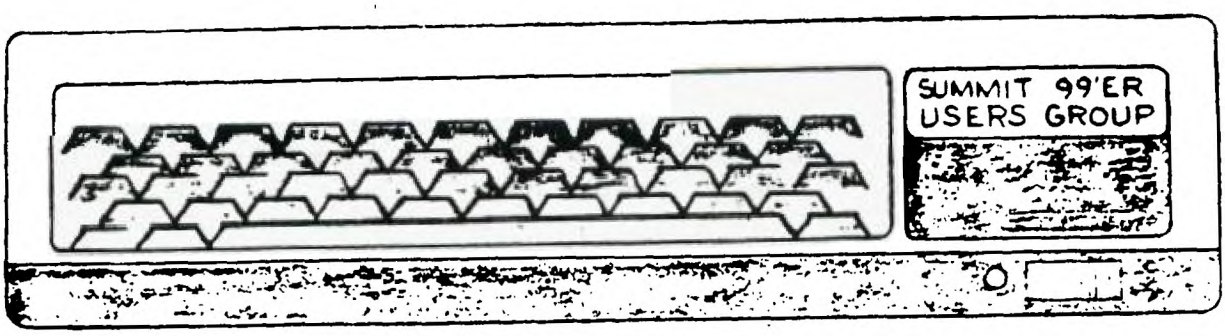

APRIL 1985 Vol. 3 No. 4

This month's meeting will be held on Thursday, April 18 at Cuyahoga Falls High School at the corner of Fourth and Stow Streets in Room 413 - Physic's Lab. The May meeting will be held on May 16. Please remember to sign in at the meeting.

This month's program will be on the Gemini printer. Rich will teach a Basic class so be sure to bring your Blue book.

We are scheduling programs three months in advance. The May program will be on How a TI Works by Rich Williams and the June program will be on Flow Charts and Diagraming Programs by Dan Fedak and Ian Mariano.

The library has some tapes that are past due and Bert would like to see them returned to the library. The following members have tapes still out: Hambrick, Milford, Kunos and Sedita. Please see Bert at the meeting.

This year's membership cards are blue and will be passed out at the April meeting. These new cards will have no membership numbers.

The deadline for the May newsletter is April 27.

LIST OF BOARD MEMBERS AND THEIR HOME PHONE NUMBERS

President, Norm Sorkin	678-2360
Vice President,	
Librarian, Bert Haase	753-7846
V.P. Program, John Tuesday	644-2616
Secretary, Vicky Chrisman	784-0943
Treasurer, Betty Duncan	633-5217
Educational Director, Rich Williams	626-2423
Editor, Kathi Anderson	923-7530

AN OTHER WAY

The last couple of months we have read articles in other news letters telling us how to change the out put of T.I. Writer to PIO. using the disk fixer etc. to make the changes.

I don't have Navarones disk fixer, but I do have a very good utility called DISK SURGEON 99. Distributed by Amerisoft International

Using their idea and my Surgeon I set out to change the printer default of my TI Writer to PIO.

I started by using the search option of the utility. Search allows you to put in the string that you want to change or repair. In this case RS232.BA=1200.LF. The utility showed me that it was on sectors 007E 0047 0050 .After finding them all I had to do was use my arrow key to get to the part of the sector that I wanted to change then type in the hexidecimal numbers to give me the equivalent of PIO. After the panic subsided I found the answer in a couple of places. One in the back of the books that I got with the computer, secondly in the back of the TI Writer manual .

In this case with the cursor setting on the R in RS232 I typed in 50 to change the R to P then 49 to change the S to I 4F for O 1B for . 4C for L and 47 for F then all I had to type was 20 ten times to replace the rest of the string with 0's.

At this point it might be best to explain more about how to use the Surgeon 99. You load it in Extended Basic -or- Editor Assembler.

I use Extended Basic. Just turn it on and wait for the menu. You will notice that you can Read a sector (to the screen) Write a sector (back to disk) Print a sector (to printer) Search a sector (look at all sectors for a particular string)

When you read a sector you only see half, as the screen only shows 40 col. You must hit enter to see the second half.

If you Print a sector you get all 80 col.

The way I made the changes was to read in one of the sectors that needed changes ie. 007E . I made the changes. The information is held in the buffer, that you may go back to the menu screen and pick the write option to sve the changes to disk. As in this example on sector 007E. I did the same to the other two sectors and I was done in just about 5 minutes.

If anyone in the group would like to have their TI Writer default option changed, I will be glad to make the changes for you. Just bring your working copy to the next meeting.

As unlikely as it may seem if you didn't get the Writer updates the came out this summer I'll but them on at the same time.

Norm Sorkin April 85

As you may have noticed the last couple of months there hasn't been a Presidents Corner. I thought that I'd give you a break from my opinions and soap box. Look out next month . You may get an article and my opinions too !

I would like to hear your opinions too. If your too shy to put them in print, how about telling them to me and I'll put them to print and if their good I'll even take credit for them. Or you can write them out and submit them anonymously.

Thank you and see you at the next meeting ... NORM

This article comes to us from Super 99 Monthly, 10/84 issue.

USING "Double FORTH"

STANDARD: 1A 2C 4B 5A 6B 7A 9A

TI FORTH is a very flexible language. One common alteration to standard TI FORTH is to change it to recognize screens on disk side 2 and/or disk 2. If you have already done this, we have some tips for you. If you haven't, we'll try to get to how to double FORTH next month.

The editors from -EDITOR and -64SUPPORT cannot be loaded at the same time. If you'd like to be able to switch from one editor to the other quickly, we have a solution. Be sure you are using disks that don't contain programs on screen 7 or any screen above 90 and with the only changes to screen 3 being for DISK-HI, DISK-LO, and DISK-SIZE.

What we are going to do is set up your own personal rapid load, a binary image load created by BSAVE and loaded with BLOAD, in a manner that will allow you to quickly change editors.

Key -EDITOR and 7 EDIT. On screen 7 list the menu options that you often use. Try to arrange these from the most used to the least used so that you may be able to FORGET the ones at the bottom of the list later. The last two options should be -BSAVE and -EDITOR. Here is one possibility:

```
-GRAPH -DUMP -VDPMODES -COPY
-PRINT -BSAVE -EDITOR
```

Do a <FCTN> <9> to return to immediate mode and key the following:

```
FLUSH
COLD
7 LOAD
' TASK 91 BSAVE
```

Find the first blank screen above 91. Our example would place the blank screen at 101. Repeat the above steps using -64SUPPORT in place of -EDITOR and 101 or your first blank screen in place of 91. Key 3 EDIT. Toward the bottom of screen 3, you should key 91 BLOAD (101 BLOAD), with the one in parentheses being your second BLOAD screen number.

To change editors, just edit screen 3 and reverse the parentheses to the other BLOAD and do a COLD. Your original disk is left essentially unchanged and you can easily check or update your BLOAD's later by looking at screen 7!

Beginning FORTH: XBASIC To FORTH

STANDARD: 1A 2C 4B 5A 6B 7A 9A

Putting definitions onto disk screens is really not much different from using immediate mode. We have received a number of requests for information on converting XBASIC to FORTH and simulating XBASIC's numeric ACCEPT. Key -SYNONYMS -FLOAT -EDITOR. Insert your FORTH program diskette and find a blank screen (if you haven't done anything with the disk since last month, all screens except 4 and 5 should be available). We'll use screen 10 as an example. Key 10 CLEAR and 10 EDIT. FORTH is not very picky about your format, but you'll find it best to lay out a screen neatly. Here is the FORTH (XBASIC?) program:

```
 0 BASE->R  DECIMAL
 1 0 VARIABLE AMOUNT  ( LET AMOUNT=0 )
 2 : CALL_CLEAR     CLS ;
 3 : ACCEPT_SIZE4_AMOUNT
 4                  PAD 1+ 4 EXPECT VAL
 5                  FAC->S AMOUNT ! ;
 6 : AT             GOTOXY ;
 7 : DISPLAYAMOUNT  AMOUNT ? ;
 8 : RUN            CALL_CLEAR 0 0 AT
 9                  ACCEPT_SIZE4_AMOUNT
10                  0 5 AT
11                  DISPLAYAMOUNT ;
12 R->BASE
```

Key <FCTN> <9>, FLUSH, 10 LOAD, RUN.

This article comes to us from Chattanooga Users Group, 2/85 issue.

VARI-PRINT :PIO PRINTER PROGRAM

Here is an EXTENDED BASIC program I wrote out of necessity. I found that I needed a way to print the programs for this newsletter in 33 column format to match the rest of the newsletter. There were several ways to accomplish this; like writing a fixed length new file to disk using the LINPUT command from extended basic; or copying the program to disk using the LIST "DSK1.NAME" command which formats the program in DIS/VARIABLE 80 format allowing you to set margins with the TI Writer commands ; or, the option I chose, write a short printer control program.

Although using the TI Writer option is attractive since it allows you to easily edit or correct programming errors on a long program, it requires that you use disk space to save the program again under a different filename in display format. For me that was too much trouble since I have a hard enough time thinking up new file names and keeping up with the files that I already have. The program is self explanatory, allows you to vary the print width, and works with any parrallel printer with Olivetti compatible control codes.

```
100 ! VARIABLE WIDTH COLUMN PARAL
LEL PRINTER PROGRAM; LSBRYANT; CH
ATTANOOGA USER
S GROUP; MARCH 1,1985
110 CALL CLEAR
120 DISPLAY AT(1,3):"THIS PROGRAM
 ALLOWS VARIABLE WIDTH PRINT FROM
 YOUR OLIVETTI
 COMPATIBLE PIO PRINTER. ENTER DE
SIRED PRINT WIDTH IN FORM:"
130 DISPLAY AT(10,3):"FIRST DIGIT
 = W1" :: DISPLAY AT(12,3):"SECON
D DIGIT = W2"
140 DISPLAY AT(14,3):"FOR EXAMPLE
; FOR A 42 COLUMN PRINT WIDTH W1=
4,W2=2"
150 DISPLAY AT(18,10):"W1=" :: AC
CEPT AT(18,14)SIZE(1)BEEP VALIDAT
E(DIGIT):W1
160 DISPLAY AT(20,10):"W2=" :: AC
CEPT AT(20,14)SIZE(1)BEEP VALIDAT
E(DIGIT):W2
170 OPEN #1:"PIO"
180 PRINT #1:CHR$(27)&CHR$(80)&CH
R$(48+W1)&CHR$(48+W2)&CHR$(27)&CH
R$(90)
```

A REVIEW OF HITCHIKER'S GUIDE TO THE GALAXY

by Ian Mariano

```
PSUEDO-GRAPH:
              problem-OK-good-OH ACH!-terribly fun-beat's Vogon's
PERFORMANCE:@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
GRAPHICS   :@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@...
CONTAINER  :@@@@@@@@@@@@@@@@@@@
KNOWLEDGE  :limited
TEA        :none, the Earth was destroyed
EASE OF USE:@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
```

Sit down! Grab a towel! Relax! You are about to be overcome by a review of Infocom's hilarious adventure based on a trilogy of four books. You portray Arthur Dent, englishman, tea lover, and one of the few Earthlings still alive. The performance of this high packed galactig-gig-gic-tic adventure is quite good. Admirable are the high-resolution TEXT graphics that look even better than a Vogon or even a Vogon starship! As you probably have read four or less of Douglas Adams' books, you will see some familiar beings: Ford Prefect, Zaphod Breblebrox, and Marvin to name but three. A good thing about this adventure is the guide, the Hitchiker's Guide.

This Mege-Publication[tm] of Ursa Beta Minor has entries about almost anything or anyone possible (or impossible), large (or small), good (or evil), and (or) true (or false). Also included in the container of this adventure is some fluff, senso-matic peril sunglasses, a button with the words DON'T PANIC written in big freindly lettering, and an instruction book. So if you are happening on a wild and crazy moon far off from your real home, DON'T PANIC, and play THE HITCHIKER'S GUIDE TO THE GALAXY, today! Er-tomorrow! Yesterday? Whatever time period you happen to be!

This article comes to us from Atlanta's A9CUG Call Newsletter 2/85 issue.

Mickey Mouse

Free Program: by Ed York

The program listed below was written by Cin-day User Group member Dave Rose. The program does a nice drawing of the famous cartoon character known world wide as "Mickey Mouse". The picture, also shown, was created using the very fast assembly language screen dump called "SCREEN DUMP". "SCREEN DUMP" is available from Bright Micro Komputers.

```
100 REM MICKEY MOUSE
110 REM
120 REM WRITTEN BY:
130 REM
140 REM DAVE ROSE
150 REM
160 REM CIN-DAY USER GROUP
170 REM
180 CALL CLEAR
190 CALL SCREEN(16)
200 FOR A=1 TO 14
210 CALL COLOR(A,2,1)
220 NEXT A
230 FOR B=35 TO 138
240 READ A$
250 CALL CHAR(B,A$)
260 NEXT B
270 RESTORE 600
280 FOR C=2 TO 13
290 FOR D=13 TO 19
300 READ E
310 CALL HCHAR(C,D,E)
320 NEXT D
330 NEXT C
340 FOR F=18 TO 20
350 FOR G=6 TO 26
360 READ H
370 CALL HCHAR(F,G,H)
380 NEXT G
390 NEXT F
400 CALL KEY(0,I,J)
410 IF J=0 THEN 400
420 CALL CLEAR
430 END
440 DATA 0000000000000001,00
00000073F7FFF,0000000080F0F
8FC,0000000000010303,0007FF
FFFFFFFFF,00C0F0FCFEFEFFFF
450 DATA 0303070707070707,FF
FFFFFFFFFFFFF,FEFFFFFFFFFFF
FFE,0000000071F3FFF,0303030
3E1FFE3C1,FFFFFFFFFFFEFCF8
460 DATA 07030301,FFFFFFF7F
1F,FFFFFFFECE1C1C3C,C3811820
200E112,8C928200001C2281,FF7
738381C1C1E1E,F0C
470 DATA 3C3C3E3E3F3F301,202
026272728001,011939391100FB
FC,1E3E3E3E41,0000000008040
40,2020202110100807
480 DATA 0141814040201 00F,FC
FCFBF0000104FC,4020508182041
86,40408,0000000103070F0F,00
0FFFFFFFE7EFD
490 DATA C2F1FBFEFFFFFFFF,24
09F307BFFFFFF,8000008080C0C
0E,0F0F060404080808,80003878
787787161,1F070060F0F0F0F
500 DATA FFFFFF7B3B131F0F,E0
E0F0F0FBFBFCFC,0808080804040
404,0101,F0E0C,0F0F0F1F1C101
01,F0E0E08,0808080403
510 DATA 0010080402EF1F0F,00
00000000FF7FBF,1010080808 30C
EC1,0000000000000E,00000000
001F608,0703010100C03C03
520 DATA BFDFDFEFEF77B71B,C0
C0E0E0E0F0FBFC,1F,00F8060101
010638,000101010101
530 DATA 8000000000008040,00
0C020101,1F0B0B0C0A894804,FB
FBF0000010204,F01E0201408,0
00000C030080404,201B0403
540 DATA 000000807F,040A1960
8,081000C0201B0601,000000000
0003FC,0404040810608,FCFCFC
FC30383B3C,0303030300010103
550 DATA F0F0F0F0C0C0C0C0,30
787B300000007,00000000000000
3E,1C1C1C0404040404,00000000
000000FB,000000000000001F
560 DATA 000000000000007C,34
363333331 31FCFC,02060C0C9B98F
363,C0C0C0C0C0C0F0F0,7070101
01010107C,7F7F41404040417F
570 DATA 0404040507040 41F,FB
FB6080406030 7C,7F7F41417E404
17F,1F1F040402020101,7C7C101
0202040C,FCFC,6303,F0F0
580 DATA 7C7C,7F3E,1F1F,0000
0000000303,8080808080E0E0E
0,000000000000001C,000000000
000007,7F7F41414141417F
590 DATA 1C1C0808080808 0F,71
712121202021F9,FCFC0400F8040
4FC,0F07,F9B8,FCF8
600 DATA 35,36,37,32,38,39,4
0,41,42,43,44,45,42,46,47,48
,49,50,51,52,53
610 DATA 32,32,54,55,56,57,5
8,32,32,59,60,61,62,63,32,64
,65,66,67,68,32
620 DATA 32,69,70,71,72,73,3
2,32,74,75,76,77,78,32,32,79
,80,81,82,83,32
630 DATA 32,84,85,86,87,88,8
9,90,91,92,93,94,95,96,32,97
,98,99,100,101,102
640 DATA 103,104,105,106,107
,108,109,107,110,111,32,32,3
2,103,104,105,107,130,131,10
9,107
650 DATA 112,113,114,115,116
,117,118,119,120,121,32,32,3
2,112,113,114,132,133,134,13
5,119
660 DATA 122,123,124,125,126
,127,125,126,128,129,32,32,3
2,122,123,124,126,136,137,13
8,126
```

TIPS FROM THE TIGERCUB

#21

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Columbus, OH 43213

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The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for cassette, packing and postage, or $3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

I thought that my 28-Column Converter, as published in Tips #18, was finally foolproof, but someone found a way to print a program incorrectly with it!

I'm sure you know that characters 127-143, and on up to 159 in Basic, can be redefined and used in graphics. You probably also know that these redefined characters can be put into PRINT or DISPLAY AT statements, by holding down the CTRL key as you type them. If you load a program containing such redefined characters and LIST it, they will appear as blanks. If you RUN the program, so that they are redefined by the CALL CHAR statements, and then LIST it again, they will show up in their redefined form - but if you print out the program on your printer, they will still appear as blanks. So, before you publish a program, it's a good idea to RUN it and LIST it, and look for any of those gremlins.

If you do want to publish such a program, this fix will take care of it by underlining all characters that must be typed with CTRL down (except that lower case v is typed with FCTN down). It's slow, so only use it when you need to.

```
190 IF Q$="E" THEN 195 :: PR
INT #2:".TL 126;94;" :: PRIN
T #2:".TL 123;64;" :: PRINT
#2:".TL 125;38;" :: PRINT #2
:".TL 124;42;" :: PRINT #2:"
.TL 92;46;" :: PRINT #2:".NF
"
195 PRINT "Does the program
contain":"redefined characte
rs above":"ASCII 126? (Y/N)"
196 ACCEPT AT(24,1)VALIDATE(
"YN"):Q$
282 IF Q$="N" THEN 290
283 FOR J=1 TO LEN(L$)
284 A=ASC(SEG$(L$,J,1)):: IF
 A<127 THEN L2$=L2$&CHR$(A)::
 GOTO 288
285 IF A=127 THEN A=118 ELSE
 IF A=128 THEN A=44 ELSE IF
A=155 THEN A=46 ELSE IF A=15
6 THEN A=59 ELSE IF A=157 TH
EN A=61 ELSE IF A=158 THEN A
=56 ELSE IF A=159 THEN A=57
ELSE A=A-64
286 L2$=L2$&CHR$(27)&CHR$(45
)&CHR$(1)&CHR$(A)&CHR$(27)&C
HR$(45)&CHR$(0)
288 NEXT J :: L$=L2$ :: L2$=
""
```

That should do it, unless the number of added control characters stretches the line beyond 80 characters. Such is the case with the following, which I had to type in manually (It also contains low ASCII characters which the printer misinterprets as controls).

TIGERCUB CHALLENGE

```
100!The Unprintable Unkeyabl
e Program!
110!To shuffle the numbers 1
 to 255 into a random sequen
ce without duplication
120!The strings contain the
ASCII characters 1 to 127 an
d 128 to 255
130!Most of the ASCII charac
ters below 32 or above 159 c
annot be input from the keyb
oard
140!So how was this program
 programmed?
150 M$="
        !""#$%&'()*+,-./0
123456789:;<=>?@ABCDEFGHIJKL
MNOPQRSTUVWXYZ[\]^_`abcdefgh
ijklmnopqrstuvwxyz{|}~"
160 M2$="




170 M$=M$&M2$
180 L=LEN(M$)!! RANDOMIZE ::
 X=INT(L*RND+1)!! N=ASC(SEG$
(M$,X,1))!! M$=SEG$(M$,1,X-1
)&SEG$(M$,X+1,LEN(M$))
190 PRINT N;!! IF LEN(M$)=0
THEN STOP ELSE 130
```

GROCERY SHOPPING LIST

Are you desperate for some way to convince your wife that your computer and PEB and printer and all are not just a too-expensive plaything? Maybe this will do the job.

The first thing to do is to prepare a file of the grocery items she might want to buy. It will be especially useful if you can list the items in the sequence in which she will come to them in the aisles of her favorite store. This little program will set up the file. Type END when you are finished.

```
100 OPEN #1:"DSK1.BUYLIST",O
UTPUT
110 INPUT A$
120 IF A$="END" THEN 150
130 PRINT #1:A$
140 GOTO 110
150 CLOSE #1
```

If you have TI-Writer, you can also use that to create the file, edit it and add to it - but BE SURE to delete all the carriage return symbols and any blank lines at the end. Save it under the filename BUYLIST.

Next, this program will hopefully get your wife to actually sit down at the keyboard and try out your computer. It will go through the list and ask if she wants to buy. If she types in any quantity other than 0, it will output the item name and quantity to the printer. At the end, she will be given the opportunity to add any other items.

```
100 CALL CLEAR
110 OPEN #1:"DSK1.BUYLIST",I
NPUT
120 OPEN #2:"PIO"
130 LINPUT #1:A$
140 IF EOF(1)THEN 210
```

```
150 DISPLAY AT(12,1):A$
160 DISPLAY AT(12,LEN(A$)+2)
:"0"
170 ACCEPT AT(12,LEN(A$)+2)S
IZE(-4):Q
180 IF Q=0 THEN 130
190 PRINT #2:A$&" "&STR$(Q)&
" "&CHR$(175)
200 GOTO 130
210 DISPLAY AT(12,1):"ADDITI
ONAL? Y"
220 ACCEPT AT(12,13)VALIDATE
("YN")SIZE(-1):U$
230 IF U$="N" THEN 300
240 DISPLAY AT(12,1):"ITEM?"
250 ACCEPT AT(12,7):A$
260 DISPLAY AT(14,1):"QUANTI
TY?"
270 ACCEPT AT(14,11):Q
280 PRINT #2:A$&" "&STR$(Q)&
" "&CHR$(175)
290 GOTO 210
300 CLOSE #1
310 CLOSE #2
320 END
```

The list will be in enlarged print, so that no one in the store will see her putting on her reading spectacles. And after each item and quantity is a blank square to be checked off when she picks up the item.

You might also point out that she could use the checkoff blocks to mark the items she has coupons for, and she could jot down prices on it to be sure she isn't cheated at the checkout counter, or to shop for better bargains elsewhere.

The program is set up for the Gemini printer. You may need to change the "PIO" to the name of your printer, and other printers may not have the open block character CHR$(175) available.

Of course, you can also use this program for more important things, such as shopping for computer software....!

If you type the period key while holding down the CTRL key, the printer interprets the resulting blank space as CHR$(27), even though the computer knows it is really CHR$(155). Since CHR$(27) is the ESC or "escape code" which tells the printer to interpret the following characters as function command codes, you can for instance set up the printer for emphasized double-struck double-width underlined italics by OPEN #1:"PIO" :: PRINT #1:" E 6 W"&CHR$(1)&" -"&CHR$(1)&" 4 ", using CTRL . in the blanks. I have been overlooking another very useful feature, the skip-over perforation. PRINT #1:" N"&CHR$(6), again with CTRL . in the blank, causes the paper to advance to the top of the next page when there are only 6 lines left at the bottom of the page (providing that you started at the top, of course). This makes it possible to LIST "PIO" a program, or PF PIO from TI-Writer Editor, without printing right across the perforations.

Ghosts! Did you ever read data from a file, and find that you were getting data from a file that was no longer on the disk? It can happen, at least if you are reading from a RELATIVE file in the UPDATE mode. When you delete a file, only its address is actually deleted - the data remains on the disk until it is overwritten by a new file. If the new file is shorter than the old one, and you try to read beyond the end of the file, you may awaken the ghost!

Are you making use of those special characters that are available on your Gemini printer? You didn't know about them? Try this.

```
100 OPEN #1:"PIO" :: 110
PRINT #1:" (hold down the
CTRL key and type 1234567/
and then hold down the FCTN
key and type (>/0;BHJKLMNQY
) ". RUN . Surprised? Some
of those can be very
useful, such as the true
division sign that you get
with FCTN H. There are many
more of these that you can
access by CHR$. For a
complete list of them and
their CHR$ codes, run this -
100 OPEN #1:"PIO" :: FOR
CH=160 TO 254 :: PRINT
#1:CH;CHR$(CH);:: NEXT CH ::
CLOSE #1. Unfortunately,
these can't be used out of
TI-Writer.
```

Here's a handy little routine to practice up on your typing.

```
100 CALL CLEAR
110 CALL CHAR(94,"3C4299A1A1
99423C")
120 CALL SCREEN(5)
130 CALL VCHAR(1,31,1,96)
140 CALL COLOR(1,8,16)
150 FOR SET=2 TO 12
160 CALL COLOR(SET,2,16)
170 NEXT SET
180 PRINT TAB(10);"TIGERCUB"
;:TAB(8);"TOUCH-TYPING";:T
AB(11);"TUTOR";:TAB(9);" T
igercub Software";:
190 REM by Jim Peterson
200 PRINT " Watch the scree
n, not the";" keyboard!";:"
 Letters and numbers will"
210 PRINT " appear on the sc
reen grid";" in position cor
responding";" to their keybo
ard position.";:" Type the
m and they will"
220 PRINT " disappear.";:::
" Press any key"
230 CALL KEY(0,K,ST)
240 IF ST=0 THEN 230
250 CALL CLEAR
260 CALL CHAR(32,"FFB0808080
808080")
270 CALL VCHAR(1,30,1,192)
280 CALL HCHAR(14,1,1,384)
290 CALL VCHAR(1,4,1,14):: C
ALL VCHAR(5,6,1,11):: CALL V
CHAR(8,7,1,6):: CALL VCHAR(1
1,8,1,3):: CALL VCHAR(8,29,1
,6)
300 CALL VCHAR(11,28,1,3)
310 CALL CHAR(48,"003A444C54
6444B8")
320 KEY$="1234567890=QWERTYU
IOP/ASDFGHJKL;"&CHR$(13)&"ZX
CVBNM,."
330 RANDOMIZE
340 K=ABC(SEG$(KEY$,INT(42*R
ND+1),1))
350 GOSUB 370
360 GOTO 420
370 X=POS(KEY$,CHR$(K),1)
380 Y=ABS(X>11)+ABS(X>22)+AB
S(X>33)+1
390 R=Y*3
400 C=((X-ABS(Y>1)*(Y-1)*11)
*2)+4+Y
410 RETURN
420 CALL HCHAR(R,C,K)
430 CALL KEY(3,K,ST)
440 IF ST=0 THEN 430
450 GOSUB 370
460 CALL GCHAR(R,C,G)
470 IF G<>32 THEN 500
480 CALL SOUND(-100,110,0,-4
,0)
490 GOTO 340
500 CALL HCHAR(R,C,32)
510 CALL SOUND(-100,1000,0,1
005,0)
520 GOTO 340
```

Here's one for the kids to have fun with. I'm sorry I lost track of who published it.

```
100 CALL INIT :: FOR J=1 TO
100 :: PRINT J :: FOR P=1000
 TO 1 STEP -J :: CALL LOAD(-
31456,P):: NEXT P :: NEXT J
```

MEMORY FULL,

Jim Peterson

TIPS FROM THE TIGERCUB

#20

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

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The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for casette, packing and postage, or $3.00 for diskette, PPM) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Come on now, folks, don't you support your local schools? And don't you support those who support you? There are thousands of schools which have TI-99/4A computers in the classroom, usually without disk drive and without Extended Basic. They could use some educational programs in Basic on casette. They could probably use some of the public domain software in your library. Maybe they could use some of the educational programs I sell for just $3 (and I authorize schools to copy them for use within the school). There is probably such a school in your area - is your group supporting it? In the last Tips, I asked the members of 101 users groups to give me the addresses of schools that had TIs, so I could send them a free catalog. How many addresses did I get? Zero to the power of zero times zero!

More on the pestiferous asterisk bug in TI-Writer. Dr. Guy-Stefan Romano has confirmed and explained it. If you are printing out of the Formatter mode and your text contains an asterisk followed by two or more numeric digits - the asterisk and two digits will disappear! For instance, A*256 becomes A6, and I've noticed that A6 in programs published in several newsletters recently.

The TI-Writer program misinterprets the asterisk and two digits as an instruction to input data from a "value file" (see Alternate Input on p. 111 of the manual).

The solution to this bug is to type two asterisks followed by two dummy digits, then the actual digits. For instance, instead of A*256 type A**25256. Trouble is, the bug usually shows up in a program which has been LISTed to disk and then MERGEd into TI-Writer, and is usually not noticed. The solution? Run the program through my 28-Column Converter (see Tips #18!).

Dr. Romano informs me that there is an even worse bug in the Transliterate command coding, erratic and sometimes destructive. It is triggered by certain sequences of characters, but these have not been documented.

Dr. Romano says that he does not use transliteration.

I would suggest that you also avoid the use of the & and @. The & will only underline a single word, unless you tie words together with the ^ sign. If you tie words together, the Fill and Adjust will leave gaping blanks in your lines and if you tie too many together the line will extend beyond the right margin! Also, the underlining is a broken line. It is better to use the escape codes CTRL U, FCTN R, CTRL U, SHIFT -,CTRL U, SHIFT A, CTRL U, which will give a solid underline until you turn it off with CTRL U, FCTN R, CTRL U, SHIFT -, CTRL U, SHIFT @, CTRL U.

The @ is handy to emphasize a single word, but if you want to double-strike a whole sentence or paragraph it is better to use the escape code CTRL U, FCTN R, CTRL U, SHIFT G, and turn it off again with CTRL U, FCTN R, CTRL U, SHIFT H.

The period bug is another killer - the Formatter thinks that any line which begins with a period is a formatter command, and deletes the whole line! If your text contains a decimal value such as .11 and the wraparound puts it at the beginning of a line, the line disappears! There are two ways around this - put a 0 in front of all your decimals, as 0.11, or transliterate all your periods.

In all, the TI-Writer formatter is a temperamental and unpredictable piece of software, prone to unwanted line feeds and unexpected paper-wasting form feeds. I like to use it to right-justify text back to the disk, but from then on I prefer to print it out of the editor mode, or out of my own program.

Designing downloadable characters for the Gemini printer (see page 115 of the manual) is a bit tricky because it is hard to visualize how the expanded pattern will appear in print. The following program will enable you to experiment with designs, dump them directly to the printer for viewing, then save them as a file. When you later dump this file into printer RAM for use, you must activate the download characters with the escape code - CHR$(27);CHR$(36);CHR$(1).

```
100 CALL CLEAR :: CALL SCREE
N(4):: CALL CHAR(128,"FF8181
818181818181FF",129,RPT$("F",16)
):: CALL COLOR(13,2,16)
110 FOR R=9 TO 15 :: CALL HC
HAR(R,11,128,9):: NEXT R
120 X=1 :: FOR R=9 TO 15 ::
DISPLAY AT(R,7)SIZE(2):STR$(
X):: X=X*2 :: NEXT R :: FOR
C=9 TO 17 :: DISPLAY AT(8,C)
SIZE(1):STR$(C-8):: NEXT C
130 DISPLAY AT(2,9):"TIGERCU
B'S" :: DISPLAY AT(4,1):"GEM
INI CHARACTER DOWNLOADER" !p
rogrammed by Jim Peterson fo
r the Public Domain
140 DISPLAY AT(17,1):" Move
cursor with W,E,R,S,D,":"X,
 and C keys. Toggle on":"and
 off with Q key. Press":"Ent
er when finished.": : :"Pres
```

```
s any key"
150 CALL KEY(0,K,ST):: IF ST
=0 THEN 150 :: CALL HCHAR(17
,1,32,224)
160 R=9 :: C=11 :: CH=128
170 CALL HCHAR(R,C,32):: CAL
L HCHAR(R,C,CH):: FOR D=1 TO
 10 :: NEXT D :: CALL KEY(3,
K,ST):: IF ST=0 THEN 170
180 ON POS("UWEKDCXIS"&CHR$(
13),CHR$(K),1)+1 GOTO 170,31
0,230,220,210,200,190,260,25
0,240,330
190 K=R+1
200 C=C+1 :: GOTO 270
210 C=C+1
220 R=R-1 :: GOTO 270
230 K=R-1
240 C=C-1 :: GOTO 270
250 C=C-1
260 R=R+1
270 R=R-(R(9)+(R)15):: C=C-(
C(11)+(C)19):: IF CH=128 THE
N 300 :: CALL GCHAR(R,C-1,GX
):: CALL GCHAR(R,C+1,GZ):: I
F (GX<>129)#(GZ<>129)THEN 30
0
280 DISPLAY AT(22,1):"You ca
n't have two in a row":"hori
zontally!" :: FOR D=1 TO 50
:: NEXT D :: DISPLAY AT(22,1
):" ":" "
290 CH=CH-1
300 CALL HCHAR(R,C,CH):: GOT
O 170
310 CH=CH+1+(CH=129)#2 :: IF
 CH=128 THEN 320 :: CALL GCH
AR(R,C-1,GX):: CALL GCHAR(R,
C+1,GZ):: IF (GX<>129)#(GZ<>
129)THEN 320 ELSE 280
320 CALL HCHAR(R,C,CH):: GOT
O 170
330 FOR C=11 TO 19 :: X=1 ::
 FOR R=9 TO 15 :: CALL GCHAR
(R,C,G)
340 IF G=129 THEN A=A+X
350 X=X#2 :: NEXT R
360 FOR J=1 TO LEN(STR$(A)):
: CALL VCHAR(15+J,C,ASC(SEG$
(STR$(A),J,1))):: NEXT J ::
M$=M$&CHR$(A):: A=0 :: NEXT
C :: A=0
370 DISPLAY AT(20,1):"Print?
 Y/N Y" :: ACCEPT AT(20,12)V
ALIDATE("YN")SIZE(-1):Q$ ::
IF Q$="N" THEN 470
380 IF F=1 THEN 390 :: F=1 :
: DISPLAY AT(20,1):"Printer
name?" :: ACCEPT AT(20,15):P
$ :: OPEN #1:P$
390 DISPLAY AT(20,1):"ASCII
to redefine?" :: ACCEPT AT(2
0,20)VALIDATE(DIGIT)SIZE(3):
CH
400 DISPLAY AT(20,1):"Descen
der (0 or 1)? 0" :: ACCEPT A
T(20,21)VALIDATE("01")SIZE(-
1):D$ :: D=VAL(D$)
410 M$=CHR$(27)&CHR$(42)&CHR
$(1)&CHR$(CH)&CHR$(D)&M$
420 PRINT #1:M$ :: PRINT #1:
CHR$(27);CHR$(36);CHR$(1);
430 PRINT #1:RPT$(CHR$(CH),7
2):: PRINT #1:CHR$(14);RPT$(
CHR$(CH),36)
440 DISPLAY AT(20,1):"Save (
Y/N)? Y" :: ACCEPT AT(20,13)
VALIDATE("YN")SIZE(-1):Z$ ::
 IF Q$="N" THEN 470
450 IF F3=1 THEN 460 :: F3=1
 :: DISPLAY AT(20,1):"Filena
me? DSK" :: ACCEPT AT(20,14)
:F$ :: OPEN #2:"DSK"&F$
460 PRINT #2:M$
470 M$="" :: DISPLAY AT(20,1
):"Another (Y/N)? Y" :: ACCE
PT AT(20,16)VALIDATE("YN")SI
ZE(-1):Q$ :: IF Q$="Y" THEN
100
480 CLOSE #1 :: CLOSE #2 ::
END
```

Micropendium ran a contest to improve on a brief ingenious organ program. The winner was Michael Christianson, who wrote a superb program. You'll have to buy the January issue of the magazine to get it (you should be suoscribing, anyhow!). I didn't enter the contest, of course, and my version is not nearly as good, but have fun -

```
90 CALL CLEAR
95 PRINT TAB(5):"MICROPENDIU
M ORGAN":::::::"Pl
ay bass with left hand":"o
n left side of keyboard.":
"melody on the right":::
100 REM - MICROPENDIUM ORGAN
 modified by Jim Peterson
110 OPTION BASE 0
120 DIM NOTE(20)
130 FOR A=0 TO 20
140 READ NOTE(A)
150 NEXT A
160 DATA 40000,220,247,262,2
94,330,349,392,440,494,523,5
87,659,698,784,880,988,1047,
1175,1319,1397
170 CALL KEY(1,K1,S)
180 CALL KEY(2,K2,S)
190 CALL SOUND(-1000,NOTE(K2
+1),0,NOTE(K2+1)#1.01,5,NOTE
(K1+1)#3.75-ABS(K1+1=0)#1100
00,30,-4,0+ABS(K1+1=0)#30)
200 GOTO 170
```

A sprite routine that doesn't do anything but look pretty. I call it Patches.

```
50 CALL CLEAR :: CALL SCREEN
(5)
100 A$=RPT$("AA55",16):: B$=
RPT$("F",64):: CALL MAGNIFY(
4):: RANDOMIZE
110 FOR CH=40 TO 136 STEP 8
:: CALL CHAR(CH,A$,CH+4,B$):
: NEXT CH
120 C=2 :: S=40 :: K=1 :: FO
R T=1 TO 24 STEP 2 :: COL=15
0#RND+50 :: CALL SPRITE(#T,S
,C,R,COL,#T+1,S+4,C+1,R,COL)
:: S=S+8 :: C=C+1 :: R=R+15
:: NEXT T
140 FOR T=1 TO 50 :: CALL CO
LOR(#INT(24#RND+1),INT(16#RN
D+1)):: NEXT T :: GOTO 120
```

This is one that I fancied up, based on a sprite routine written by a youngster named Andrew Sorenson, published in the Sydney Newsdigest from Australia.

```
100 ! WILL O' WISP
      by Jim Peterson
       based on
       Andrew Sorensen's
       sprite routine
110 CALL CLEAR :: CALL SCREE
N(2):: CR=48
120 FOR CH=48 TO 63 :: FOR L
=1 TO 4 :: RANDOMIZE :: X=IN
T(16#RND+1)#2-1 :: X$=SEG$("
0018243C425A667EB199A5BDC3DB
E7FF",X,2):: B$=B$&X$ :: C$=
X$&C$ :: NEXT L :: CALL CHAR
(CH,B$&C$):: B$,C$="" :: NEX
T CH
130 FOR N=1 TO 28 :: CALL SP
RITE(#N,CR,INT(14#RND+3),8#N
+20,120,5,0):: NEXT N :: IF
CR=64 THEN CR=48 :: T=T+1+(T
=2)#2 :: CALL MAGNIFY(T)
140 X=(INT(3#RND)-1)#4 :: Y=
(INT(3#RND)-1)#4
150 IF INT(10#RND+10)<>10 TH
EN 170
160 CR=CR+1 :: GOTO 130
170 FOR N=1 TO 28 :: CALL MO
TION(#N,-Y#20,X#20):: NEXT N
 :: GOTO 140
```

Here are a few more enhancements to my Menu Loader, published in Tips #15. Delete line 150 and add

```
101 OPTION BASE 1 :: DIM P$(
127):: ON WARNING NEXT :: G
OTO 110
105 @,A,A$,B,C,D$,FLAG,I,J,K
,KD,KK,N$,NN,P$,PG$(),Q$,S,S
T,T$(),TT,VT,X
CALL INIT :: CALL LOAD :: CA
LL LINK :: CALL PEEK :: CALL
 KEY :: CALL SCREEN :: CALL
COLOR :: CALL CLEAR :: CALL
VCHAR :: CALL SOUND :: !@P-
```

The pre-scan will speed up run time by a worthwhile amount. The warning default will prevent a screen scroll on an erroneous Enter.

When you're finished printing strip labels, cut off the strip BEHIND the platen and roll it FORWARD! You'll waste a few labels that way, but if you try to roll backwards and get a gummy label stuck in the works, you've got trouble!

MEMORY FULL

Jim Peterson

the Tigercub

SUMMIT 99ers USERS GROUP
P.O.Box 2201
Cuyahoga Falls, Ohio 44223

There is a new computer store in Fairlawn called COMPUTER BOOKSTORE at 2872 W. Market St., Fairlawn, Ohio (across from the Fairlawn Plaza in the Wyant Blvd.). They support all machine types and operating systems with introductory, specific applications and technical books. You can call them at (216) 867-7775.

I want to thank Ian and Norm for the articles in this month's newsletter. If you have an article you would like to see in the newsletter, feel free to write it. Hope to see you at the meeting.

Kathi Anderson, Editor