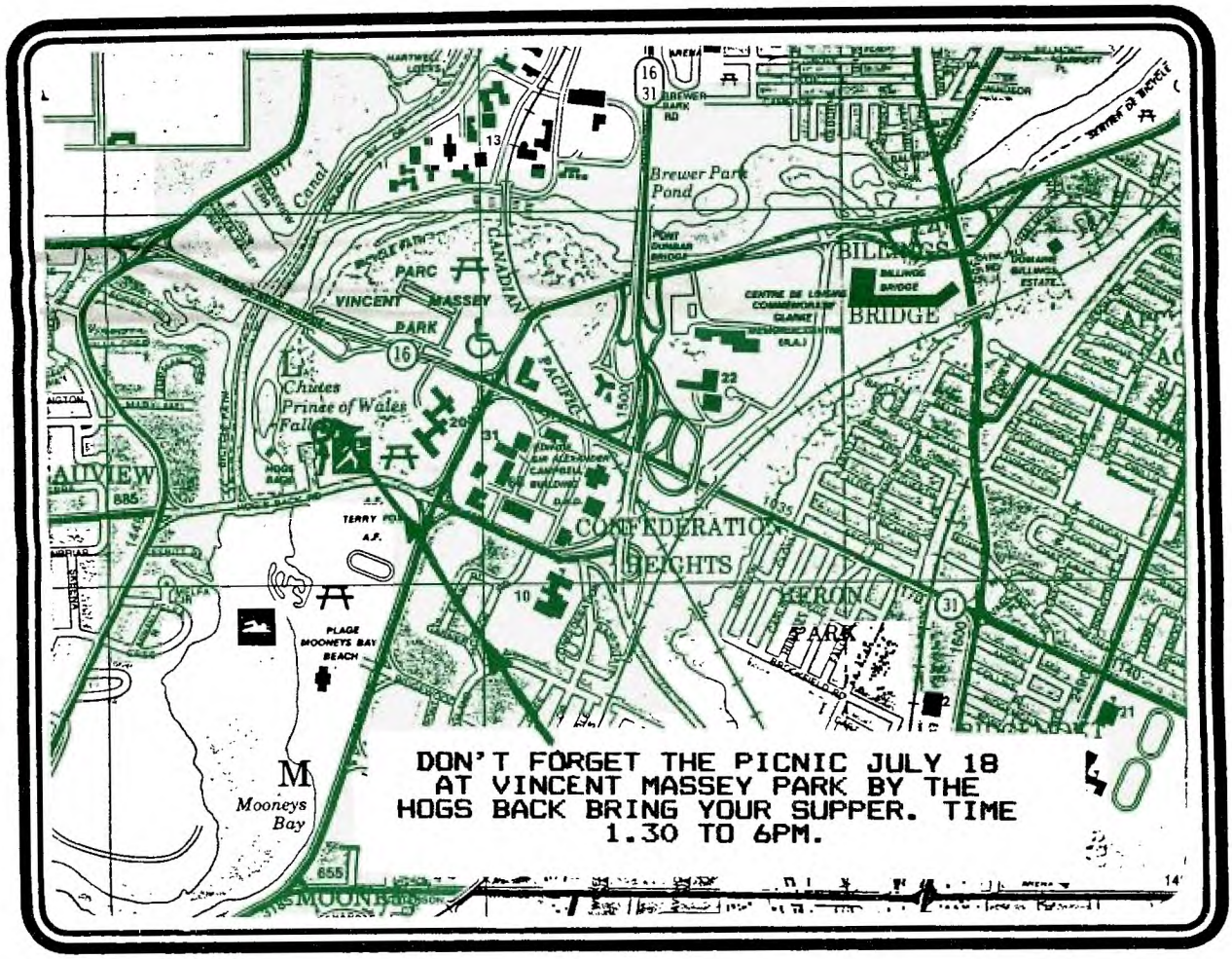
The Ottawa T.I.99/4A Users' Group

MASTERBYTE

VOLUME 6 NUMBER 05.....MAY 1987



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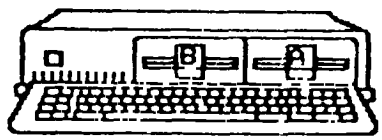

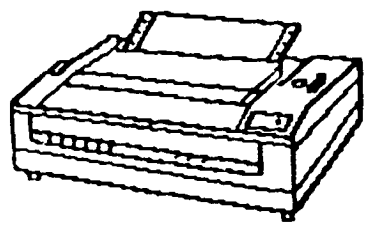

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CHAIRMAN'S TWO CENTS WORTH

by **Berry Minuk**

I am writing this last column of the season still fresh from the euphoria of our 2nd TI-Fest North which has been another success thanks to the efforts of Bob Boone and his many volunteer workers. Although the local turnout was a bit down from last year, the out of town response was much better. The highlight of the show for me personally was a successful demo of a properly working Geneve 9640 running a useful piece of software, i.e. the new 80-column word processor.

I would also like to thank all of the distributors who came to the Fest from both near and far. Without you the show would have been sadly lacking. Due to family reasons I was unable to attend the dinner on Saturday night and thank everybody in person.

We can now go forward into the next season of activity knowing that there is still plenty of life left in our orphans and also a chance for future growth. Those of you who missed the show will probably get a chance to see for yourselves at the June meeting. At the meeting we will also show the winning programs from the software contest and award the prizes. This will be your last chance until September to see all the new goodies.

Bill Sponchia who has been acting as a 1-man committee to review the constitution will have his first report ready and you can study it all summer. The new BBS is running fine now and Lloyd has all the kinks out of it. He will now concentrate on improvements so if you have any suggestions leave him a message on the board.

Due to time constraints I will now have to end my ramblings since I am still trying to make the deadline for the May newsletter.

See you all at the June meeting.

BROWSING THE LIBRARY

--with **Stephen Bridgett**

One day after the fest and our patient editor waits for my article. Would such weak excuses as not enough time be supported by the fact that I haven't even paid my telephone bill for April.

The Fest, from my corner of the room, appeared to be a great success and from the standpoint of the library, very rewarding for me personally. Good news for catalogue enthusiasts....The night before the Fest I spoke with Marty Kroll in Pennsylvania. Marty gave his blesing to converting the catalogue program to run from XB. Our own Art Green has done just that, resulting an easy to run version, for all us XB fans. Marty also hinted that he had a new version soon to be released which would support partial string searches and global searches. This, in my opinion was the only 2 limitations on an otherwise superior piece of software. On that note let me remind all those with conscience, that Marty's is a FAREWARE product.

Interest in the new catalogue was keen at the Fest. Now everyone who wishes to take advantage of the Ottawa User Groups vast collection of software is able to do computer searches and make requests. Out of towners too, of course. For those so inclined, the complete catalogue is also available as a download from the club's BBS.

A committee was been formed during the spring and with the jobs being effectively shared, it is hoped that such matters as correspondance, documentation, updates, research etc will begin to be carried out. Look for the first catalogue update in the Fall. In the meantime there are 100 pages of goodies to browse through. Feedback is more than welcome, it is essential!

For those who are not familiar with the price scheme, look at the

DIRECTORY of the catalogue. Basically it's simple and inexpensive, and generally $3.00 per disk.

Disk of the month, as a great deal of other things, was put on hold over the last couple of months. Now that the start up work of the catalogue is complete we may see a return of what was very popular concept.

June is our last meeting before th summer break, and the last convenient time to grab your copy of the disk based catalogue. June will also see the introduction of our documentation drive. Why not order a couple of interesting disks, pick up some blank questionnaires and dive in. Only by group participation can we reach the goal of a well documented and up to date library. And remember the $1 credit for returning the completed form.

See you in June
.....Stephen

SOFTWARE.....STEPHEN...521-3631

CASSETTE BASED SOFTWARE...JACK...225-6989

EDITOR'S NOTE

This NEWS LETTER was printed using the new STAR NX10 printer on loan from EXCELTRONIX.

DOWNLOADING FROM COMPUSERVE

by **Jim McLaren**

This file comes to us courtesy of Jim McLaren and is an extraction from the Sudbury Ontario user group's December 1986 newsletter.

For those of you with modems one of the benefits of having a modem is being able to download a file from a local bulletin board. For the most part these files are fairly small and there is no access charges. With larger databases similar to Compuserve the Source and in Canada Timeline there is a charge for connect time.
So time is of the essence. You don't want to spend your time and money going through countless menus before attaining the one you were looking for. With help from Terry Atkinson and Tom Kennedy I was finally able to download a file from Compuserve. When you log onto Datapac you will have to put in some numbers to reach Compuserve do the following:
A) Use **Fasterm** v1.16
B) Set up a parameter file(this is a must))
C) Set parity to none

You can do it two ways:
1) Type at the prompt 1.3106,C1S02 or
2) 13106 Then at the next prompt C1S02 You will come to a Host Name Prompt. When you are on datapac you have to send a CTRL P then type in "PROF(1space)3". After you type PROF 3 press three carriage returns. This sets up the ability to download a file from Compuserve through Datapac. You will then see "Host Name" again. Type "CPS" then press enter. You will be asked for your User ID# and followed by a password request. Once you have entered into Coompuserve at the first available prompt type GO TIFORUM. This will take you into the TI Forum area. At this point you may have to sign up. It takes only a few minutes and will not cost you anything to join up.

After you have signed up you will see a function menu like:
1)(L)Leave a message 2)(R)Read messages 3(CO) Conference 4(DL) Data Libraries 5(B) Bulletins 6(MD) Member Directory 7(OP) User options 8(IN) Instructions

You want #4 (DL) Data Libraries

The next menu will display the different types of files available eg. 1) 0)General text 1)99 New Uploads 2)99 Basic/XBasic 3)99 Assembly/Forth 4)99 C,Pascal,etc
5)99 Classics
6)Going,going...
7)Art/Music/Games 8)Ti Professional

Choose one of the data libraries.

eg dl 7-Art/Music/Games

1)(DES)Description of data librarie.
2)(BRO)Browse through files
3)(DIR)Directory of files.
4)(UPL)Upload a new file
5)(DOW)Download a file
6)(DL) Change data library
7)(T) Return to function menu
8)(I) Instructions

At this point I used FastTerm capture buffer as well as spooled to the printer.(Fctn B, log filename.)Ctrl 3 (printer on/off).
I chose #1(DES) I typed " S *.*/DES " This will give you an alphabetical description of the files. At the first prompt "carriage return for more" then type "S"; it will scroll continuously until all files are described.
Once you have downloaded this you can then take your time off line to read the files. I strongly suggest that you do this with all catagories. It will save you many hours of cost time.
Note: Pressing "log" at any prompt will exit Compuserve and be logged off.
Once you have viewed the files off line you can choose the particular file you want to download.Having a file description will sure make things alot easier.
To download do the same procedures to get to data libraries.At this point I usually use the "bro" command to see the file I want to download.

eg BRO MUSIC

This will describe the file. Press enter for menu before you download the file, press FCTN N to name the file you want to download; EG DSK1.MUSIC or any filename you want. It doesn't have to match the filename you are downloading. Now you will see this menu:

1)(REA) Read this file
2)(DOW) Download this file
3)(M) Data Library Menu

Choose **"DOW"**

Next screen will show:
Transfer Protocols available

1) Xmodem(modem 7) protocol
2) Compuserve "B" protocol
3) Compuserve "A" protocol
4) DC2/DC4 CAPTURE protocol
0) Abort transfer request

Select #1 Xmodem transfer and you will see: 'Starting Xmodem transfer'. Press (CR) when transfer is complete; then press FCTN SHIFT X. At this point I pressed the FCTN key and held it, pressed shift key, held it, then X key.
You will see send or receive file; Press R for receive. I used CRC checking so I pressed N at the next prompt. The system answered 'waiting for record...'.
Your disk drive light should come on in a few seconds. You will see numbers flashing. This means data is in progress.
Depending on the file length, will determine the length of download time.
for example it took about ten minutes to download a 25 sector file.
After the transfer is complete you will get a message "file transfer complete".
Press "enter" and you will be back to where you left off before downloading. At this time I pressed "log" to log off Compuserve.

Hopefully I have given you a better understanding on how to download a file from Compuserve.

I spent close to 3 hours on line reading messages and trying to download. I thank Terry Atkinson and Tom Kennedy for their help. If it wasn't for those two fellow TI'ers I would have been in an endless loop of menus. Sure was a great feeling to finally be able to download from Compuserve.
There are alot of files in the different data libraries.By downloading the files with a description will save you time and money.I have downloaded files from new Tunnels of Doom adventures to multiplan files to games.There is something for everyone.

Here again from Jim McLaren of the Sudbury 99ers. The following information was ownloaded from Compuserve by Jim:

TROJANHORSE

The **TROJANHORSE** is a file that will destroy disk contents when it is run. If the file is run too often it can misalign your disk drive. These files have turned up on BBSes, as well as large databases like Compuserve. The trojan file can be uploaded into a user group library. Most of the time files are loaded to new upload catagory until the local sysop has a chance to check the files for mistakes and where to put the file; so there is a chance that you can download a file before it is checked. The sysops do a super job but there is not time to check files that are uploaded daily. I had fair warning from the Winnepeg group rUG Houston User's Group who both mention trojan files in their newsletters. I downloaded a file from a database that looked very enticing, almost too good not to download. Listed below is the description of the file:

[73317,425] DSKSCN.EA3 01-FEB-87 10095(4320) ACCESSES:5

KEYWORDS: XMODEM OPTION 3 DISK SCANNER UTILITY

This program is a neat little program I found on a local BBS. If you have a blown disk this will tell you where and what the problems are, or it provides all sorts of neat info on normal disks(even the abnormally protected ones). Uploaded by the Commentator 73317,425

As you can see, this file is just too tempting not to download. Everyone has a blown disk; (Contributor's note: Is that right Jane?), most people are looking for such utility programs. When I looked at this file I thought it was a small file so it will not take long to download it. The file would be a very useful utility. The file description almost covers any user's needs, even if you didn't have a blown disk, it states all sorts of neat info. There were 5 accesses already and the file was just uploaded. Once I downloaded the file and ran the program I used a old disk that had bad sectors on it. The title screen was very attractive when I pressed to go on, the program halted and said "REMOVE WRITE PROTECTION TAB"; maybe I should have seen at that time that it was a **trojan** file. I removed the tab and continued. The drive made an awful clacking sound. At first I thought that somehow the disk had jammed in the drive. When I catalogged the disk, it gave me a disk uninitialized error. It was only then that I realized that it was indeed a trojan horse file. If I had of used a disk with some valuable programs on it I would have lost all the files!

I immediately went back online to warn everyone else, I let the sysop know about it. They removed the file immediately, and mentioned that another user had a problem with the same file, so I wasn't the only one caught. They checked to see if they could find out who uploaded the file, but because the person used a handle(the commentator)I don't think they could trace it. Even with the id number listed on the filename [73317,425] It was most likely a free trial offer that lots of companies offer when you buy their modems. Hence there would be no visa or mastercard number to check for a address. Who ever these people are who can program a trojan file

must have some good knowledge of programming. Its a shame that they waste their time programming something like this. They must have little respect for others.

HERE IS A LIST OF (TROJAN HORSE)FILES mentioned in the WINNEPEG, HUSTON UG and my NEWSLETTER: (progname)(size)STAR-ARC(FILENAMES>; EXAMINER(4); HELP(3); LOAD(36), LOAD1(54), LOAD2(3) SUPERTRACK, SUPERHACKER, SUPERCOPY and DISK SCANNER

TI BASIC continued from April

By **Steven Shaw**

PECULIARITIES

PAUSES

When a program is RUNning, from time to time your computer will appear to stop operating for a very short period. This pause is especially noticeable when using the PRINT AT routine to be found later in this book, or when using Sprites with Extended Basic. The reason for the pause is called 'garbage collection'.
When you amend a program line by re-entering it or by using the Edit mode, there is a pause before the cursor reappears, which becomes longer the longer your program is.
During this pause the computer is deleting the previous version of the line, moving all the following lines up in memory and adding the new version of the line to the bottom of the program memory : in short, doing a great deal of work.
When a program is running, and variables are defined, the values of the variables are stored in memory. When a new value is allocated to a variable, to avoid frequent delays to your program, the computer retains the old value in its memory, even though it will use the new value.
As time progresses, the memory will become full of these old variable values. When memory becomes full, the computer discards the redundant values : this is called garbage collection. It is more efficient to only do this when memory becomes full than every time a variable is redefined, but a very small pause is caused.
These pauses will be more frequent if your program is a long one, as there will be less memory to fill up with dead variable values.

REDUNDANT CHARACTER DEFINITIONS

When you switch the console on, some characters are undefined. If you define these characters in one program, the computer will retain that definition even if you use NEW and load a new program. Only by using BYE or QUIT will the definition be erased.
Therefore never assume a character is undefined : you may run a different program first which defines that character!

Example: Type in:

```
100 CALL CLEAR
110 A$="FF818181818181FF"
120 B$="0000FF0000FF0000"
130 CALL HCHAR(12,1,140,128)
140 GOSUB 210
150 CALL CHAR(140,A$)
160 GOSUB 200
170 CALL VCHAR(1,12,140,120)
180 CALL CHAR(140,B$)
190 GOSUB 210
200 STOP
210 FOR T=1 TO 1000
220 NEXT T
230 RETURN
240 END
```

RUN this program. When it ends, type in:
PRINT CHR$(140) {ENTER}

Notice that the definition is still there.
If you wish, RUN the program again and note the difference at the beginning, as the character is no longer undefined.

Now type in:
NEW {ENTER}
and repeat:
PRINT CHR$(140) {ENTER}

The definition is still there. If a new program is loaded, which uses this character and assumes the character is undefined, the character will not be printed as a blank but as the character we have defined with the above short program.

This TI BASIC program simulates two puzzles

The screen is used as a memory device, with CALL GCHAR used to find out what is in a particular position, and then the information is manipulated and new characters displayed.

The program can be speeded up by using a 6X6 array to hold the information and using that instead of GCHAR. This program will work: can you make it work better?

```
100 REM  SQUARES   S SHAW 1981        4X4 IS BEST
110 RANDOMIZE
120 DEF RAN(X)=INT(X*RND)+1
130 GOSUB 2200
140 GOSUB 2100
150 GOSUB 1340
160 GOSUB 980
170 FOR I=8 TO 6+2*V STEP 2
180 FOR I2=5 TO 2*H+3 STEP 2
190 CALL GCHAR(I2,I,I4)
200 POSR=I2
210 POSV=I
220 IF I4=32 THEN 260
230 NEXT I2
240 NEXT I
250 REM
260 IF SCR=0 THEN 300
270 SCR=SCR+1
280 IF SCR=2 THEN 360
290 RETURN
300 CALL KEY(0,A,B)
310 IF A=ASC("P")THEN 130
320 CALL HCHAR(15,22,63)
330 CALL HCHAR(15,22,32)
340 IF B1 THEN 260
350 KEY=POS("1234567890QWERP",CHR$(A),1)+1
360 IF (H=4)*(KEY>5)THEN 260
370 ON KEY GOTO 260,390,450,520,690,860,890,920,950,2300,2330,
    2360,2390,2420,2450,130,130
380 SCR=SCR+1
390 REM
400 IF POSR=5 THEN 260
410 CALL GCHAR(POSR-2,POSV,I3)
420 CALL HCHAR(POSR-2,POSV,32)
430 CALL HCHAR(POSR,POSV,I3)
440 GOTO 170
450 REM  DOWN
460 IF POSR=15 THEN 260
470 IF (H=4)*(POSR=11)THEN 260
480 CALL GCHAR(POSR+2,POSV,I3)
490 CALL HCHAR(POSR+2,POSV,32)
500 CALL HCHAR(POSR,POSV,I3)
510 GOTO 170
520 IF H=6 THEN 580
530 IF POSV=8 THEN 260
540 CALL GCHAR(POSR,POSV-2,I3)
550 CALL HCHAR(POSR,POSV-2,32)
560 CALL HCHAR(POSR,POSV,I3)
570 GOTO 170
580 M$=""
590 I5=5
600 FOR I=8 TO 18
610 CALL GCHAR(I5,I,I2)
620 M$=M$CHR$(I2)
630 NEXT I
640 M$=SEG$(M$,3,9)SEG$(M$,2,1)SEG$(M$,1,1)
650 FOR I=8 TO 18
```

```
660 CALL HCHAR(I5,I,ASC(SEG$(M$,I-7,1)))
670 NEXT I
680 GOTO 170
690 IF H=6 THEN 750
700 IF POSV=14 THEN 260
710 CALL GCHAR(POSR,POSV+2,I3)
720 CALL HCHAR(POSR,POSV+2,32)
730 CALL HCHAR(POSR,POSV,I3)
740 GOTO 170
750 M$=""
760 I5=5
770 FOR I=8 TO 18
780 CALL GCHAR(I5,I,I2)
790 M$=M$CHR$(I2)
800 NEXT I
810 M$=SEG$(M$,11,1)SEG$(M$,2,1)SEG$(M$,1,9)
820 FOR I=8 TO 18
830 CALL HCHAR(I5,I,ASC(SEG$(M$,I-7,1)))
840 NEXT I
850 GOTO 170
860 I5=7
870 M$=""
880 GOTO 600
890 I5=7
900 M$=""
910 GOTO 770
920 I5=9
930 M$=""
940 GOTO 600
950 I5=9
960 M$=""
970 GOTO 770
980 T$="PRESS APPROPRIATE KEY TO"
990 R=17
1000 VR=3
1010 GOSUB 2260
1020 T$="MOVE BLANK SQUARE"
1030 R=18
1040 VR=3
1050 GOSUB 2260
1060 IF V5 THEN 1110
1070 T$="OR SLIDE ROWS          "
1080 R=19
1090 VR=3
1100 GOSUB 2260
1110 T$="1. UP      2. DOWN"
1120 R=20
1130 VR=3
1140 GOSUB 2260
1150 IF V>5 THEN 1210
1160 T$="3. LEFT    4. RIGHT"
1170 R=21
1180 VR=3
1190 GOSUB 2260
1200 RETURN
1210 T$="3.TOP  4.TOP>  5.2  6.2>"
1220 R=21
1230 VR=3
1240 GOSUB 2260
1250 T$="7.3    8.3>    9.4  0.4>"
1260 R=22
1270 VR=3
1280 GOSUB 2260
1290 T$="Q.5    W.5>    E.6  R.6>"
1300 R=23
1310 VR=3
1320 GOSUB 2260
1330 RETURN
1340 CALL CLEAR
1350 REM  DRAW
1360 FOR I=7 TO 7+2*V STEP 2
1370 FOR I2=4 TO 4+2*H STEP 2
1380 CALL HCHAR(I2,I,98)
1390 NEXT I2
1400 NEXT I
1410 FOR I=8 TO 6+2*V STEP 2
1420 FOR I2=4 TO 4+2*H STEP 2
```

```
1430 CALL HCHAR(I2,I,96)
1440 NEXT I2
1450 NEXT I
1460 FOR I=7 TO 7+2*V STEP 2
1470 FOR I2=5 TO 3+2*H STEP 2
1480 CALL HCHAR(I2,I,97)
1490 NEXT I2
1500 NEXT I
1510 IF V5 THEN 1740
1520 FOR I=8 TO 18 STEP 2
1530 FOR I2=5 TO 15 STEP 2
1540 CALL HCHAR(I2,I,45+I/2)
1550 NEXT I2
1560 NEXT I
1570 CALL HCHAR(11,14,32)
1580 RANDOMIZE
1590 T$="   WAIT-RANDOMISING"
1600 R=17
1610 VR=3
1620 GOSUB 2260
1630 FOR Y=1 TO 32
1640 SCR=1
1650 KEY=RAN(14)+1
1660 GOSUB 170
1670 SCR=1
1680 KEY=RAN(2)+1
1690 GOSUB 170
1700 GOTO 1710
1710 NEXT Y
1720 SCR=0
1730 RETURN
1740 REM
1750 I3=65
1760 FOR I=5 TO 11 STEP 2
1770 FOR I2=8 TO 14 STEP 2
1780 CALL HCHAR(I,I2,I3,1)
1790 I3=I3+1
1800 NEXT I2
1810 NEXT I
1820 CALL HCHAR(11,14,32)
1830 REM
1840 T$=" WAIT-RANDOMIZING"
1850 R=17
1860 VR=3
1870 GOSUB 2260
1880 FOR Y=1 TO 55
1890 SCR=1
1900 KEY=RAN(4)+1
1910 GOSUB 170
1920 NEXT Y
1930 SCR=0
1940 RETURN
1950 PRINT "SQUARES"::"STEPHEN SHAW 1981":"PRESS '1' OR '2' FOR:"
1960 PRINT "1. 6X6 PROBLEM":"2. 4X4 PROBLEM"
1970 PRINT "FOLLOW DIRECTIONS AT BOTTOM   OF SCREEN AFTER
     DIAGRAM":"HAS BEEN DRAWN"
1980 CALL KEY(0,A,B)
1990 IF A=49 THEN 2050
2000 IF A=50 THEN 2010 ELSE 1980
2010 H=4
2020 V=4
2030 CALL CLEAR
2040 RETURN
2050 H=6
2060 V=6
2070 CALL CLEAR
2080 RETURN
2090 CALL CLEAR
2100 PRINT "SQUARES    1981"::"STEPHEN SHAW STOCKPORT":"THE
     OBJECT IS TO RESTORE "
2110 PRINT "THE ORIGINAL PATTERN OF ":"SQUARES,WHICH THE CO
     MPUTER":"HAS SCRAMBLED"
2120 PRINT "USING THE COMMANDS AVAILABLE.":"IN BOTH PUZZLES
     THE BLANK":"MOVES UP OR DOWN"
2130 PRINT "IN THE 6X6 PUZZLE":"IT CANNOT MOVE > OR  BUT":
     "THE WHOLE ROW SLIDES "
2140 PRINT "WATCH AS THE COMPUTER":"SCRAMBLES THE ORIGINAL"
```

```
    :"PATTERN TO SEE HOW IT":"WORKS!"
2150 PRINT "(BEING RANDOM YOU MAY END":"UP BACK AT THE START!)"
2160 PRINT "PRESS KEY P TO PLAY AGAIN":"WHEN YOU HAVE COMPL
    ETED":"YOUR PUZZLE"
2170 INPUT "PRESS ENTER":T$
2180 CALL CLEAR
2190 GOTO 1950
2200 CALL CLEAR
2210 CALL CHAR(96,"000000FF")
2220 CALL CHAR(97,"1010101010101010")
2230 CALL CHAR(98,"101010FF10101010")
2240 CALL SCREEN(12)
2250 RETURN
2260 FOR G=1 TO LEN(T$)
2270 CALL HCHAR(R,VR+G,ASC(SEG$(T$,G,1)))
2280 NEXT G
2290 RETURN
2300 I5=11
2310 M$=""
2320 GOTO 600
2330 I5=11
2340 M$=""
2350 GOTO 770
2360 I5=13
2370 M$=""
2380 GOTO 600
2390 I5=13
2400 M$=""
2410 GOTO 770
2420 I5=15
2430 M$=""
2440 GOTO 600
2450 I5=15
2460 M$=""
2470 GOTO 770
2480 END
```

NOTE: Many variables in this program are the letter I, or a letter I with a number following.

Be careful to distinguish between the letter I and the number 1.

CHAPTER THREE

HOW TO USE TI BASIC

PRACTICAL PROGRAM WRITING

Before you switch your console on to write a program, or even gather a large pile of paper to work on, sit and think about your proposed program.
Work out what your program is to do, and try to split it into small blocks of tasks to be accomplished. Then you can write the coding for each block, and check it to ensure you have made no mistakes, before moving to the next block.
It is much easier to write a small program that works well than to write in one go a 15k program : it is improbable that it will work first time, and you will be faced with a lot of checking!
Some experienced programmers can just sit at their console and input a new program,but certainly at first, you should write your proposed program down on paper. Check the flow of the program before you input it: can any variable or input reach a value which would cause the computer problems? If so, is an 'error trap' required, or does the program need rethinking?
The Basic language is in some ways similar to English: the same task can be accomplished in several ways, but some ways are more efficient than others. A method which works well in one program may be inappropriate in another, therefore it is not possible to give any more than the most general guidelines. A digital stopwatch can be an advantage when you are trying to find the quickest way of doing something. Usuaully a single process is too fast to time, but place it in a loop. (A loop is a part of the program which is repeated several times, until a particular condition is met. In the following FOR value of 1000).

```
FOR I=1 TO 1000
```

```
CALL HCHAR(3,4,45)
NEXT I
```

and it is possible to obtain a reasonably accurate time to compare with other ways of doing the same thing- for instance, to place a single character at one screen position you may also use:
CALL VCHAR(3,4,45) - try substitution in the above loop and see the difference in execution time.

In general the 99/4A is slow at reading DATA and at scrolling the screen (PRINT), but there are occaisons when these are the best commands to use.
It is faster for instance to PRINT 24 lines than to use CALL HCHAR 768 times (the number of characters on the screen)!

Your program idea may need to be amended to meet with the demands of the computer, and you should never be afraid of completely scrapping your work and starting again: often new inspiration can lead to a far more efficient program.

DISPLAY+USING ARCHIVES?

by **Henri Monat**

Few months ago, after a tough competition and having used all of my influence, I have been appointed chairman, secretary and sole member of the archives' Committee of our Club... (In fact, nobody wanted the job...).

The archives' Committee is pleased to publish a list of documents it treasures. The list has two parts:

1.-Newsletters and Magazines: we receive each month approximately 40 newsletters, mainly from Canada and U.S. Members will note that some series are incomplete. If, by chance, any of our members can supply some of the missing issues of the newsletters, I would appreciate being contacted (824-0941), in order to work out something for the archives. Thanks to those who have already done their share.

2.-Documentation on programs: this was the personnal documentation of the previous archivist. I have tried to summarize, in few words, what each of those documents are and programs do. Some are fairware programs and may possibly be obtained from our library. Most of them are commercial programs and cannot be obtained from sources other than the authors, either directly or through intermediaries. Since documentation is always (or should be) furnished when a commercial program is being bought, the purpose of this list is to inform our members of what is available on the market to supply their particular needs. Of course, this list is of no warranty of the quality of the programs.

This brings me to another subject. It is not without reason that I chose the title of this article: how can we use the archives? Should the archivist just display a list of his treasures or should he come up with a policy to make them available to our members? I have given some thoughts on how our members could benefit from the valuable articles we find in various newsletters, but I did not come to a definite answer. Ideally, we could make an index of each article found in each newsletter, and distribute exerpts on demand; this is too much of a burden due to the number of the newsletters we receive. As an alternative, some Users' Groups publish each month a summary of some contents of newsletters they receive. A third solution is to loan those newsletters to our members, on a "first come, first served" basis.

None of those ideas are without practical problems. Would there be anybody, this summer, to give me input on how we can have the best use of our archives? By the way, if there is no answer on the phone, it is not because the archivist's position is vacant... Tough luck!!!

NEWSLETTERS - MAGAZINES

1. From Computers Clubs

Boise 99'ers	Oct. 85		
	Dec.		
	Aug. 86		
	Dec.		
Boston, Mass.	Jun. 86		
	Jul.		
	Aug.		
	Nov.		
	Jan. 87		
Britain (TI*MES)	Spring 85		NO. 8
Calgary	Nov. 86		
	Feb. 87		
Central Pa. (99'er)	Nov. 86	Vol.4	NO. 11
Central Westchester	Jan. 86		
Charlotte TI 99	Jun. 85		
Chicago TImes		Vol.4	NO. 7
			NO. 8
			NO. 9
			NO. 10
Daytona, Fl.	Jul. 86		
	Aug.		
Edmonton 99'er	Aug. 85		
	May 86		
	Feb. 87		
K-Town 99'er, Tn.	Aug. 85	Vol.2	NO. 5
	Dec.		NO. 9
	Oct. 86	Vol.3	NO. 7
Lake Charles, La. (Bayou Byte)	Jul. 86	Vol.4	NO. 7
	Sep.		NO. 9
Lexington, Kentucky (Bytemonger)	Jan. 86	UP TO AND INCLUDING	
	Nov. 86		
Los Angeles, Cal.	Feb. 86	Vol.5	NO. 2
Memphis, Te. (Mid South)	Aug. 86	Vol.4	NO. 8
	Sep.		NO. 9
Miami County, Indiana	Aug. 85	Vol.3	NO. 6
	Jan. 86	Vol.4	NO. 1
	Jun.		NO. 6
	Jul.		NO. 7
	Aug.		NO. 8
	Jan. 87	Vol.5	No. 1
Montr{al	Avr. 86	Vol.2	NO. 1
North Bay	Nov. 86		
	Jan. 87		
Northern Nevada	Nov. 85	Vol.1	NO. 11
	Aug. 86	Vol.2	NO. 8
	Oct.		NO. 10
Nova Scotia	(No Date)		
	Mar. 86		
Ottawa	Apr. 83	Vol.2	NO. 4
		UP TO DATE	
San Diego	Sep. 86		
Saskatoon	Jan. 85		
Southern California (The Computer Voice)	Oct. 85		
St. Petersberg, Fl. (Suncoast Beeper)	Nov. 85		
Toronto (Newsletter 9T9)	Aug.-Sep. 86		
Trois-Rivi}res (Le TI-Mot)	Oct. 86	Vol.1	NO. 2
Twin TIers, N.Y.	Jan. 85		
	Sep. 86		
	Dec. 86		
West Jax, Fl.	Oct. 85		NO. 8
Will County, Il.	Jan. 86	Vol.3	NO. 1
	Sep. 86		NO. 9
Winnipeg	Feb. 86		
W.W.	Sep. 86		

2. From other sources

99'er	Nov.	86	Vol.4	NO.	11
Clubline-99 Mag.	Jun.	84	Vol.2	NO.	6
	Nov.			NO.	11
	Dec.			NO.	12
	Jan.	85	Vol.3	NO.	1
	Feb.			NO.	2
	Mar.			NO.	3
	Apr.-May			NO.	4
	Jul.			NO.	6
	Nov.		Vol.4	NO.	2
	Dec.			NO.	3
	Jan.	86		NO.	4
	Mar.			NO.	6
Genial TRAVeLER	(preview)				
(Mag. on disk)					
Home Computer Mag.			Vol.4	NO.	5
			Vol.5	NO.	1
				NO.	2
				NO.	4
				NO.	5
MICROpendium	May	85	Vol.2	NO.	4
	Mar.	86	Vol.3	NO.	2
	Apr.				
	Mar.	87	Vol.4	NO.	2
Millers Graphics	Free Mini sample				
(The Smart Prog.)	Feb.	84			
	Mar.				
	Apr.				
	May				
	Jun.				
	Aug.				
Mill. Graph.: new hardware,books and software					
Mini-Mag 99	Apr.	85	Vol.1	NO.	2
Network News			Vol.1	NO.	1
(Ron Albright, Ed.)					
Ryte Data	Jan.	85	Vol.1	NO.	1
	Feb.	85		NO.	2
				NO.	3
Smart Programmer	Jul.	86	Vol.2	NO.	2
(formely Millers	Sep.			NO.	4
Graphics and Super 99)					
SUPER 99	Sep.	84	Vol.1	NO.	1
	Oct.			NO.	2
	Nov.			NO.	3
	Jan.	85		NO.	5
	Feb.			NO.	6
	Mar.			NO.	7
	Apr.			NO.	8
	Jun.			NO.	10
	Jul.			NO.	11
	Aug.			NO.	12
	Sep.		Vol.2	NO.	1
	Oct.			NO.	2
	Dec.			NO.	4
	Jan.	86		NO.	5
Texnet Comp.Express Winter 85-86					
Tigercub Soft.			Cat.	NO.	6
Tigercub (Tips from)				NO.	29

DOCUMENTATION ON PROGRAMS

BUSINESS MANAGEMENT AND FINANCE

BASKETBALL STATISTICIAN, T.I.:maintains statistics on up to 16 players for a 40-game season.
CASH MANAGEMENT PACKAGE,T.I.: provides a method of forecasting the amount of cash available to a bussiness.
CHECKBOOK MANAGER,T.I.: helps to balance a checking account.
COUNT-SIL, Systems Interface, Napean, ont.: provides an electronic spreadsheet system.

FINANCE MANAGEMENT, T.I.: offers various financial calculations such as cash flow, depreciation, compound interest, annuities, etc...
GRAPHICS GRABER, unknown, transfers text or graphic from screen to printer.
GRAPHING PACKAGE,T.I.: performs a variety of graphing functions, such as plots, tables, curves, contour mappings.
MATH ROUTINE LIBRARY, T.I.: performs sophisticated mathematical analysis.
SCHEDULER (THE), Dynamic Data and Devices: controls activities entered from a keyboard.
STRUCTURAL ENGINEERING LIBRARY, T.I.: solves problem encountered in structural engineering.

COMMUNICATIONS - SPEECH AND SPELL

COLOR AND SPEECH USING TE-II: downloaded from the PRO-99er, N. Reading, Mass.
FAST TERMINAL PROGRAM, Paul Charlton, Charlottesville, Virginia.
GRAPHICS WITH TE-II, Terry Atkinson, TI Nova Scotia. (Article).
MDM -TRANSFER (3.5), Stu Olson, Lake Villa, Il.: transfers of disk files using X modem protocol.
PROTOCOL MANUAL, T.I.: describes the communication protocol used by the terminal emulator packages.
PTERM DOCS
SPELL WRITER, T.I.: allows creation and usage of vocabulary.
TE 3
TE I200 TERMINAL-AIDE, Poenix Software.
TERMINAL EMULATORS: quick references.
TERMINAL EMULATOR II,T.I.
TERMINAL EMULATOR X, Steven R. Sostrom.
TEXT-TO-SPEECH (ENGLISH), T.I.: makes the computer to speak in English.

DRAWING

DRAW-A-BIT, Data Force Inc. and Dominic J. Melfi, Hinsdale, Il.: incorporates keyboard access to bit mapping graphic mode.
DRAW'N PLOT, Quality 99 Software, incorporates HI-Resolution graphics for XBasic.
GRAPHICS CODE GENERATOR, Software Carousel: produces graphics.
GRAPHICS DESIGN INSTRUCTIONS V2.0, Dave Rose: creates pictures or saves existing XBasic/Basic picture screens.
GRAPHX, R.L. and C.P. Davis, Sydney, Australia, creates high resolution graphic screens.
J.P. DRAWING (V3.0), Jean-Pierre Morin, Ottawa: draws color graphics in TI-Forth without having prior knowledge of TI-Forth.
TI-ARTIST, Inscebot Inc., graphics generation program.

GAMES

MARKET SIMULATION, T.I.: allows two people to compete in a simulation of the market place.

PROGRAMMING AIDS AND ENHANCEMENTS

EXTENDED BASIC ENHANCEMENTS, RAG Software.
DISPLAY ENHANCEMENT PACKAGE, unknown: provides a 40 X 24 display format and other enhanced data.
MINI 99. DOC, unknown: manipulates Dis/Var 80 files and simulates RAM disk.
PROGRAM BACKUP ROUTINE, RAG Software: copies program from cassette to disk.
PROGRAM WRITER, The Softies: creates or edits Basic or XBasic programs in a text mode and reverts them back in a program mode.
PROGRAMMING AIDS I, T.I.: (incomplete).
PROGRAMMING AIDS III, T.I.
SCREEN/DUMP, Extended Software Co., reproduces any XBasic screen on paper by way of a printer.

SST EXPANDED BASIC COMPILER SYSTEM, SST Software Inc.: converts a basic program into a machine language program and stores it permanently on disk.
SST BASIC COMPILER SYSTEM, SST Software Inc.: condensed version of the above for cassettes.

PROGRAMMING LANGUAGES

FORTH - Manuals:

TI-FORTH MANUAL,T.I.: (incomplete)
TI-FORTH'S ASSEMBLY SOURCE LISTINGS, T.I.
WYCOVE FORTH MANUAL, Wycove Systems Ltd.

FORTH - Articles:

FORTH DIMENTIONS: magazine published by Forth Interest Group:
Vol. 4, No. 3,4,5,6
Vol. 5, No. 1,2
Vol. 7, No. 2
FURTHER WITH FORTH, Tom Freeman, MICROpendium Mag., Aug. 1985.

GRAPHICS PROGRAMMING LANGUAGE (GPL):

G.P.L. MANUAL, T.I.
GPL ASSEMBLER (V2.1), Michael Weiand, Elektronic Services.
GPL COMPILER AND DECOMPILER, (handwriting).

SUPER EXTENDED BASIC (SXB):

SXB MANUAL, J. and K.B. Software, Arlington, Va.
SXBrief NEWSLETTERS: issues from Jan. 1984, No. 1, up to and including Jan. 1985, No. 13.

WORD PROCESSORS:

COMPANION (V2.0), Intelpro, Montreal, Qu{.
FUTURA WORD PROCESSING MANUAL, Ehninger Associates, Texas.
TI-WRITER MANUAL, T.I.
TI-WRITER - Articles:
TI-Writer Help File, PRO-99er, Reading, Mass.
Taking Control of CTRL U, MICROpendium, Sept. 1985.
Taking Control of TI-Writer: using Transliteration, by R. Castelton.

RECORDS

DATA BASE 500/300, International 99/4 Users Group.
DATA BASE 99, Quality 99 Software, Washington, d.c.
DATAMAN, EASYWARE, Ottawa, Ont.: develops a check register and journal entry system.
MAILING LIST,T.I.: includes six programs for creating and maintaining a computer based filing system.

UTILITIES

GENERAL:

ASSEMBLER, UTILITIES AND TEXT PROCESSORS, RAG Software.
DIAGNOSTIC PROGRAMS, T.I.: test different components of the computer system
DM 1000.
UTILITIES I, Republic Software, Washington, D.C.: provides a dissassembler, a point-plotting and screen dump routines, and speech utility.
UTILITY PROGRAMS, RAG Software.

COPIERS:

DISC COPY PROGRAM, J.P.Morin, Ottawa.
NIBBLER (V1.2), Tarik Isani, Starsoft.
TURBO COPY, Know-Ware.

DISSASSEMBLERS AND DEBUGGERS:

BUGOUT.
STARSOFT DISSASSEMBLER.
SUPER BUGGER (V3.1), Navarone.

FIXERS:

DISK FIXER (THE HIDDEN POWERS), Bill Gronos, Navarone: enhances Basic programs stored on disks.
DISK FIXER (1RST VERSION), Navarone.
DISK FIXER FOR THE TI 9974A, Michael Wilson, Navarone.
DISK REPAIR, unknown: repairs disks or recovers lost files.

ENTOMOLOGY CORNER

by **Tony McGovern**

I just received 3 articles from Tony McGovern in Australia along with the permission to republish them here. I enjoyed them immensely and feel confident that you will too. They are power packed with both technical and general information so obviously cry out for wider TI world dissemination. Enjoy! Bob Boone

ENTOMOLOGY CORNER No. 10

It was recently pointed out to me that a spider is not a bug, and that this column should be called Arachnid Corner or some such name. Well, I was conscious of the distinction from the start, but this series started out being about bugs, not written by bugs, so the name seemed entirely appropriate for the subject matter. Still does too. Long daylight savings evenings have been spent clearing out the jungle that had grown up during the preoccupation with programming Funnelweb. Lots of the little critters' holes out there where the Tradescantia grows -- over everything. No punishment is too cruel or unusual for the moron who introduced that noxious weed to the area. The same goes for privet too.

First I'll continue with the hardware review from last time. We have accumulated more experience with the Myarc 512K RAMdisk card and now are running a HORIZON RAMdisk as well, which arrived in from Bob Boone just after last month's article was written. That makes it a computer with over 700 Kbytes of RAM and 130 Kbytes of ROM that I'm using right now. That's right - my lil' old 99/4a. It could take 3 more Horizon cards for another 576 Kbytes without either physical or logical distress. I would happily have one more, but 3 more would be sheer excess.

Word is filtering in on the auxiliary power situation for the Myarc - the undocumented socket at the rear of the card. My summary of the San Diego experience is that unless you do it properly don't bother. Let's interpret that. Initial inspection showed the the external line coupled to the on-card regulator through a diode for reverse isolation. The obvious source of power is a plug-pack in a mains socket which remains switched on. This has the problem that there is very little filtering in such gadgets of rubbish on the mains - just look at all the extra components TI put into the PE-box for this purpose. I think the real problem is that there is almost no protection against mains dropouts, as there are only small capacitors in the plug-pack and in the card. The card regulator would provide some protection against spikes, but is helpless if the supply drops out. So you either have to use a better supply or float rechargeable batteries across the supply as one San Diego user has done with success so far. This news is encouraging in that it means that it isn't affected by the PE-box bus. Myarc advise that the correct power up/down cycle should be observed. These aren't CMOS RAMs so a isolated battery would be

good for only a short life without mains charging unless of substantial A/h capacity. Another solution to the short term mains drop-out problem would be a large capacitor, but I'm not sure what the rectifiers in a typical plugpack will handle and I wouldn't want to go squeezing more into the card itself.

Anyway we are not worrying too much about all that because we now have an Horizon card as well. How do they compare ? Installation is easy in either case if the card is the only one in the system. Only one Myarc card may be used, but several Horizons may be installed. If so, or if the Horizon is in addition to a Myarc card its address switches must be set. The circuit detail to note is that the Horizon uses CMOS memory. As news goes this is both good and bad. The good news is that the standby power requirements of these are so low that some on-card Ni-Cads are enough to retain memory without any worries about external supplies. The board can be removed, stored and replaced without losing its contents. (We know because our PE-Box self destructed (a shorted power rectifier diode) and the Horizon card contents were still there when replaced after repairs. Just don't remove it with PE-Box power on !!) The bad news is that they are considerably more expensive than dynamic RAMs of similar capacity. The Horizon card is limited to 180K (DSSD equivalent) by the physical size of the 8Kx8 RAMs. 32Kx8 are now available but are still expensive, and Dave Romer figures they will have to come down to $A12 or so to be viable in this application. They would certainly make the board less crowded, even if its present design limits it not much more than DSSD size.

Unlike the Myarc which bank switches the 32K memory expansion, the Horizon stays entirely within the confines of the assigned DSR space. It does this by bank switching the upper 2K of this space (>5800 - >6000) by CRU addressing. Since only 128 CRU bits are available for each DSR a little arithmetic gives the estimate above. On the Myarc scheme, 32K at a time, much larger sizes could in principle be handled, but it is much trickier to deal with from a programmer's point of view because it is switching the RAM in which the normal assembly programs reside.

The Horizon in this sense remains truer to the original TI concept of peripheral devices sharing a predefined address block. The Horizon DSR is also in CMOS RAM, occupying the lower 6K and some of the 2K blocks. This means that the programmer can alter the DSR or install new versions from disk , and complete source code and auxiliary programs are provided. A welcome contrast to the traditional TI approach which Myarc also follow. This is why I said 2 Horizons would be quite a thinkable prospect. Once you have one there is the temptation to experiment, but neither do you want to surrender the existing RAMdisk function. The card has DIP switches which allow the CRU base address to be set. The normal disk controller resides at CRU base >1100. The first address >1000 is normally vacant (I think TI used it for production test equipment according to the Technical Manual) and is usually taken by RAMdisks because it gives the quickest response. The Myarc device hogs this address, while the Horizon can be switched to any vacant CRU base. So ours is set at >1200.

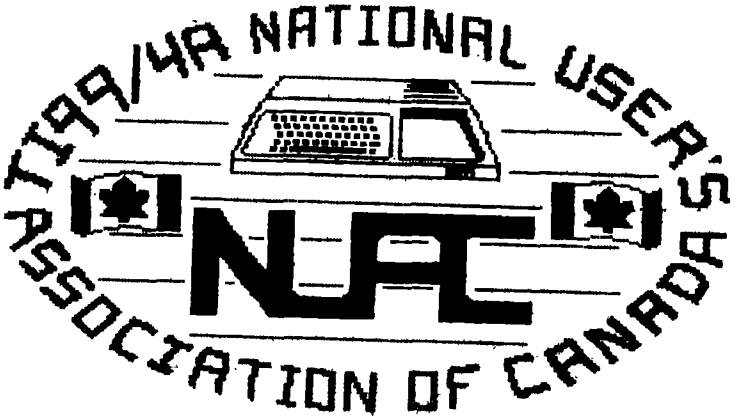
So how does it handle? Basically like a charm. It is a little slower than the Myarc because it uses VDP in the same way as the TI disk controller, but both are so much faster than physical disks that it hardly makes any difference. So far neither has lost any data because of a machine lock-up. I have identified only one problem so far and this has to be fixed in the programs reading from the card. This stems from the TI DSR system design which never envisaged that there could be more than one disk card in a system. As you recall it works, the DSR LiNKing process that is, by searching through the DSRs until it matches the device name being requested. Now we accept the limitation that if two devices call themselves DSK1. that the one earliest in the search path is the one that will always end up doing the work. The problem comes with routines not normally visible to the Basic programmer which of necessity have the same name for all disk cards, such as sector read or write. This means that sector reading routines unless specifically designed to try for a Horizon at higher CRUs currently terminate at the first disk controller in the system, whether or not they actually worked properly. The special routine used in the Horizon auxiliary programs works fully but is too lengthy to use in FUNNELWEB and assumes all sorts of internal details of the Horizon

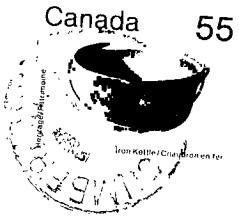
ROS. The current issue of FWB has routines that will find the Horizon cards in a system. Edgar Dohmann of the JSC UG in Texas has run into the same problem in developing Super-Forth, as TI-Forth makes heavy use of sector accessing.

Earlier comments made in the HV99 Newsletter version of this article were based on initial impressions which appear to have been too hasty. I'm not sure whether something was going wrong at the time or whether it was just the confusion of working everything out for the first time. Mea culpa and apologies.

Now these comments could equally well apply to the Myarc, but the designers of that had thought about and circumvented it in an entirely transparent fashion. I'm somewhat chagrined that we had the Myarc operating for a couple of weeks without realizing that there might have been a such a problem. I guess that's some sort of tribute. What happened was that as soon as the Horizon was installed at CRU base >1200, sector accessing routines like QD, SD and so forth just ignored it. A little detective work revealed the sector routine common name problem, and also that even physical disk sector access was ocurring at the CRU base >1000 for the Myarc card rather than at the disk controller CRU base of >1100. I haven't gone into it at all but I expect it is doing the same sort of thing as Will found last time for the print spooler function, namely going out into its own private 32K bank and driving the regular disk controller from there, returning all error codes correctly. This method is all right as far as it goes, but there is no way that the Myarc knows about any other disk emulators at higher CRU bases. It could of course search for them in the same way that FWB now does, but its DSR is in ROM so there is no way of making changes when it is found to be inadequate for purposes beyond those it was designed for. The Myarc does appear so far to do correctly everything it was intended to do, but its designers never allowed for more RAMdisk cards in the system. A shade arrogant perhaps, but no program can ever take care of every eventuality.

The signals we get on the new Myarc computer continue to be mixed. News from Ottawa dated a couple of months ago was that costs had been cut by redesign and the operating system was bug free. Initial production run was to be for 2300 with 1000 sold already. The Nov 86 Ottawa Newsletter says one was received there, but without any operating system as yet. The most recent letter from the US said it was still not out, and that word was that the DOS was rather skimpy with some big drawbacks, details unsperified. Look how long it took for software to appear that used the 99/4a to anywhere near its potential. You might say that was because of TI's self defeating secretiveness, but if you find consolation in that thought remember that Myarc seem to be just as secretive about details as TI ever were. That doesn't augur well for a machine that by its nature will sell only in limited numbers to the existing 99/4a user base. I certainly don't think we are interested in the machine at all if its architecture is not completely open. And if only the same proportion of Myarc owners respond to "fairware" as ever did of 99/4a full system owners, then there will be very little incentive to add to the curiosity. A liking for TI 9900 family assembly code can stretch only so far when it comes to spending real money on a successor machine.





FROM

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