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Editor Jack Zawediuk 821-1043

LEHIGH 99'ER COMPUTER GROUP

Next meeting: 7:30 PM, Monday
March 21, 1988

Conference Room A-D, Second Floor
Sacred Heart Hospital
4th and Chew Streets
Allentown, Pennsylvania

PRESIDENT

Sorry I didn't get to write a column for the January newsletter. One of my other hobbies is amateur theatre and I have a part in the Shepherd Hills Dinner Theatre musical comedy "Promises, Promises". The heavy rehearsal schedule in December left me with no time for anything else. But now the show is running weekends through Feb 21 and I am getting caught up in my other activities. If you haven't heard about the show before and want to see it, you may have one last weekend when you read this.

Since I really didn't have too much for my column this month I thought I'd use the space to tell you about the show. But now back Lehigh 99'er news. John Rejician gave the club a demo last month on "Creative Filing System". This program was detailed in the last newsletter and was our disk of the month. I was the lucky winner of the Jan. drawing and now have the DON to test. It's a 3 SS/SD disk set for anyone who can use an extensive database program.

As promised we ordered 200 DS/DD disks in sleeves, repackaged them into lots of 10 and are selling at the meetings for \$3.50/pkg. By the end of the meeting there was only one pack left so we'll be re-ordering and should have a supply in time for the Feb. meeting.

Anyone still using T-I Writer should get Funnelweb Version 4.0 from our library, read or print the docs, and try using this WP program and DM1000 all from your XB cartridge. Be sure to pass it on to others who are using V3.5 as there are some nice improvements in this latest from "down under".

Ira Lieberman

ONE LINER

Here is a one line program in extended basic to speak the alphabet:

```
10 CALL SCREEN(2):: CALL MAGNIFY(2)::  
FOR X=65 TO 90 :: CALL SPRITE(IX-64,X  
,RND*12+3,X*4,240,0,-16):: CALL SAY  
(CHR$(X)):: NEXT X:: GOTO 10
```

SECRETARY'S CORNER

Our December meeting was held at Sacred Heart Hospital on Dec. 21. Considering the closeness to Christmas the attendance was very good. Two disk of the month were chanced off(Funnel Writer, ver.4.0 and a disk of Christmas Music. remember to be eligible to win the disk of the month you must be a paid up member and attend the meetings.

It is my sad task to report that Herb Taylor a very active member of our group passed away in December. A collection was taken at our meeting to be passed on to Herb's family. Herb you will be missed by the members of the Lehigh Valley '99ers.

At our December meeting disks were sold at the unbelievable price of \$3.50 for ten. Disk of the month were sold for three dollars a piece. These are two more good reasons to attend our meetings.

Many new disks come into our libraries monthly. The Utilities library has Ti-Keys available for lending, this neat little program allows you to have one key stroke for putting program commands in basic programs. The Home and Business library has a new disk of games and a disk to aid in the learning of French and German. If anyone out there knows how to translate Swedish maybe they will help in translating a newsletter we have that is written in Swedish.

ANN HALKO

New Software:

Coming up in the next few months, dust off your old MBX expansion system and get it ready for a new line of utility software! Testaments is proud to announce its MBX Tester, a program specifically designed to test all the functions of your MBX system. Also coming are drivers to allow software to be written for the MBX system. That's right, you will be able to use the power of your MBX system as you should have years ago. You may look forward to some pretty original software in the near future... and if you have any ideas please pass them along.

FUNNELWEB

Now that I have version 4.0 of funnelweb and have learned the ease of S-D (Show Directory) and other improvements, I have filed my T.I. Writer cartridge away in bottom drawer. My New Years Resolution is to send a donation to the author of all the Fairware Programs I use with any regularity. As for Funnelweb, I know it is one of the more popular programs and a lot of our group members are using it. Over the next few months we will be accepting donations and our group will send an international money order to the author, Tony McGovern in Australia. We can't tell you how much to donate, you need to evaluate, for yourself, how much you use this program compared to others. I'm quite sure you would pay a good buck for a program of this quality. I, for one, use Funnelweb loaders for my word processing (Funnelwriter, Formator), Modem program (Mass Transfer), Disk Manager (D.M.1000 or Myarc Diskmanager), Editor Assembler, a label program and others. I seldom put any other disk in my system anymore and I never have to change cartridges.

As for your donation, unless requested we won't include a list of names and amounts donated. We will just send a single amount donated from our users group. This way you need not feel you are donating too much or too little. Just PLEASE give something. Programs of this quality will not keep coming if you do not support the authors!

Editor

THE GRAMULATOR FOR THE TI-99/4A

Mark Van Coppenole has designed a direct equivalent for the popular but out-of-production Gram Kracker, but it is targeted to cost less.

To go from a prototype to a production model requires a substantial investment. Your letter or phone call will make this product a reality.

If you would consider purchasing this product call or write:

Mark Van Coppenole
52 Audobon Road
Haverhill, MA 01830
(617) 372-0336

TICOFF'88

East Coast Computer Show

Saturday, March 26, 1988
Roselle Park High School

All proceeds go to student scholarships.

20,000 sq. foot vendors' area
TI Lectures and workshops
Hardware/Software demonstrations

Admission Price \$5.00

(Free Disk of Utilities Software with Pre-paid Admission)

The student council will be operating a swap shop. Buy, sell or swap your used, extra and no longer wanted computer hardware and software. All software must be in original packaging. A 10% commission payable by the seller (tax deductible) goes to the scholarship fund.

Directions to Roselle Park High School

Going North or South on the Garden State Parkway, Exit #137. Turn left on to Westfield Avenue and go to the third traffic light. Turn left on to Locust Street. Proceed up Locust Street and turn left immediately after the railroad overpass. Roselle Park High School is two blocks in on West Webster Avenue. School phone number is (201) 241-4550.

For any additional information call the school at the above number, or the student council office at (201) 241-8902.

ERROR TRAPPING AFTER RUN

The following will NOT work:

```
100 ON ERROR 200
110 RUN "DSK1.TEST"
... program continues
...
200 PRINT "TEST PROGRAM NOT FOUND"
210 PRINT "INSERT DISK IN DRIVE ONE"
220 PRINT "AND PRESS ANY KEY"
230 CALL KEY(0,K,S)
IF S<1 THEN 230
240 RETURN 100
```

If you run this program with out a program called TEST in drive one, lines 200 thru 220 will print their message and then your program will fall in line 230 with 'SYNTAX ERROR IN 230'.

Why? As near as I can tell, when your TI executes the RUN part of RUN "DSK1.TEST", it clears memory including the variable table (think of it as "un-pre-scanning" the program). The program and the line number table, however, remain.

When your TI tries to execute line 230, it looks for the variable table to find out where the values for S and K are stored. Finding none, the CPU decides that an error condition exists and ends the program.

What to do? One way is to add a disk directory reading routine to find out if the desired program is on the disk. This will significantly increase the time it takes to load the program, however.

Another way is to use RUN. This will recreate the variable table. Since you can specify the line number where program execution starts, you can control what happens. This works:

```
200 RUN 210
210 PRINT "TEST PROGRAM NOT FOUND"
220 PRINT "INSERT DISK IN DRIVE ONE"
230 PRINT "AND PRESS ANY KEY"
```

```
240 CALL KEY(0,K,S) :
IF S<1 THEN 240
250 GOTO 100
```

What about pre-scan? Even though you specified that program execution started at line 210, the entire program is pre-scanned. You must be careful, however, to return to a point in the program that will assure that all necessary variable initialization is completed.

Enjoy.



CIN-DAY USER GROUP
416 Pinewood Avenue
Piqua, Ohio 45356

THE GENEVE IS HERE , FINALLY .

Part 4
by Jerry Boyer

Well, this month I've decided to talk about some of the quirks that I have come up against with my GENEVE 9640.

Some programs (not very many) don't work with the GENEVE as they do with the TI 99/4a. FunnelWriter or Funnelweb Utilities are some that lock up the GENEVE and you have to shut down and restart all over again. TI-ARTIST and GRAPH_X are two others that don't work. This might seem like a tragedy but it's not. The MY-WORD word processor and MY-ART drawing package for the GENEVE are far superior programs and a lot easier to use. The programs written for the TI that use special memory mapping are the ones that lock up the GENEVE. All the other programs as well as the modules saved to disks work extremely well, some are better in the GENEVE mode than in the TI mode, much faster.

There are some irritating quirks though. To load the MY-WORD program you first have to load the M-DOS. Then you have to load the GPL interpreter program. And then you are ready to load the MY-WORD loader program which then in turn loads the MY-WORD word processor. MYARC claims that in the future you'll be able to load MY-WORD directly from the M-DOS but not now. Also when you switch back from GPL mode to M-DOS mode you reverse the functions of the CAP LOCK and the NUM LOCK buttons. This can be very annoying. I have found that if you press the CONTROL and the SHIFT keys then press the CAP LOCK or the NUM LOCK keys you can correct the reversed situation. Another annoying feature is that if one of your programs lock up the GENEVE and you have to shut it off and start over again, you just messed up the CLOCK and DATE settings in your card. You then have to manually reset the correct date and time in the M-DOS mode. The first couple of times this happened I thought the battery in the card was defective but it wasn't. Another is the fact that as of now you can't change the color of the screen in the M-DOS mode. In MY-WORD you have 6 screen color choices. It would be nice to have others, especially if you have a composite monitor as I do. In the OO column mode the letters bleed over a little. Not bad just a little annoying at times.

Well after 5 months of enjoying all the benefits and speed of the GENEVE, the above is all that I can find fault with the GENEVE. Not too bad I think. The GENEVE is the best thing going right now to keep the TI system alive. You can run 99 percent of your TI programs and 100 percent of your TI modules plus you now have the power to run large programs like the larger PC computers run with much better graphics and speed. It's a giant step up for the TI computer. The GENEVE is well worth it's price.

STRINGS AND THINGS
by Jack Shattuck of the
Delaware Valley Users Gp.

Computers long have been seen as used for number crunching; a census-taker is credited with development of the first computer a century ago. But surveys time and again show the biggest use of home computers is for word processing, by more than 5 of 6 computer owners. This month we'll look at some of the functions dealing with variable character strings on the TI-99/4a.

In analyzing these functions, let's use the following: the larger string, A\$="COMPUTER", the smaller (sub)string, B\$="PUT", N=4, L=3 and X=1. The reason for these variables will be explained below. Here are the major functions with which you should be familiar:

ASC(A\$) = the ASCII code of the first character in the string. Using the above variables, ASC(A\$)=67.

CHR\$(67) = the reverse process, telling you what character letter equates to ASCII 67. Here CHR\$(67)="C".

DATA marks the program line containing string values, such as 100 DATA COMPUTER, PUT. These values are found by the command to READ A\$, B\$. Data will be read from the first or next available line that has DATA within it, unless RESTORE (line number) is used to indicate a different line to use for the DATA source. (On other occasions, you could also read numeric data, such as A,B instead of A\$,B\$.)

LEN(A\$) = number of characters in a string. Here, LEN(A\$)=8.

POS(A\$,B\$,X) = what number character within A\$ is the position where substring B\$ begins. X indicates at which character you start searching. Starting with the first character as our above example suggests, if N=POS(A\$,B\$,X) THEN N=4.

SEG\$(A\$,N,L) = a segment of string A\$ beginning at position N, continuing for a length of L characters. Here, SEG\$(A\$,N,L)="PUT".

STR\$(X) = converts a numerical value X into a string that looks like a number, but which can't have numerical functions (such as SQR) applied to it. Here, STR\$(X) converts 1 into "1" (i.e., the number one becomes string character "1").

VAL(X\$) = opposite function of STR\$(X). Here, VAL(X\$) would convert the string "1" into the numeric value 1.

All functions discussed above can

be used in TI Basic. One other function applicable to strings works only with XBasic. That's RPT\$(A\$,n), used to extend a string by repeating it n times without a break. That can be accomplished in a somewhat similar fashion in BASIC through a concatenation of A\$&A\$&A\$ etc. n times.

We're not quite finished. Other computers use LEFT\$,MID\$ and RIGHT\$ to obtain a segment (that is, a substring) from the left, middle or right hand part of the main string.

For instance, B\$=LEFT\$(A\$,L) sets B\$ equal to the first L characters in the string A\$ on another computer. B\$=SEG\$(A\$,1,L) is TI's equivalent.

Other computers' B\$=MID\$(A\$,N,L) is the exact same function as TI's B\$=SEG\$(A\$,N,L), wherein substring B\$ starts at position N for a length of L characters.

Other computers' B\$=RIGHT\$(A\$,L) derive substring B\$ from the last L characters of A\$. TI's equivalent is B\$=SEG\$(A\$,LEN(A\$)-L+1,L). Here if L=3, then B\$="TER" (the last three letters of COMPUTER).

One other function I'd like to see in the reverse string display, to print A\$ backwards. I'm not aware of a single function to achieve that, but it can be printed or displayed with a FOR - NEXT loop. First in XBasic:

```
1 A$="COMPUTER"
2 X=LEN(A$) :: FOR C=1 TO LEN
  (A$) :: DISPLAY AT(4,C):SEG$(
  A$,X,1) :: X=X-1 :: NEXT C ::
END
```

The difference in Basic (aside from using individual instead of multiple lines) is to substitute CALL NCHAR(4,C-2,ASC(SEG\$(A\$,X,1))) instead of the "DISPLAY AT" portion.

So much for what the functions can do. When would one use them? Well, suppose you want to display the letters of the alphabet in groups of seven letters indented on successive lines, for example:

```
  ABCDEFG
   BCDEFGH
    CDEFGHI
     etc. until you came to TUVWXYZ.
(Seven letters were chosen to keep the display within the screen capability of 24 lines, as you'll soon see.) Successive PRINT or DISPLAY AT lines will absorb mucho memory. Instead try:
```

```

100 A$="ABCDEFGHIJKLMNOPQRSTUVWXYZ
UVWXYZ"
110 FOR LOCATION=1 TO 20
120 PRINT TAB(LOCATION);
130 PRINT SEG$(A$,LOCATION,7)
140 NEXT LOCATION

```

(See Herbert D. Peckham, "Programming BASIC with the TI Home Computer", McGraw-Hill, 1979, p.159-160.)

Run it, then change line 110 to read: FOR LOCATION=20 TO 1 STEP -1. Then RUN. Change line 110 back to its original version, then add the revised line 110 as line 150. Retype lines 120, 130, 140 as lines 160, 170, 180 respectively. Now run it. Does the pattern look familiar? Like a skier slalom? Imagine if you used CALL CHAR to reshape those characters into a landscape, then ran this program . . .

There's always someone who insists on practical programming. One example is in looking for an expected answer to the programmer's question, and comparing the response to the desired answer. This is in the form, IF SEG\$(A\$,1,1)<>"Y" THEN

Printing text without scrolling is solved in Basic (which doesn't have DISPLAY AT a particular point) by the CALL NCHAR command with a for-next loop, such as was shown in the Reverse text example, bringing up part of a string segment at a time.

How about the continual problem of label-making from a data collection of names and addresses and assorted information whose length varies from case to case, invariably including material too long for a single line? Why should you worry about it when the computer can fix it for you?

In the original TI Mail List, the first disk-based program written in 1980 (in Basic), the first label line includes a title and an individual's name, but has to fit it all within 32 spaces. Regardless of what length first and last name you may have entered, Mail List chops it into a title (a maximum of 4 spaces), space, then 27 letters for the name -- 12 characters for the first name and 15 for the last name. (See p.32 of the TI Mail List instruction booklet.) In the program, when field 13 (F\$(13)) is the title, and field 3 (F\$(3)) the name -- last name then first name -- this translates into: F\$(13)&"&SEG\$(F\$(3),16,12)&SEG\$(F\$(3),1,15) as the line to be printed. (See

program lines 3730 and 3750.)

Manipulation of data throughout the Mail List program relies on data segments. What about sorting and lookup routines? Aren't they comparisons of string segment locations?

Replace String functions in TI-WRITER's Editor are certainly an important activity, as another example. Don't forget spacing variations for a different length replacement text. Replacement by a text with uniformly altered ASCII code is the basis for simple Cryptograms.

A program in Manning and Inglisbe's "Get personal with your TI-99", Dilithium Press, 1984, p.188ff., gives some good examples of string functions, including a conversion of dates from the mm/dd/yy format into yymmdd (10/01/87 to 871001). Simply multiply the VAL(SEG\$(A\$,7,2)) [year] (did you remember the slashes?) by 10000, VAL(SEG\$(A\$,1,2)) [month] by 100, and add the remaining VAL(SEG\$(A\$,4,2)) [day] to get the "digital" date. Don't forget STR\$ to convert the number back into a string. Such is simple when you know how the computer does it; now you know that language and you can program it yourself.

Another use of string functions is to match the segment of a word in a Hangman game. You can figure out the logic for word games if you know the computer's capabilities. Computerized Scrabble scoring also derives from string placement. But word games aren't the only use for string segmentation. If you consider yourself a math whiz, and have been around for a while, try interpreting Barry Traver's multiple number base conversion program (THE DATA BUS, vol. 3:6, July, 1985, p.8) which also works on segment manipulation. Then again, graphic programs also use string segmentation to save memory in character definitions. Would you call that use of "word" strings? That's simple computer handling of parts -- bits and bytes -- of building blocks of computer data.

Here's leaving you with a little broader perspective at your computer's role in some fairly frequent string variable handling routines you may have been overlooking.