

---- Vol. 5 No. 3 -----

----March 18, 1989----

## VAST U. G. INFORMATION

The VAST USERS' GROUP is a support group for Home Computer users. We primarily support the TI-99/4A Home Computer and compatibles, but all computer users are welcome. We will be meeting at the Pyle Adult Recreation Center in Tempe on the 3rd Saturday of this month (March 18). In coming months, the meetings will be scattered between the second and third Saturdays. I have included a 2 month calendar on the Editor's page (page 3) showing the meetings for April and May and will continue to do this in coming months so you have some idea of when the meetings will be. The meetings will start at 10:00 AM and continue until 11:00 AM with socializing starting at 9:00 AM. Please see the address page for additional meeting information. The yearly membership fee is \$15.00 and now includes the newsletter mailed to your door!

All meetings are open and anyone may attend. Only dues paying members may vote in elections and obtain programs from the Users' Group library.

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The date that appears in the upper right hand corner of your mailing label is your membership expiration date. Address renewals to the return address on page 12. Newsletter *O N L Y* membership is available for \$12.00/year, First Class Mail.

The User Group's BBS is in operation 24 hours a day. Contact it at (602) 437-4335. There are 3 message bases, a TI specific download section, and a lot of interesting

conversation and information available here so why not give it a try.

Deadline for submission of articles or advertising for the Newsletter is the last Saturday of every month. Articles may be submitted in any form, however, the preferred method is by phone transfer directly to the Editor.

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Advertising rates are as follows:

COMMERCIAL:

Full Page \$10.00 Half Page \$ 7.00 Quarter Page \$4.00

### PERSONAL:

Four lines, 30 Characters/line \$1.00 \$.20 per line over four.

All rates are for **ONE** issue only!

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Programs are available from the USERS' GROUP LIBRARY at the following rates:

SS/SD Disk \$2.00 DS/SD Disk \$4.00

If copying of documentation is required, it will be at the rate of \$.10 per page. If the User Group supplies the disk, please add \$1.00 to the above charges. An exchange program for free programs is also in effect. Please contact the librarian for further information. A complete list of what is in the library is available on 2 disks free of charge if you supply the disks or for \$1.00 per disk if the User Group supplies the disks.

## From the Editor's Desk

We have 2 holidays this month which makes it hard to come up with some common item to put on the front cover page and the back cover. I could ignore both, I guess, but that isn't the right way to solve the problem, so St. Patrick's Day is the closest to the meeting and it got the front page and Easter is at the end of the month so it got the back page. Seemed pretty reasonable to me... Anyway, HAPPY ST. PATRICK'S DAY and HAPPY EASTER!

### MEETING SCHEDULE...

(Subject to change without notice)

Here are the scheduled meeting dates for April and May...

APRIL					19	B9_	1.11	MAY			1989			
	MON									WED				
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	3						7							
٩	10	11	12	13	14	<b>(15</b> )	14	15	16	17	18	19	<b>20</b>	
15	17	18	19	20	21	22	21	22	23	24	25	25	27	
23	24	25	26	27	28	29	28	29	30	31				
30														

In a related item, the Secretary of the group, Bill Wedmore, has sent an inquiry to the Italian/American club which has a meeting room at about 12th Street and Northern Ave., requesting information and room availability. As of this writing, there is no reply, but I'll keep you posted.

## SWAP MEET ...

(Success or Failure???)

Well, that one depends on who you talk to. There seemed to be a lot of confusion this time as there was no business meeting before the Swap Meet began (therefore there are no meeting minutes this month). The business meeting should have been a NECESSARY item BEFORE the swap meet. Nominations for group officers should have been discussed as elections should be taking place at this month's meeting. Does anybody know if anybody is even running for any office? Answer? NO!

From what I have heard, some folks were set up for, and started "swapping" before 9:00 AM. Some were still setting up by 10:00 AM.

Another confussion factor was that on this particular meeting date, we had to be out of the room by 11:00 AM as something else was scheduled for the facility. This IMPORTANT information did not get conveyed to the appropriate people. With the turn-out for the Swap Meet being quite good, this was a very bad situation. Some folks did not even get set up good before they had to take everything down again.

On the brighter side, we did renew several old members, and we did sign up about 5 NEW members.

Success or Failure? I guess you will all have to draw your own conclusions...

## ELECTIONS ...

I don't have any information on this item as there was no business meeting last month. I have heard, though, that our President, Bob Nixon, is not planning on running for another term and our Librarian, Earl Bonneau, may be moving and will not seek another term. We will see at this meeting....

### IN THIS ISSUE ...

As I mentioned in last month's issue, I went to the TI Fest West which was held in San Diego this year. That is why I was not present at the last meeting; it was held on the same day. I have written my impressions of the Fest West Faire and that is on page 10. Since we have been covering BASIC functions in Computer Tutor for the last several issues, this month we have some sample programs demonstrating these functions starting on

Continued on page 4 >>>

## Editor's Desk continues from *page 3...*

page 5. Sounds Abound on page 7 this month shows you another way to have your computer talk that is faster than using the "CALL SAY" routine. Page 9 has a summarization of an article that appeared in Computer Shopper about the First PC. the Altair 8800. I'm sure you have heard of some people that have sprayed their printer ribbons with WD-40 lubricant to increase the ribbon's life. On page 11 is another prespective to this item. And that about wraps up this issue.

### IN THE NEWS...

(from the February, 1989 MICROpendium Magazine)

There isn't a lot of news this month, but here goes.

Are you still waiting for your copy of PRESS from Asgard or something NEW from Myarc? Well a policy change at both companies now isn't going to give you any dates anymore that you might expect their new products. This isn't new in the software industry as even the "big guys" have guit "making promises!!" Now, all you might get from these companies is that a certain piece of software is under development and that's all! Oh, well. We knew they wouldn't make it on time anyway.

Asgard Software has released several new programs this past Among them is Form Maker month. 99 designed to allow you to include maps, charts and graphs, among other items, in text and to allow the use of different fonts. This one sells for \$19.95 + \$.75 shipping. Another program is Typewriter 99 for those small items you need to type that are too simple to fire up your full blown word processor. It supports centering, underlining and even word-wrap and right justification. This one sells for \$9.95. And finally, we have Cassette Labeler which prints the contents of your audio or computer cassettes on a cassette label which is outlined by the program for you to cut out. This one also sells for \$9.95. further information on any of these, contact Asgard at P.O. Box 10306, Rockville, MD 20850.

Looking for that software for your TI to do your 1988 taxes with? Well William Chavanne, 4549 English Ave., Ft. Meade, MD 20755 has written the software you need. program is called, obviously, TI-TAX and has available just about any form or schedule you might need. programs all generate IRS acceptable forms complete with your data and ready to send! For a complete list of forms and/or schedules and prices or output samples, contact William directly at the above address.

Some upcoming computer faires you might like to know about....

**Hest Coast Computer Fair; March** 17-19; San Francisco 99ers will have a booth. Contact them at 24816 Mango St., Hayward, CA 94545.

TICOFF (TI Computer Owners Fun Faire); March 18. Write TICOFF'89, c/o Roselle Park High School, 185 W.

Webster Ave., Roselle Park, 07204 or call (201)241-4550 or (201)382-5963 or the TICOFF BBS (201)241-8902.

New England TI Fayah; April 1. Contact the Boston Computer Society TI 99/4A U.G., 1 Center Plaza, Boston, MA 02108.

Multi User Group Conferences More information on this one later.

### IN OTHER NEWS.....

I got a note from Jim Peterson of Tigercub software announcing the availability of over 200 disks of public domain software. The disks are cataloged by catergories and will be sold for \$1.50 per disk, post paid. He has a catalog of all titles available for \$1 and a self addressed stamped envelope. Send to: TI-PD, 156 Collingwood Ave., Columbus, OH 43213. This sounds like a good deal to me, folks. Jim has been a promoter of the TI computer for more years then he probably cares to remember and we have borrowed from his "Tips from the Tigercub" newsletter in the past and will probably do so in the future.

That's about it for this issue. See you at the meeting.

Jim Ely, Editor



- Part 20 -

(Countesy *ERIE 99er* Newsletter)

In the last few installments of this column we have presented the various functions in TI BASIC. Noticeably lacking were "sample programs" illustrating these functions. The programs listed below will, hopefully, help fill that void.

10 REM HOW MANY 9'S IN A NUM

20 INPUT "ENTER A NUMBER- ":

Ν

30 S\$=STR\$(N)

40 B=1

50 NI=0

60 PDS9=PDS(S\$,"9",B)

70 IF POS9=0 THEN 110

80 NI=NI+1

90 B=POS9+1

100 GOTO 60

110 PRINT "THERE ARE ";NI;"

NINES IN";N

120 GOTO 20

10 REM CHANGING WORD TO NUME RIC CODE

20 INPUT "ENTER MESSAGE - ":

30 IF LEN(M\$)=0 THEN 90

40 PRINT

50 PRINT "ASCII NUMERIC TRAN

SLATION IS": :

60 FOR I=1 TO LEN(M\$)

70 PRINT ASC(SEG\$(M\$,I,1));

**BØ NEXT I** 

90 END

10 PRINT "ENTER A DOLLAR & C. ENTS"

20 PRINT "NUMBER LIKE THIS ( \$XXX.XX)- "

30 INPUT D\$

40 N=POS(D\$,"\$",1)

 $50 T_{\$}=SEG_{\$}(D_{\$},N+1,255)$ 

60 A=VAL(Ts)

70 PRINT "THE VALUE OF ";D\$;

" IS ";A

```
THE ELEMENTS OF BASIC 10 PRINT "A$","B$";TAB(26);"
                           P"
```

20 As="X"

30 Bs="BOXES"

40 P=POS(B\$,A\$,1)

50 PRINT "=POS(B\$,A\$,1)"

60 PRINT A\$,B\$;TAB(26);P

70 As="BOB"

80 B\$="BOBBY"

 $90 P = POS(B_{5}, A_{5}, 1)$ 

100 PRINT A\$,B\$;TAB(26);P

110 A\$="B"

120 P=POS(B\$,A\$,1)

130 PRINT A\$,B\$;TAB(26);P 140 PRINT "P=POS(B\$,A\$,4)

 $150 P = POS(B_{\$}, A_{\$}, 4)$ 

160 PRINT A\$,B\$;TAB(26);P

170 A\$="X"

 $180 P = POS(B_{5}, A_{5}, 4)$ 

190 PRINT As, Bs; TAB(26); P

10 REM FINDING AVERAGES 20 DEF A=(X+Y+Z)/3

30 INPUT "ENTER 3 NUMBERS-":

X,Y,Z

40 PRINT "THE AVERAGE IS ";A

50 END

10 REM ALPHABETIZING THE

20 REM LETTERS OF A WORD

30 INPUT "ENTER A WORD ":W\$

40 LET L=LEN(W\$) 50 LET K=1

60 FOR I=65 TO 65+26

70 REM TEST LETTERS IN ALPHA

BET

80 REM TO SEE IF IN WORD

90 FOR J=1 TO L

100 LET G=ASC(SEG\$(W\$,J,1))

110 IF G<>I THEN 140

120 LET H\$=H\$&CHR\$(G)

130 LET K=K+1

140 NEXT J

150 NEXT I

160 PRINT "HERE IS YOUR WORD

170 PRINT "IN ALPHABETICAL O RDER:"

180 PRINT

190 PRINT " ":Hs

200 END

CONTINUED ON PAGE 6 >>>

## Computer Tutor continues from page 5....

10 REM CODE MAKING PROGRAM 20 INPUT "ENTER A SENTENCE T O BE CODED ":S\$ 30 LET L=LEN(S\$) 40 LET S\$=S\$&" " 50 FOR I=1 TO L STEP 2 60 LET P\$=SEG\$(S\$,I,2) 70 LET Q\$=SEG\$(P\$,2,1)&SEG\$( P\$,I,1) 80 LET L\$=L\$&Q\$ 90 NEXT I 100 PRINT "THE CODED SENTENC 110 PRINT 120 PRINT " ";L\$

10 PRINT CHR\$(27);CHR\$(76);C HR\$(80);CHR\$(0) 20 PRINT CHR\$(27);"L";CHR\$(8 0);CHR\$(0) 30 PRINT CHR\$(27);CHR\$(76);" P";CHR\$(0) 40 PRINT CHR\$(27);"LP";CHR\$(

10 REM DOUBLE DUTCH 20 INPUT "GIVE ME A SENTENCE ":S\$ 30 LET L=LEN(Ss) 40 FOR I=1 TO L 50 LET L\$=SEG\$(S\$,I,1) 60 IF L\$="A" THEN 120 70 IF L\$="E" THEN 120 80 IF L\$="I" THEN 120 90 IF L\$="0" THEN 120 100 IF L\$="U" THEN 120 110 LET SS\$=SS\$&L\$ 120 NEXT I 130 PRINT "HERE IT IS IN DOU BLE DUTCH" 140 PRINT 150 PRINT SS\$

10 REM THE ANSWER PROGRAM 20 INPUT "ENTER A QUESTION " 30 LET L=LEN(Q\$) 40 REM REMOVE QUESTION MARK 50 LET Q\$=SEG\$(Q\$,1,L-1)&"." **60 REM FIND END OF FIRST WOR** 70 FOR I=1 TO L

80 LET C\$=SEG\$(Q\$,I,1) 90 IF C\$<>" " THEN 120 100 LET S1=I 110 LET I=L 120 NEXT I 130 REM FIND END OF SECOND W ORD 140 FOR I=S1+1 TO L 150 LET C\$=SEG\$(Q\$,I,1) 160 IF C\$<>" " THEN 190 170 LET S2=I 180 LET I=L 190 NEXT I 200 REM TURN WORDS AROUND 210 LET S\$=SEG\$(Q\$,S1+1,S2-S 1) 220 LET V\$=SEG\$(Q\$,1,S1) 230 PRINT S\$;V\$;SEG\$(Q\$,S2+1 ,L-S2)

10 REM PIG LATIN 20 INPUT "ENTER A WORD ":W\$ 30 LET L=LEN(W\$) 40 REM FIND THE FIRST VOWEL 50 FOR I=1 TO L 60 LET V\$=SEG\$(W\$,I,1) 70 IF V\$="A" THEN 130 80 IF V\$="E" THEN 130 90 IF V\$="I" THEN 130 100 IF Vs="0" THEN 130 110 IF V\$="U" THEN 130 120 NEXT I 130 IF I<>1 THEN 160 140 LET L\$≃₩\$&"LAY" 150 GOTO 200 160 REM FOUND IT 170 LET L\$=SEG\$(W\$,I,L-I+1) 180 LET L\$=L\$&SEG\$(W\$,1,I-1) 190 LET L\$=L\$&"AY" 200 PRINT " ";L\$ 210 FOR T=1 TO 1000 220 NEXT T 230 GOTO 20

10 REM BACKWARD ADDED TO FOR DWARD 20 INPUT "ENTER A NUMBER ":N 30 LET N\$=STR\$(N) 40 LET L=LEN(N\$) 50 FOR I=1 TO L 60 LET B=L-I+1 70 LET B\$=B\$&SEG\$(N\$,B,1) Continued on page 8 >>>



### TUBRO SPEECH

(or how to speed up the Spoken Word)

by Stephen Shaw

(Reprinted from the May, 1988 HOCUS Newsletter of the Milwaukee Area 99/4 User Group as excerpted from the TI99/4A Exchange TIXMES Newsletter of Great Britain, Issue #6, Autumn, 1984)

Now, on to something really juicy, SPEECH. Old hat, huh? Well, this information will give you speech in TI BASIC with the Mini-Memory or, if you have Extended BASIC with 32K RAM, will give you speech just a mite faster than using CALL SAY which slows programs down no end.

For this information I am indebted to Neil Lawson who has been delving.

Speech requires either:

Extended BASIC with 32K memory
OR
Mini-Memory

and Speech Synthesizer.

Here is the program framework (for timing purposes):

20 CALL INIT
30 S=-27648
100 FOR I=1 TO 1000 :: NEXT I
110 PRINT "START....."
120 FOR X=1 TO 20
130 REM TEST ROUTINE HERE
140 FOR T=1 TO 30
150 PRINT ">";
160 NEXT T
170 NEXT X
180 PRINT "END....."

This standard routine sets up a framework test our new routine in, and gives a basic time reference.

(Please note: Times quoted are for MY system; yours may be different, but the ratios should be similar.)

Running the above program, with the loop in line 140 running 30 times as shown, takes 18.7 seconds from "START" to "END". Change line 140 to loop just 20 times and the timing is 12.7 seconds.

Now we can insert our two possibilities:

The first is available only in XBASIC:

130 CALL SAY("#THAT IS INCOR RECT#")

Run the program again. If line 140 is looped 20 times, the time is 44 seconds. If line 140 is looped 30 times, the time is 50 seconds.

The time for the speech is constant. It adds about 21 seconds to the program.

Now for something different (also works for Mini-Memory):

130 CALL LOAD(S,70,"",S,65,"
",S,72,"",S,70,"",S,64,"",S,
80)

I you run the program now, it says the same thing as many times, but look at the timing:

If line 140 loops 20 times: 26.3 sec. 30 times: 26.5 sec.

We know that looping line 140 an extra 10 times adds 6 seconds... so where have those 6 seconds gone?

The CALL SAY routine holds everything up until it has finished speaking. But, using the CALL LOAD equivalent, while the computer is speaking, it gets on with the next chore too. The "dead time" is used and soaks up those 6 seconds.

Thus, using the CALL LOAD equivalent, the computer speaks faster, and also permits your program to run more quickly if there is work for it to do between speech outputs.

That's the clever demonstration! (Impressed?) Now for the theory.

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## Sounds Abound continues from page 7....

Reference: Editor/Assembler Manual pages 351, 355, 422 to 427.

(*Errata:* The reference in paragraph 1, page 355, should be to section 22.1.4, NOT as printed in the manual.)

Address -27648 is the SPEECH WRITE address. We keep feeding it with bytes, and in due course, the computer speaks. The bytes to feed to that address are found out as follows:

First, decide what you want to say from the standard vocabulary. Then, look in the table (pages 422-427) for the address of that word or phrase. "THAT IS INCORRECT" is given as 6816. That is Hexidecimal, not a decimal number. The four numbers are reversed, and become 6186.

Now we offset them by Hex 40 and feed them in. As we are dealing with decimals with our CALL LOAD, that means we add decimal 64 to each digit in turn:

If the numbers were Hex A-F, these have a decimal value as follows:

Now we must indicate end of word by loading a zero, again offset, thus 0+64=64. Finally, instruct the computer to speak by loading Hex 50, decimal 80.

Thus we have loaded in order:

Check back to the listing. Note the way CALL LOAD has been used; a single command to load the same address with several different values.

To assist your experimentation, here are some Hex addresses from the manual. Remember to reverse them, translate to decimal and offset.

This is not only a useful programming aid in its own right, but by demonstrating a part of the E/A manual's sometimes complex instructions, it should assist you when you are ready to move on to FORTH or Assembly language.

## \* \* \* \* \* \* \*

# Computer Tutor continues from page 6...

80 NEXT I 90 LET B=VAL(B\$)
100 PRINT
110 PRINT " ";N
120 PRINT "+";B
130 LET L\$=""
140 PRINT " ";SEG\$(L\$,1,L+2)
150 LET A=N+B
160 LET A\$=STR\$(A)
170 IF LEN(As)<>L THEN 200
180 PRINT " ";A
190 END
200 PRINT A

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The First PC

by Steve T. Peddy-Coart

The story of the first personal computer takes many forms and is different depending upon who you talk to. Here is a condensed version of one those stories taken from an article in the Computer Shopper.

The credit goes to the **Altair** 8800 which was offered as a kit through the pages of *Popular* Electronics in January, 1975. There were other articles about building computers before this one, but the Altair was the first to use the 8080 chip as its central processor. This chip had the internal components that were thought necessary to be called a microcomputer. The kit sold for \$397, which was a considerable savings over the standard price of the 8080 CPU chip alone. The developer was promised a good price provided he would take cosmetic rejects. These chips had surface defects but worked okay.

The developer for this project was Ed Roberts who had to sell 200 computers to reach the break-even point. This was considered a huge amount for this kind of electronics project. Ed hoped that the readers of *Popular Electronics* could make it possible. Roberts and his three man crew completed the project before the deadline date and shipped the computer to Les Solomon in New York, who was the technical director for the magazine. However, Les never got the first prototype for the Altair. Ed Roberts had shipped the package by Railway Express, which in those days was considered a safe thing to do. But this time Railway Express lost the package. They also went bankrupt around this time and the computer package was never Solomon wrote the first found. installment for the article from

photos taken before shipment and material supplied by Roberts.

The computer shown on the cover of that issue of Popular Electronics was an empty box with lights and switches on the front panel. photos inside the magazine showed several boards stacked on top of each other separated by spacers and connected with ribbon cable. There was no bus structure which we have come to associate with the microcomputer. When Ed Roberts was building the replacement for the missing Altair, inspiration struck and he came up with the S-100 bus structure that later became famous as the "Altair Bus." So fate took a hand in the development of the microcomputer and we would never have had the S-100 bus without the bankruptcy of Railway Express.

There are many stories about the name given to this first microcomputer, but my favorite is this one. When Les Solomon was writing the article he wanted to come up with a name to call the computer. So he asked his young daughter, who was a Star Trek fan, what they called the computer on the show. She told him they called it "Computer." He said, "You're a biq help," so she said "Why not call if Altair; that's where they are qoing this week" and that's what they Ed Roberts intended to make later models so he added the numbers 8800 to the name.

The **Altair** article ran is several issues and they were deluged with orders. To this date they are not sure exactly how many computers were sold, but Les Solomon estimates over 2,000. That was more computers than had ever been sold before in the history of the industry. Naturally, they were swamped with orders and could not deliver. The company offered the people their money back, but no one asked for a refund. They wanted their computer, never mind the money.

Well, what did you get for \$397? kit of parts for the bare essentials. The instructions were not too well written, so they furnished a phone number to call for help. And if you were not up to wielding a soldering iron, they would sell you a pre-assembled computer for \$498. With either one, the cabinet was excellent and had a front panel with lights and switches. The CPU card and the front panel plugged into the only two bus sockets mounted on the bus card. There was no memory expansion card and no I/O card. The entire RAM on the CPU card was 256 bytes (No not K bytes, 256 bytes). So what could you do with 256 bytes of memory? Not much. The first computer game was invented and it was called "Kill the Bit." It was played by trying to quess which light would light up on the front panel and then flip the switch before it went out. Exciting stuff.

If you really wanted to use your computer you had to upgrade with memory expansion boards, which cost from \$97 for 1K up to \$264 for 4K. Also needed was a Serial or Parallel Interface (\$119 or \$92), a cassette interface board (\$120) and Altair BASIC (actually Microsoft BASIC) for \$150. Of course to add all this to your computer you had to add more bus boards and connectors to put the expansion cards in. For every socket you had to solder 100 pins and for every bus board you had to solder 100 wires to the previous board. So to become a computer quru in those days you had to be handy with a soldering iron.

Once all that was connected, it was time to load your software. It was not as easy as typing "RUN." This computer had no operating system, only a monitor program to do housekeeping and some troubleshoot-But even before that, the system had to be "BOOTED," a term

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TI FEST WEST, San Diego, CA. February 18 & 19, 1989 My Impressions... Jim Ely

This was the first TI Computer Faire I had attended. Thanks to Wallace Knight, he and I flew over to San Diego on Saturday, February 18th at 7:00 AM. We were staying in the Clarion Hotel, which was also where the Faire was being held. The shuttle from the Hotel picked us up at the airport and delivered us to the Hotel. After checking in, the first order of business was breakfast! We met Mike Marfisi and his wife, Cherry, who also went over for the Faire, at the hotel and went out for breakfast. After breakfast we came back to the Hotel in time for the opening of the Faire which was at 9:00 AM. We spent the rest of the day visiting the different booths and taking in the various demos and seminars.

Here are the folks who were present: The sponsor of the Faire was the Southern California Computer Group (S.C.C.G.) with help from the Southwest 99ers of Tucson. S.C.C.G. was also representing Tigercub Software. Other User Groups having booths were the Pomona Valley U.G., the North County 99ers U.G., the TI Sig U.G. of San Diego, The L.A. 99ers U.G., and the Boston Computer Society TI U.G. Most of the User Groups had brought along their software librarys and were selling disks. Companies having booths were T.A.P.E. which had

hardware and software by Mechatronics, RAVE 99 and John Mcdivett showing the new RAVE Keyboards and Memory systems, TEX-COMP which may have had one of the best deals on new 1/2 height DSDD disk drives (\$29.95!) among other hardware and software, DIJIT Systems with their new ADVC (Advanced Digital Video Card) 80 column card and software, Comprodine with Roger Merritt and his new software (Forms Shop Software, Jiffy Flyer and Jiffy Card software), Genial TRAVelER diskazine with Barry Traver in attendence and Express Computer Supply which had various computer supplies from printer ribbons to anti-static mats to disks. C. Regina, the current BASIC writer for MICROpendin magazine, was also in attendence with software and books that she has written.

Noticeably absent from this show were company representatives from MYARC, TEXAMENTS, ASGARD, TRITON and Comprodine's Roger Merritt TENEX. was somewhat representing ASGARD with a variety of software and TEX-COMP had quite a variety of Texament's software.

Several excellent seminars were given at the Faire. Roger Merritt demoed his new software showing several of the different options available; Barry Traver demoed 2 new games from General Computerware and gave an excellent talk on supporting the TI computer. Even though MYARC didn't attend, Charlie Summerfield(?) gave an excellent demo of the Geneve. C. Regina showed her San Diego map program which appeared in the January MICROpendium and gave some tips on BASIC programming. Bill Gaskill gave a very in depth over-view of TI Base. Woody Wilson of S.C.C.G. went over how to run the configure program of Funnelweb using version 4.13 of the program (the latest version). Seminars on Sunday were pretty much the same ones.

According to Wallace, this faire was not near as big as the faire held in Chicago and everything wa seen very easily in one day. The turn out was, in my opinion, quite good. I thoroughly enjoyed myself and meeting some of the people I have read about. The representative from Express Computer Supply probably summed it up best with his observation, "I didn't realize there was so much support for the TI computer. I didn't bring near enough of the different types of supplies. When I come back tomorrow (Sunday) I will have a much bigger selection." You know what? He did!

J.E.



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# For Your Information continues from page 9...

borrowed from the phrase "pulling yourself up by the bootstraps." The routine to initialize the I/O board was keyed into the front panel by setting the switches to represent one word of machine code and then pressing ENTER. The whole routine was entered this way word by word. Then you could load the Bootstrap Loader which was usually read in from paper tape on an ASR 33 Teletype. After that the Monitor Program was loaded using the paper tape reader. Only then were you ready to load Basic. Whew!!! All that and you had only loaded BASIC. But can you imagine the thrill of those people who were able to own their own computer by building the Altair 8800 and seeing the sign-on for BASIC pounded out by the teletype for the first time and reading the prompt "READY."

S.P.



Last month's Computer Tutor column was not all there! Seems that when I told you "Continued on page...", several paragraphs got omitted. Here is what should have been included. Sorry for the inconventience.

As one becomes intimate with the DEF function, it should be easy to see that this function can save space by eliminating the need to repeat an expression especially when the expression is long or complicated. For example, rounding off values to two decimal places for "dollar and cents" expressions complete with the

dollar sign and decimal point can be made simple with the following 2-line program:

10 DEF ROUND(X)=INT(XX100)/1
00
20 DEF DOL\$(Z)="\$"&STR\$(ROUN
D(Z))

The ROUND definition multiplies the number X by 100, makes it into an integer (removes the decimal places), and divides the result by 100 to get two decimal places. Then the DOL\$ function puts the dollar sign (\$) in front of the string representation of the rounded number.

Add these lines to the above program to see how it works when decimal values are used.

30 A=654.32632 40 B=987567.89235 50 C=4.5555 60 PRINT DOL\$(A);TAB(10);DOL \$(C);TAB(20);DOL\$(B)

The output should produce this line with the dollar signs automatically included.

**\$654.**33 **\$4.**56

**\$**987567**.**89

RE-INKING RIBBONS & WD-40

By Ed Machonis - QB Monitor Newsletter by way of the KAWARTHA KRON-ICLE Newsletter Peterborough, Ontario Canada

Several newsletters have carried articles about restoring ribbons by spraying with WD-40. I tried this a couple of years ago, it works. Then I happened across the following book which contained this excerpted paragraph:

From: EPSON, EPSON, READ ALL ABOUT IT!
by Julie Knott & Dave Prochow

"Warning: Some Epson owners feel that the life of their printer's ribbons can be extended through the liberal application of the lubricant WD-40. This could be the most costly mistake you can make with an Epson The WD-40 will revitalize the dried ink in the ribbons fabric, but it may also qum up the pins in the Although the lubricant consistency of WD-40 is ideal for large gears, it is not suitable for close-tolerance pin movement. Your choice as an Epson owner is between buying a new ribbon now or paying for a new printhead later."

I would disagree with classifying WD-40 as a large gear lubricant but the book seems otherwise authoritative. I only know of one person who regularly used WD-40 on his ribbons. I also only know of one person who had to replace the printhead on his printer. Coincidently, both are the same person.

Upon reading the above, I purchased a Mac Inker. I think it is terribly over priced and if you are handy, you could make one. I find that re-inked ribbons do not last as long as the originals, but some of the ribbons have been re-inked 6 times. The advantage is I always have a fresh ribbon. Perhaps that is why they don't seem to last as long.

The ink used contains a lubricant for the printhead. I don't think stamp pad ink would be a good idea as it lacks the proper lubricant.



TO-

FIRST CLASS MAIL

VAST USER GROUP NEWSLETTER c/o 2120 S. Los Feliz Drive Tempe, AZ 85282-2905

March 18, 1989 NEELLING NOLICE i i

All are WELCOME! ms 00:01 gnitəəM — ms 00:9 ts nəqO 655 E. Southern Ave. – Tèmpe, Az Pyle Adult Recreation Center

Thappy Easter from the V a I Wer Graup

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