CLEVELAND AREA TI99
USER GROUPS

NOVEMBER, 1987

OFFICERS	NORTHCOAST	TI-CHIPS	MEETING DATES	
PRESIDENT	MARTIN SMOLEY 1-257-1661	TERRY VACHA 225-5360	NORTHCOAST 1:30 P.M.	TI-CHIPS 10:00 A.M.
VICE PRESIDENT	RICH JOHNSON 261-9274	RUSS SHIMANDLE 1-887-5330	EUCLIDIAN ROOM	NORTH ROYALTON LIBRARY
TREASURER	JIM NEKEEL 286-3179	LIN SHAW 235-3912	EUCLID SQUARE MALL	STATE ROAD & RT 82
MEMBERSHIP	ELMO IACOBUCCI 585-2508	JOHN PARKEN 331-2830	THIRD SATURDAY	THIRD SATURDAY
	2161 Pine Ridge Drive	4172 W.217TH ST.		
	Wickliffe, OH 44092	Fairview Park, OH 44126	NOVEMBER 21, 1987	
SECRETARY	CHUCK POULIN 731-6473	MARY PHILLIPS 582-4009	DECEMBER 19, 1987	
LIBRARY(DISK)	ERNIE & DON NITSCHKE 888-4845	MARK McCAULEY 235-8888	JANUARY 16, 1988	
(TAPE)	TOM NELLIS 475-4067	JOHN PARKEN 331-2830	FEBRUARY 20, 1988	
(MODULES)	TOM NELLIS 475-4067		MARCH 19, 1988	

To Clone or Not to Clone is a topic which unfortunately has recently taken up a lot of space in the various newsletters. I can understand people getting clones, but don't understand why they feel they must immediately dump their TI's. I have had my clone(s) for just about a year and find that I use my TI just as much as always. I am just more comfortable with it. When I first got the clone, I thought I would have little use for the TI, but the opposite has been the case. If you are doing anything with computers in the business world, you HAVE to have a clone. If you are just a hobbyist or home computer user, the TI is more than adequate and does a lot in the music and graphics area that the clones can't touch.

Be sure to read what Marty Smoley has to say about the RAM disks. Harry Hoffman is going to the TI-FAIRE in Chicago and expressly wants to check out the RAM DISK situation. I will anxiously be waiting for his report because I am convinced...just need to determine which one is best for me. This past weekend I was using 6858, TI-ARTIST, FONT WRITER II and seemed that it was taking me an eternity to wait for each section of these programs to load. If I had a RAM disk it would save wear and tear on my disk drives and I could go between the features of these programs faster than I could blink an eyelash.

The procedure to install 32K on the high-speed bus is included in this newsletter. If you only have a cassette system, you should investigate one of the several ways to add 32K to your console, then invest in Clyde Colledge's high-speed cassette loader which allows you to run many assembly language programs without a disk system. Next month's newsletter will feature an article on this loader.

Have you ever gotten mailing labels stuck around the platen of your printer? I had this happen recently and in the recesses of my mind, seemed to recall that I had read in a newsletter where someone used an old plastic credit card to push the paper on through. After trying everything else, I decided to see if it would work. It took some doing, but the credit card is both stiff enough and flexible enough to to the job. If anyone else has had any experience with this problem, please pass along your solution.

Also, if you need a typewriter and would like to have the advantage of a letter-quality printer thrown in, Bak Industries has a nice deal. They have a Silver Reed electronic typewriter with parallel RS232 interface included for $169.00 plus $9 P&H. It has a 25-character LCD display, right justification, decimal tabs, automatic centering, all in the typewriter mode. When I want to use it with my computer, I plug in the same cable I use on my Gemini printer for letter quality printing. Bak Industries, Inc. 8200 Remmet Ave., Canoga Park, CA 91304, Phone 1-800-423-2866.

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TI-CHIPS EXECUTIVE NOTES

TI-Chips welcomed Tom Hallis of Northcoast. Tom Spoke about and demonstrated FUNNELWEB, a Fairware package developed in Australia. As described in the documentation, "FUNNELWEB has been prepared to allow the Extended Basic module to provide a utility environment of TI-Writer, Editor Assembler and Disk Manager utilities with some welcome improvements. It will also autoload from the E/A or TI-Writer modules as file DSK1.UTIL1, and can be loaded by Minimem or even from the bare console with Myarc or Corcomp disk controllers. The utilities supported are at least as convenient to use as with the original modules, and the need for module swapping has been greatly reduced. Many user options are set from the XB LOAD program, which can be edited and resaved.

Tom distributed a printout of the FUNNELWEB LOAD program and described what he had done to add options which he uses, such as BA-1000, Myarc BM, FAST-TERM, ARCHIVER, and others. He suggested that the full instructions for adding the directions are in the documentation, but it was still necessary to do some experimentation to see what would work the best. The versatility of this software was quite evident. A big "Thank You" to Tom for sharing his knowledge with the group.

Matt Andel shared what he had done with a program called "Artist Enlarger". The program takes instances and fonts and enlarges or reduces them horizontally, vertically, or both. The effect it had on a space shuttle picture were interesting.

The Shaws demonstrated their cooperative work with a disk of Music with graphics programs. Lin programmed the music while his wife tackled the graphics. Many of their favorite programs were Christmas carols, which will be great for the coming holiday season.

Les Kee defined the DEF statement used in Extended Basic. The DEF statement allows the programmer to define his own functions. Les showed how it works in a program to find algorithms of numbers.

Glenn Bernasek shared another program he had written, titled "Cryptographics". The program allows the user to enter a message and have the computer encode it for transmission. A cipher can be entered and the resulting message printed. He has a cassette library of about thirty-one programs which he is willing to share.

The November meeting will be a "Swap and Shop". Please bring any items you might like to sell or trade with others. See you then!

MARY PHILLIPS.

ROUNDING DECIMAL PLACES
Glenn Bernasek - TI-Chips

The following short routine demonstrates how you can control the rounding of decimal places after the decimal point to a pre-determined number. Line 160 is the "workhorse" of this routine. The "9" in this line is the number at which you wish to have the answer round to. This

routine can be used either as a subroutine or a program line command. Give it a try.

```
100 CALL CLEAR
120 RANDOMIZE
130 N=RND*A
140 PRINT N,"(AS DRAWN)"
150 FOR D=8 TO 0 STEP -1
160 R=INT(N*)+.5/10^D
170 PRINT:R,"(";D;"PLACES)"
180 NEXT D
190 PRINT :: TAB(5);"( PRESS ANY KEY )"
200 CALL KEY(0,K,S)
210 IF S=0 THEN 200 ELSE (110)
```

DESIGNER LABELS - A REVIEW
DEANNA SHERIDAN - NORTHCOAST 99ERS

I saw an ad in MICROpendium for a program called "Designer Labels". It was only $10 + $1.50 S&H, was written in c99, so I decided to order it more out of curiosity than anything else. I sent a personal check and had the program back in less than a week.

This is a very simple program which will print Artist Instances in various pre-defined formats, plus has an option for user-defined parameters. You create your label in TI-Artist and Designer Labels prints out multiple copies for you. You can choose from the standard 15/16 mailing label in widths from 2.5 to 4.0; 1 7/16 labels, 3.0 x 5.0 cards; 4.0 x 6.0 cards (same as postcards), 8.5 x 11.0 sheets; plus other - to be defined by the user.

This means that you could prepare a postcard with special graphics as long as the information would fit on the screen and print it out through designer labels. You could use it for letterheads, etc.

It is a nice no-frills utility that you might like if you do not have CSGD III. Otherwise, it would duplicate many of the features already available to you in that program. They also have a support disk of graphics which you can order in CSGD or Artist formats for $10.00 + $2.00 S&H. NAMELOC SOFTWARE 3971 S.E. Lincoln, Portland, OR 97214.

FOR SALE

TI SYSTEM - INCLUDES:

COMPUTER
PEB BOX WITH 32K MEMORY - TI DISK CONTROLLER
TI SINGLE SIDED DRIVE
PARALLEX RS232 CABLE FOR PRINTER
MONITOR - NOT SURE IF COLOR - PRICE NEGOTIABLE

I have friends in Morgantown, W.VA with this system for sale. The son has gone to college and got a compatible. If you know of anyone who is interested, give me a call, and I will put you in contact with them. DEANNA (216)333-5986.

Well here it is time for executive notes again. The meeting went quite well. The demo by Jim Mekeel included a .ck refresher coures on PRBase. The demo was well received and the members were very interested in Jim's data disks.

As for other items of interest. We are doing reasonably well financially. The treasury is a bit low at this point, however, most of our renewals should be coming in near the end of the year. We also had several guests at this meeting and three new members joined. One guest and now a new member is Wesley R. Richardson from Georgetown, KY. It seems like I've seen Wes at a lot of our meetings lately. He must have those freeways down pat by now.

We had another rousing question and answer period. Much of the conversation seems to concern recent improvements to our little TI. Ernie Malnar and Charles Gilbert said that they recently installed IBM type keyboards on their TIs. They both said that they were very impressed with the new key functions that were available and the ease of installation, and use of the keyboard. Mr. Gilbert said his unit cost appoximately $110, and Ernie's cost $199. Ernie has the RAVE 99/105 Enhancement Keyboard, and has **VOLUNTEERED** to demo his keyboard at the December meeting.

Another item of great interest seems to be RAM disks. At every meeting someone brings the subject up, and that initiates a round robin of information on what is, or may be available soon. Many of our members have said that they plan on buying RAM Disks in the very near future. For this reason have decided to include a brief testimonial for the people c New Horizon and Bud Mills Services. I have also chased down some hard facts on prices and availability.

THIS INFORMATION IS A SEPERATE PART OF MY NOTES: >>>>>>>

IMPORTANT   <<<<<<<<<

We are selling the CorComp 256K RAMDISK card which was part of our BBS. We paid $170 for it a few months ago. We also changed board programs several times in the last few months and the board was down most of the time. So the RAM card is like new. We would like sealed bids from any NorthCoast club member who is interested, and the bidding should start at $100 . The bids will be opened 10 days after our next meeting. This should give everyone who is interested time to enter a bid. Upon opening the bids, the person submitting the highest bid will be able to purchase the card at that price. If your interested contact me "Martin Smoley" as soon as possible.

The Next NorthCoast Meeting

Steve Weinkamer will be giving the next demo. It will be a TI-Writer or Funnel-Writer demo. However, Steve has been at the previous Funnel-Writer demos, and has had much xperience with these programs while writing newsletter articles, etc. "So", I expect this demo will cover some interesting tips and tricks. I have attended all of the previous demos and I can say that I have learned several new things at every one of them.

>>>>>>>>>> HORIZON COMPUTER AND BUD MILLS SERVICES TESTIMONIAL

I am writing this short testimonial because I would like to show my appreciation for these courteous and helpful people. I purchased one of the green cards (which was one of the first) from Ron Gries of Horizon Computer soon after they came out. I purchased the balance of the kit from Bud Mills shortly thereafter. The parts were very easy to assemble, and the instructions were clear and complete, but I still found myself calling both Bud and Ron several times to check on the procedure they thought would be best. I received more help, more information, and more freindship at that time than I have ever received from any company. I realized later that at the prices they were charging, they couldn't have been making much profit, and therefore, were doing all this because of their love for the TI 99/4A. I talked to Bud Mills again this week, and I find that whether you spend money or not, he is as informative, helpful, and friendly as ever. He is as enthusiastic about the new improvement to the TI as when I first talked to him. For these reasons and many others, if you are thinking about purchasing a RAMDISK, I would recommend contacting Bud Mills Services for more information.

HARD FACTS FROM BUD MILLS SERVICES 10/20/87

Due to the fact that there are so many rumors floating around concerning RAM Disks, I decided to check with Bud Mills Services, and get some facts. I talked to Bud last night, and here is as much information as I could take notes on, or remember.

Bud will be at the Chicago TI-Faire, and will be showing some really new and really big items. His standard RAMdisk kits will be approximately 104K, 192K, 256K, 384K, and 1 Meg. All of the new kits use HM62256 32K memory chips. This makes it possible to expand any of them to as much as 3 Megabytes by adding more chips. The ROS/Menu program which will be supplied with the new cards is Version 7, and is capable of handling a card from SS/SD into the Megs without any modifications, and can partition a Megabyte into more than one drive for efficient use with no user effort. The 1 Meg will cost $399, which is a big bite for some, but the smaller SS/SD kits will probably start around $150. Remember that you can expand a 104K card up to 3 Megabytes whenever you get the urge. Bud also has an upgrade for the older boards which use 8K chips to bring the 192K up to 256K, for only $27,"That's Great!". And last, "but I think, almost best", Bud has a kit to put the 32K of RAM in the console and it is attached to the 16 bit (high speed) buss of the 9900. This kit is only $25, and as I write this article my kit is already on the way. If you are interested in any of these items, I recommend you contact Bud Mills Services at 166 Dartmouth Drive, Toledo, Ohio 43614. Phone (419)385-5946

See you all at the next meeting. Marty.

FONT WRITER II
A FEW COMMENTS
Deanna Sheridan - NorthCoast 99ers

Again, I have a piece of software I would like to tell you about, but don't feel I can call it an indepth review because I have not tested each and every feature.

I decided to get Font Writer II when I found it could create a graphic catalog of TI-Artist instances, pictures, etc. and that it could take an Artist Instance and transfer it to CSGD while others programs only allow CSGD to Artist.

From reading the manual, it seems that the thrust of Font Writer, at least when it was first developed, was mostly a program to create fonts for TI-Artist. Any so-called desktop publishing features were second thoughts. I have never really figured out how one would "easily" create a font with TI-Artist and many many of them have come about through conversions from the CSGD program.

The EDITOR function is geared to creating or editing fonts. The grid displayed on the screen is also large enough to do small graphics, but useless for pictures unless you just wanted to take a portion of a larger area and save as a new graphic. Using the editor is similar to many other graphic development programs we have available, such as Spritebuilder. You can see you picture as it develops in the box at the side, it can be turned, mirrored, moved, etc. To create a font from scratch, you would develop a letter at a time and append it to the file.

The editor has a MACRO feature which you program that does a lot of the repititious work for you in developing a font. Certain points of a lot of letters are the same, and macros can be created to do those features for you, while you only fill in the areas that are different. There is a nice demo on how it works.

You can save your graphics in merge format as sprites to be used in Extended basic programming. Fonts can be saved in either CSGD or Artist format. You can convert from a CSGD graphic or picture to Artist instance or Artist instance to CSGD picture or graphic. I have mentioned many times you should learn enough about programming to change things to suit you or get yourself out of trouble. I was trying to use the Artist Instance to CSGD picture and was only getting a file the size of a CSGD graphic. I tried it several times, both with my original disk and my backup with the same results. Thank goodness most of the program is written in Extended Basic and not protected. I went into the program and found the section that was giving me a problem. I listed the lines to the printer. In line 6445 I found a CALL LIM ("...), instead of CALL LINK("...). This glitch was on both the original disk I got from Tenex and my backup. I made the correction, resaved the program and was back in business. Evidently this occurred at the time the copy was produced at Asgard. Had I not been able to spot this, I would have probably had to send the disk back for a replacement. I was especially relieved that both Asgard and J.Peter Hoddie did not have a lot of protection schemes on this disk.

The conversion then worked perfectly. I took a CSGD Christmas picture which had a 1986 in it and converted it to Artist so that I could change the 86 to 87. This was much easier than trying to change a CSGD picture where you cannot see where you are going. I then resaved it as an Instance and converted it back to a CSGD picture. It can now be used for an 87 Christmas card.

To prepare text and graphics for printing, you use TI-Writer or a similar editor. Dot commands are used similar to TI-Writer for preparing your file. There are five printdemo files which show the features. You can print images alone, an image on the same line as text, include pictures, fill a row with 1 image, put boxes around text to highlight it, etc. If you print out the demofiles through the PF command of the Editor, you can see how each file has been prepared and how the commands are utilized. I have not had time to really go in and see how complex or fancy a file can be. The method described in the manual is very easy and I am sure some very nice pages can be formatted.

There is an External File command that allows you to save an already-formatted graphics file to disk, such as a letterhead, and can be inserted in any document formatted with Font Writer.

A graphics banner program is included similar to that found in CSGD II and PRINTIT. It uses any CSGD font and graphic character and lets you choose several degrees of magnification.

AND, you can finally see all those Artist Instances which are cluttering up your files and you have forgotten what they look like, which have been converted from CSGD or GRAPHX, etc. The Font catalog prints across the page similar to the new CSGD cataloger, but the Instance cataloger prints down the middle of the page, one at a time. I do not have nearly as many TI Artist Instance and Picture files as a lot of people, and it took me almost a full day to get them all printed out. With CSGD graphics, you know they are all the same size, and that catalog prints them across the page. With Artist Instances and Pictures, they can of varying size and so the programmer chose to print one to a row centered down the middle of the page.

Font Writer II is available from Asgard Software, P.O. Box 10306, Rockville, MD 20850, EDU-COMP, TENEX, etc. for $24.95.

NEW DATA DISK AVAILABLE
FOR USE WITH PRBASE
by Jim Mekael, Northcoast 99ers, Cleveland, Ohio

Last month I finished a new data file disk titled INVESTMENTS for use with PRBase. This disk has 31 fields of information for each of 350 records on a SSSD disk or 710 records on a DSSD disk. The fields contain space for information such as names, addresses, phone numbers of brokers or service departments, investment amounts, rates, initial dates, maturity dates, dividends, IRA info and several more. There are three preprogramed reports which are very useful.

As I did with my other PRBASE data file disk called ADDRESS-PHONE-DATES, I will make the INVESTMENT disk available for $1.25 at the Northcoast meetings.

If you can not make it to our meetings, I can send either data disk to you. All I ask is that you send one disk and $1.25 for each data file that you want, and a postage paid return envelope. Or as an alternative, send $4.00, your

name, address and I will send you both disks. Request from:
Jim Mekeel
11596 Forest View Drive
Chardon, Ohio 44024

Because several folks have asked for other new and different data file disks, I have several projects right now that I am working on. You may find some of these to be of interest:

1) A data disk for use with household or small business inventory. This is scheduled for release in late October/early November '87.

2) A data disk for inventory of food freezer contents (my wife asked for this one.) Scheduled release in November '87.

3) A data disk for the contents of your extensive wine cellar.

4) A data disk for a Cub Scout Pack roster.

5) A data disk for your car's maintenance log.

If you have any other ideas for data file disks, let me know and I will see if I can get them on the schedule.

HOW TO MODIFIY THE PRBASE
ADDRESS FILE DATA DISK
by Jim Mekeel, Northcoast 99ers, Cleveland, Ohio

Several folks who have my PRBase data disk labeled ADDRESS-PHONE-DATES have asked me how to change the mailing label format. The older disks print the address's name with the first name initial. Because the popular opinion was that the full first names should be used, I changed all disks starting September '87 to do this.

If you have an older disk, this is the procedure to modify the mailing label printing:

1) Boot up PRBase and select "Database Creation."
2) Insert the data disk when ready.
3) Select "Design Mailing Labels" number 5.
4) Enter 6 lines per label.
5) When the "Report Format Design" screen comes up, enter your printer port.
6) Print the screen if you wish but it is not necessary to do so.
7) When the "Design Mailing Labels" screen comes up, change it to look like this:

Item No	Screen Location	No of Chars	Report Line	Column Position
1	172	5	1	1
2	134	14	1	7
3	93	15	1	22
4	211	28	2	1
5	231	17	3	1
6	291	2	3	20
7	299	10	4	1
8	0	0	1	1
9	0	0	1	1
10	0	0	1	1
11	0	0	1	1
12	0	0	1	1
13	0	0	1	1
14	0	0	1	1
15	0	0	1	1
16	0	0	1	1

8) Press PROC'D when finished.
9) When asked for number of lines, enter the default value of 6.

You have now successfully modified the data disk. When printing a mailing label the full first name will appear between the title and the last name. If you have any questions about this, please see me at the Northcoast U.S. meeting.

TRANSFERRING PRBASE FILES
BY DOUG GOOTEE
FROM JACKSON COUNTY 99ERS VIA CIN-DAY UG

Not too long ago, I wrote an article about transferring data from Future Mail List to PRBASE. Since then, I have found the need to move that data to another program. This time though, the program was on a different machine! The problem boiled down to this: I had an ASCII file in the TI program that I wanted to transfer to an IBM clone. Gaining access to the data by FAST-TERM was not possible because of the special disk formatting used in the PRBASE data disk. The answer to the dilemma was simply to "fool" the TI computer and create a data disk that is accessible by FAST-TERM.

I used the PRBASE utility programs in reverse to obtain this clone. One of the routines in the utility program is to copy records from one database to another. All I had to do was to create an environment for the new data that had a "normal" directory entry.

The procedure was quite straight forward. I used a short BASIC program to create a D/F 128 file that had twice as many records as the PRBASE file had. Here is the listing of that program:

```
100 OPEN #1:"DSK2.USERS",DISPLAY, FIXED 128
110 FOR X=1 TO 100
120 PRINT #1:"X"
130 NEXT X
140 CLOSE #1
```

This short program created a "shell" file for 50 PRBASE records. The key here was to use a freshly initialized diskette for this new file. With a fresh diskette, the first file is positioned so that the record #1 is equivalent to record #25 in PRBASE. All that was left was to actually use the copy utility to copy my fiule from PRBASE to the new diskette. As a bonus, the D/V 128 format allowed XMODEM transfer without the file header information from the TI system.

This technique of "cloning" might also be useful for accessing your PRBASE file from other programs. For instance, you might want a special report format that is not compatible with the report generator that is part of PRBASE. This routine may be the answer.

After working out all of the details mentioned above, I read in one of the newsletters we receive each month, that Ron Baker of the Penn/Ohio Users Group has written a routine that does this in one step. Ron's program is called PRO/MODEM, and it shares the following limitation with the procedure I have described here. The largest file that can be accommodated is limited to 325 records for single-sided and 665 for double sided. The PRO/MODEM program does one other nice thing that my technique does not do, that is it will also transfer the record and report definitions at the same time. This added feature costs an additional 10 record penalty.

For those of you who have thought about getting an IBM compatible and are concerned about the compatibility of your TI software, this should help. Once the file was set up for access by FAST-TERM, I transferred the file to my PC, but while the file was intact, the data was in one long string, with no carriage returns or any other way to break the file down. Enter a second BASIC program, this one for the PC written in GWBASIC. For those who might have use for this, I'll include the program here. If not, I hope that this article did stimulate your thoughts on ways to better use the tools that we have for the TI.

```
100 CLS
110 PRINT "Restructuring Jackson County 99er's
    Data Base"
120 OPEN "C:JC99ER.DAT" AS #1 LEN=256
130 OPEN "C:JC99.DAT" FOR OUTPUT AS #2
140 FIELD #1,29 AS LN$,15 AS FIN$,30 AS AD1$,16
    AS AD2$,15 AS CTY$,2 AS ST$,10 AS ZIP$,12 AS
    PHONE$,4 AS STAT$,122 AS JUNK$
150 GET #1
160 IF EOF(1) THEN 1000
170 WRITE #2,LN$,FIN$,AD1$,AD2$,CTY$,ST$,ZIP$,
    PHONE$,STAT$
180 GOTO 150
1000 CLOSE #1
1010 CLOSE #2
1020 END
```

FORTH FOR FUN
Paul Newmeyer, Northcoast 99ers

A quarterback received the snap from center, positioned the ball in his grip, and dropped back to pass. As he did, he trained vision scanned downfield searching for the open man. His eye hit the clearing; he cocked his arm and let'er go. With the trajectory of a blazing bullet, the ball hit it's spot--the only clear area on the field--and bounced aimlessly until it rested alone, like a lifeless tombstone in a silent graveyard.

He had wasted a down, the team had expended great effort for nought and achieved no forward progress.

Now, what would you think of a quarterback who would purposely execute that way, play after play? Perhaps he'd do better if he quit football and threw rocks at a barn, or shot sparrows in a straw stack.

Look at this matter another way. Would you continue to make phone calls to someone if they never answered? Wouldn't you eventually conclude that there's no one home?

In the same fashion, I wonder, Who out there is into Forth?. Is there anyone home out there?

I know you all have a lot of things to do with your TI You enjoy everything from fiddling at a simple 16K console to collecting megs of ramdisks; for learning basic to mastering Forth, C, Pilot, Pascal or Assembly; from plotting printers to manipulating modems; from playing games, using educational tools, engineering, spread sheets, and data bases, to word processing; from placing characters on the screen to unfurling bit map graphics; from soldering chips to connecting cables; from disks to drives; from warm societies of users' groups to helpful special interest instruction; from economical software to freeware; from a silver console to a Geneve; from spools to secretaries; from clocks to certificate makers.

Hey, you know what? I think I just talked myself out of writing to an IBM! What more could one want, than what we have?

But, let's get back to my original point--namely, What about Forth in all this exciting array of innovation and deveopment?. Is anyone out there into Forth at all? Or am I passing footballs into the open field, and no one's there to receive?

I don't ask this rhetoically. If I am to search for Forth materials and attempt to cultivate Forth interest, I need at least a few live bodies at the keyboard doing something with the language. Otherwise, I'll selfishly enjoy my Forth materials in the solitude my own domain.

I'll just go ahead and relish in this wonderful sea of language that's faster than XB and close to assembly. In fact, I'll swim on merging assembly with Forth with the speed and control no language outside of assembly enjoys. I'll enjoy all by myself, writing an uncomplicated and powerful program that occupies very little memory. I'll delight in controlling graphics and music in ways that XB can't approxi-ate.

Do you know, that Forth gives you greater music control? For example, in XB multiple CALL SOUNDS are often executed with loops, and its slow speed of execution breeds the necessary delay. However, in Forth, running of loops happens so fast that if one does not insert another procedure into the loop, the note duration is barely discernable.

Forth is easier to program in than assembly, and anything you can do in assembly you can do in Forth.

Another Forth feature I enjoy is saving my programs in binary code. When thus saved, they load much faster than other languages can make them do. Forth usually runs fast enough for our needs, but to make it faster, you can integrate machine code into it. How about that!

I can feel more in charge of my computer when using Forth. I can better understand the happenings in software or change them, and documentation is easier.

In upcoming articles we can share information regarding how to improve the Editor, DSAVE a screen, configure the system to DS/DD, incorporate assembly code, tie separate programs together into a menu driven whole, change the screen/print color, copy screens or disks, produce a Forth catalog, etc.

But, all this energy and output would be wasted if no one's out there. If you're out there, flip the ball back please.

$$$$$$FORTH AID$$$$$$

How do you get out of Forth without turning off the computer? Several methods exist: 1. If you have a widgit, push the restart button. 2. MON is a Forth word you can use. Try this little definition --: BYE FLUSH MON ; .

After putting the definition on line, by entering BYE, the current screens will be saved and then the computer will return to the title screen.

SOME SUPPLIERS OF STUFF FOR THE TI 99/4A
Compiled by John Wilforth - West Penn 99ers

I feel some of you may have heard of a product or seen something that was demonstrated at a UG meeting, and would like more information about this item, or would like to sleep at nights, and pay for something you are now using, but don't know where it came from. I've compiled this list of vendors, and hope you find it useful.

ENHANCED PC PURSUIT SERVICE
  GTE TELENET COMMUNICATIONS CORPORATION
  12490 Sunrise Valley Drive 1-800-368-4215 8am - 5pm M-F
  Reston, VA 22096   1-800-835-3001 24 hrs

DATABASE 1
  SPC SOFTWARE COMPANY
  BOX 121
  BRIGHTWATERS, NY 11718   1-516-587-5462

CONSOLE, ETC. REPAIR
  TEXAS INTRUMENTS
  2305 North University Ave.
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(More next month)

PRINTING MULTIPLE COPIES OF PICTURES
BY TOM HYNNE, PUGET SOUND 99ERS - SEPTEMBER, 1987

In most (if not all) graphics programs, you can print to disk instead of printer. This opens a whole new way of manipulating your graphic pictures. For instance, I was making name tags for the upcoming convention, and they were printed on labels. I wanted to be able to leave the computer and not have to keep telling the graphics program to print a gain because none will allow multiple copies. What I did was copy the label so two fit on one screen and fit into two consecutive labels. Then instead of printing them to printer, I entered DSK2.OUTPUT which sent the information to the file DSK2.OUTPUT. Now the graphic was in a file where I could read from Extended Basic. Now, I went into XB and wrote this sample short program:

```
100 L=3
110 OPEN #1:"DSK2.OUTPUT",INPUT,VARIABLE 128
120 OPEN #2:"PIO.CR",OUTPUT
130 IF EOF(1) THEN 150
140 LINPUT #1:A$::PRINT #2:A$::GOTO 130
150 FOR I=1 TO L
160 PRINT #2:CHR$(13);CHR$(10)
170 NEXT I
180 RUN
```

This program will print a graphics picture printed with any graphics program but with infinite copies. When you want to stop, press FCTN 4.

Line 100 initializes the variable L to 3. This sets the number of lines you want in between pictures. This is set to 3 to linefeed to the next label.

Line 110 may have to be changed for VARIABLE 80, VARIABLE 128, or whatever format the graphics program printed it. TI-Artist and Graphx print in VARIABLEL 128 format.

Line 120 may be to be changed for your printer. Use the name printer name as you would if you were printing with a graphics program. With TI-Artist you need a .CR.LF at the end of the printer name.

Line 180 will just run the program again.

The following program is a modified version from above but does not read from the disk for every picture. This one will read the file first into memory and then print from memory. WARNING! This program restricts the size of your picture. If you try a file from Joy Paint, for instance, you may get a memory full error.

```
100 DIM A$(400)
110 INPUT "NUMBER OF COPIES:":CPYS
120 L=3
130 I=0
140 OPEN #1:"DSK2.OUTPUT",INPUT,VARIABLE 128
150 IF EOF(1) THEN 170
160 I=I+1::LINPUT #1:A$(I)::GOTO 150
170 CLOSE #1
180 OPEN #2:"PIO.CR",OUTPUT
190 FOR C=1 TO CPYS
200 FOR LOOP=1 TO I
210 PRINT #2:A$(LOOP)
220 NEXT LOOP
230 FOR LINES=1 TO L
240 PRINT #2:CHR$(13);CHR$(10)
250 NEXT LINES
260 NEXT C
270 CLOSE #1
280 END
```

A LETTER FROM PAOLO BAGNARESI OF MILANESE, ITALY
FROM TIPS99 - SEPTEMBER, 1987

I am currently working on an IBM interface program, that should allow CorComp or Myarc Floppy Disk Controller owners to transfer IBM PC TEXT files directly from an IB PC diskette to a TI diskette as a DI/VAR 80 file. Then, with DA-Writer, you'll be able to use the original IBM files that, let's say, you may be developed at work. Also, the opposite will be possible, that is the transferring of a TI DI/VAR 80 file directly from a TI diskette to an IBM PC diskette. No external additional hardware will be needed (no RS232 or extra cables). The software will have a TI-IBM PC disk catalog program, with full access to all IBM Sub-directories. Further a SECTOR EDITOR program will come as an extra bonus with the package. The Sector Editor will be able to handle both TI and IBM PC diskettes, as well as the MYARC WDS 100 Hard Disk (finally a Sector Editor for a hard disk!). Last, a disk formatting routine, that will initialize a diskette to either the TI or the IBM format.

MINIMUM CONFIGURATION INCLUDES:
- 32K Expansion and PEB
- 2 DS/DD drives
- Myarc or CorComp Disk Controller (No TI Controller allowed.
- One of the following modules: Editor/Assembler, Extended Basic, Mini-Memory, GramKracker (or any module or card that allows machine language

execution).
- RS232 and a printer will be optional.

So much for the good news. As for the bad news: it is taking my friend Luigi Grilli and I an awful lot of time to complete this package. We are working on this project in the spare time, as all the TI developers now do. So far, only the Sector Editor is a finished and fully tested program. The rest of the software is working, but it is still scattered among many unrelated files. We have to bundle them together, add some further software for user screen interface, prepare the manual, get somebody to distribute it in the U.S.A., and, finally, submit the package to MICROpendium for review.

Honestly, I do not think we will be able to release anything before Christmas. I understand TEX-COMP has already released a similar package: that's simply too bad for us. At any rate, judging from the long development time we were experiencing, I always feared that somebody would eventually come up with a similar idea before we could be ready with ours. Unfortunately, this is something that happens in real life! Thank you for supporting the TI. Happy computing.

Paolo Bagnaresi
Via J.F. Kennedy 17
20097 San Donato Milanese, Italy
Phone 514.202 (Milan area code: 2. Calling from U.S. dial 011-39-2 first).

I will handle any kind of disk densities/formats: SS/SD, DS/SD, SS/DD 16 sectors, SS/DD 18 sectors, DS/DD 16 sectors, DS/DD 18 sectors, SS/DD 80 tracks 16 or 18 sectors, DS/DD tracks 16 or 18 sectors.

USING TEXT EDITOR AS A FORMATTER
by Edward Stann, Bluegrass 99ers - October, 87

If you're like me, you hate to have to go from Editor to Formatter and back again all of the time. It takes time and it's a wear and tear on the disk drives. While you know that you can print a document in the Text Editor using PF in the command mode, you also know that the Text Editor won't obey formatting commands such as)TL; it prints what is up on the screen "verbatim". You might not mind setting your tabs and typing with those annoying windows, or you might get just a little tricky and type with one window and then, after resetting your tabs, you reformat each paragraph. But you can't underline; you can't use sub- or super-script; you can't change print pitch, and you can't download your own designed characters. Right? Wrong!

I wrote a few months ago that the only printer codes that you can embed in text which the Text Editor will recognize are Emphasized and Doublestrike print codes (ESC E and ESC G, respectively, ESC F and ESC H to cancel,

respectively). Well, that's not exactly true. ALL (or nearly all) printer codes can be embedded in text which are recognized by the Text Editor. The trick is to know how to do it. This article will: 1) discuss the Special Character Mode; 2) give you a few printer codes which can be used with the Text Editor; 3) finally show you how you can discover embeddable codes for yourself.

On page 146 of the TI-Writer manual all of the Special Character Codes can be found. If you hit the key combination CTRL U, the cursor turns into a flashing underline rather than a flashing box. This means you are in this special character mode. As you may remember from a few months ago, you can now type fCTN R to get the "ESC" (Escape) character. To get out of the mode, retype CTRL U. This special character mode (henceforth abbreviated SC) is the key to embedding formatting commands that the Text Editor PF can understand. If you want to underline without having to go to the formatter, type "ESC" "-" SC "Shift A" (remember no spaces between anything)> Everything following this code will be underlined. To cancel, it's "ESC" "-" SC "Shift 2".

After some investigation, I've come up with a nice collection of embeddable codes. I've included some of them below:

TABLE

FUNCTION	START	CANCEL
Italics	ESC,4	ESC,5
Condensed	SC,Shift 0	SC,Shift R
Double-width	SC,Shift N	SC,Shift T
Subscript	ESC,8,SC,Shift A	ESC,T
Superscript	ESC,8,SC,Shift 2	ESC,T
Underline	ESC,-,SC,Shift A	ESC,-,SC,Shift 2

How did I discover all of these codes? And how can you discover even more? The trick is something called "formatting to Disk". You can format any document to a file on a disk. When using the Formatter, after the prompt "ENTER PRINTER DEVICENAME", just type "DSK!.FILENAME" instead of your printer name. Instead of the file being formatted correctly on paper, it is instead formatted correctly on a disk. Then go back to the Text Editor, and load DSK1.FILENAME. If this file is then printed out using PF, it will print perfectly (except that underscored words, but not underlined words, will look screwy). Any and all printer codes (such as underlining) will be prominently displayed for you to take note of. By comparing these funny looking characters with the characters on page 146 of your TI-Writer manual, you can identify the embeddable commands for future use. Just make sure that you determine the correct SCs. Many of the SCs look similar to each other. With this simple little trick, you can learn to embed nearly any printer code usable by the Text Editor.

32K ON THE 16 BIT BUS
By - John Clulow
Based upon ideas from Mike Ballmann

The following is a step-by-step description of how to add 64K of RAM memory on the 16 bit bus. The present modification uses only 32K. This corresponds to the memory space of the 32K Memory Expansion. The modification yields a speed increase of about 50%.

Mike Ballmann is currently working on a circuit to allow CRU decoding of the remaining 32K. This will open up a whole new area of software, including such possibilities as a real DOS which could be loaded into RAM from disk on power-up. The 32K modification described below can easily be modified for full decoding upon completion of Mike's work.

You will need two Hitachi HM62256LP-12 RAMs. One source of these is Microprocesors Unlimited. They cost around $12. You'll also need a 74LS21 and a 74LS153. These can be obtained from various electronics supply houses. All wiring should be done with wire-wrap wire. You should use a low wattage soldering pencil with a fine, pencil type tip.

The modification is done on the main board of the Black Silver console, and you'll need to refer to the Logic Board Component Location Diagram in the TI-99/4A Console Technical Data book.

1) Remove the board from the console, and identify the two ROMs. They are located between the GROM connector and the 9900 IC. One is parallel to the 9900 and the other is perpendicular to it. They are U610 and U611 on the Component Location Diagram.

2) Bend the pins on the HM62256 IC's closer so they will firmly contact the ROM pins when piggy-backed. One way of doing this is to place the RAM on it's side on a table and then move the body of the IC toward the table to bend the pins uniformly.

3) Bend out the following pins on both HM62256 RAMs: 1 2 20 22 23 26 27 28. These pins will NOT be soldered to anything on the ROMs. Holding the IC with the notch up and looking at the top, pin numbers start with pin 1 on the upper left, go down the left side, then across and up the right side. Pin 28 is opposite pin 1 on the end with the notch.

4) Place one HM62256 over the ROM that is parallel to the 9900. Make sure the notch points toward the 9900 and that the writing on the 9900 and the 62256 can be read from the same direction. Place the RAM such that pins 1 2 27 and 28 extend beyond the end of the ROM. The un-notched end of the RAM should line up with the un-notched end of the ROM. There should be a sort of "spring tension" that clamps the RAM pins onto corresponding ROM pins below it. This will help to insure good solder joints. If the RAM doesn't fit tightly, remove it and bend the pins closer.

5) Solder all RAM pins not bent out to the ROM pins below. Use a low wattage pencil with a fine, pencil type tip. Inspect each solder joint carefully in good light, under magnification.

6) Place the second 62256 on the ROM that is perpendicular to the 9900. The notch on the RAM points away from the 9900 and toward the edge of the board. As above, solder and inspect all pins that were not bent out.

7) Bend out the 74LS21 pins 1 2 4 5 6 8 10 12 14. Note that pins 1 and 14 are across from each other on this 14 pin IC.

8) The 74LS21 will be piggy-backed on the 74LS138 U504. This IC is located adjacent to the end of the board where the edge connector is. There are two 138's next to each other. U504 is the one nearest the end of the board. You will place the 74LS21 so that the UN-NOTCHED end lines up with the un-notched end of the 138 (pointing toward the cassette connector). Pins 1 and 16 of the 138 will extend beyond the notched end of the 74LS21.

9) Before positioning the 74LS21, solder 1/2" lengths of wire-wrap wire to the 138 pins 7 and 9. Then position the 74LS21 on top of the 138 and solder all pins not bent out to the 138 pins below and inspect the connections.

10) Bend out all of the 74LS153 pins EXCEPT 8 and 16.

11) Place the 153 over U613, a 74LS194. The notch will line up with the 194 notch and point toward the edge of the board away from the 9900. Solder pins 8 and 16 of the 153 to pins 8 and 16 of the 194 below.

12) At the end of the 9900 opposite to where the RAM's have been piggy-backed, you will see a line of three ICs. They are a 74LS00, 74LS32, and 74LS04. The 74LS00 is U606 and the 74LS32 is U605. Turn the board upside down so you can see the traces. Find the trace that runs from pin 11 of the 74LS00 (U606) to pin 13 of the 74LS32 (U605). Double check to make sure you're doing the pin numbering correctly. When you've found the trace, cut it with a knife so there is no continuity between the LS00 pin 11 and the LS32 pin 13.

13) Identify the piggy-backed RAM that is perpendicular to the 9900. Solder wire wrap wires connecting every bent out pin on this RAM to the corresponding bent out pin on the RAM that is parallel to the 9900. Pin 1 to pin 1, pin 2 to pin 2, etc. There will be eight wires in all to solder.

14) Solder wire-wrap wires to make the following connections on the RAM that is parallel to the 9900. Pin 1 goes to pin 24 of the 9900 (solder the wire to the 9900 pin on top of the board). Pin 2 goes to the 9900 pin 22. Pin 20 goes to two places. Connect pin 20 of the RAM to pin 22 of the RAM and also to pin 8 (bent out) of the 74LS21. There should be three wires coming off pin 20 of the RAM. Pin 23 of the RAM goes to pin 21 of the 9900. Pin 26 of the RAM goes to 23 of the 9900. Pin 27 of the RAM goes to pin 61 of the 9900 (fourth from the top on the right side). Finally, connect pin 28 of the RAM to pin 20 of the 74LS244 adjacent to the piggy-backed 74LS21.

15) Connect the following 74LS21 pins with a bare wire: 1 2 4 and 14. Connect the short wire from the 138 pin 7 to the LS21 pin 5 (bent out). Connect LS21 pin 6 to LS21 pin 12. Connect LS21 pin 8 (bent out) to the piggy-backed 153 pin 2. Connect the short wire coming from the 138 pin 9 to LS21 pin 10. Finally, connect the 74LS21 pin 14 to the 74LS244 pin 20 that you connected the RAM pin 28 to.

16) OK, we're almost done, so take a break and have a beer.

17) On the 153, connect pin 9 to pin 13 on the 74LS32 (U605). Pin 10 of the 153 goes to pin 14 of the 74LS74 next to it (U607). Also connect pin 10 of the 153 to pins 11 and 13 of the 153. Connect pin 12 of the 153 to pin 15 of the 153, and then connect pin 15 of the 153 to pin 7 of the 74LS00 U612 (next to the 74LS74). Connect pin 14 of the 153 to pin 11 of the 74LS00 U606; that's the one you cut the trace on.

18) That's it! Now have another beer before putting your computer back together. When you try it out, remember that this version isn't compatible with other 32K in the system.

TI-WRITER TIPS
By Tom Wynne - TIP#899 - June 1987
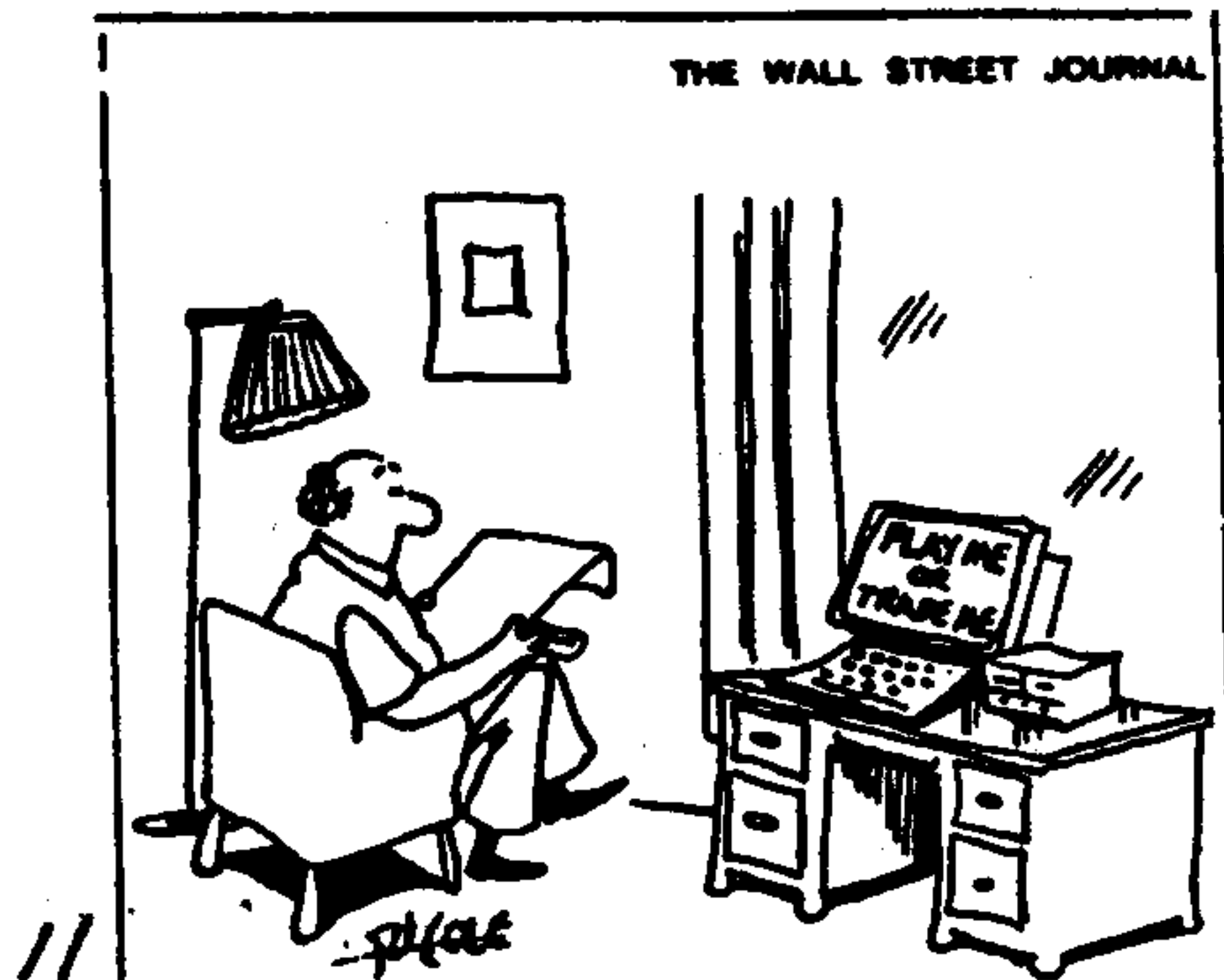
After working on the monthly newsletter and writing letters, I am quite familiar with TI-Writer. To make things easier for me, I constantly try to find more efficient ways of using TI-Writer. Some I have found to be more efficient are as follows:

First, I do not like windows. It makes it hard to proofread or follow text. What I do is simply change the margins in the Editor. Since the Formatters doesn't care how the words are formatted. Because it re-arranges them anyway, I do not have to type the text in the 80-column form. I set the left margin at zero and the right at 39 by using the (T) tab command. After this, I go into the edit mode (E) and press FCTN 0 to turn off the line numbers. Now I can type with the text on one screen.

Have your ever had to add a lot of carriage returns at the end of lines in a document? Using CTRL 8 does the trick but it also inserts a line which you must then delete. An easier way to put a carriage return symbol is to press CTRL U, press "N" (upper case only), then hit CRTL U again. If you need multiple carriage returns, press CTRL U, then move the cursor where you can the CR and press "N" again. When you are finished, press CTRL U to get the square cursor.

If you have typed in a large document, and now want to proofread it, I recommend you print it out first, take a pen and read it thoroughly. This is the best way to cath errors. When you have finished, go back to the editor. Now, instead of scanning through the text to find the word to correct, use the REPLACE STRING command. For instance, you

have a misspelled word: THEN and you want it to be THEN, simply use the REPLACE STRING (RS) and type /THEN/THEN/. This will now replace one or all of the misspellings of THEN in your text.

When you print out a document with many pages and you find a mistake, there is no need to print the whole thing again. With the Formatter, you can print out selected pages. For instance, I have a 5-page document and there is a mistake on page 4, I first correct the mistake with the editor. I go back to the Formatter to print it again. Instead of specifying A for all, specify 4 for page 4. The formatter will only print page 4. This saves time and paper. One warning though, if your change required you to reformat your paragraph by inserting or deleting an item, you would have to print that page and all pages after it because they in turn would be changed.

Moving around in your document can be slow or fast. The slow way is to use the arrow keys and wait. The fast way is to use the page up or page down keys. The fastest way is to use the S command, Show Line. With the Show Line command, you can enter the line you want to see and you are there. You can quickly get to the top of a document by typing S <ENTER> and 1 <ENTER> for show line 1. Now you are on the first line. This is especially nice when you are going to use a find string command where you need to be at the start of the document. If you want to get to the bottom, type S <ENTER> and E<ENTER> and you are there.

These are just a few Items I use. If you have any other ideas, please write to the Puget Sound 99ers, P.O. Box 6073, Lynnwood, WA 980.36

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