



99'er Online

MAY 1985

P.O. Box 11983
Edmonton, Alberta
Canada T5J 3L1

TO: (

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99'er ON LINE is the news letter of the Edmonton 99'er Computer User's Society published ten times a year. All material contained in this news letter may be published in other news letters provided that source and author are identified unless otherwise stated. We welcome correspondence from all TI User Groups and will extend source credit courtesy in **99'er ON LINE**.

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OFFICERS: PRESIDENT--BILL CANNON, VICE PRES--PAUL HELWIG, TREASURER--EVAN SMITH, SECRETARY--SUSAN LIVINGSTON

DISCLAIMER: All information published in this news letter is, for the most part, the fruits of the labors of amateurs; therefore, we cannot guarantee that the information presented is always correct.

REGULAR MEETINGS: Regular meetings of the Edmonton User's Group are held on the second Tuesday of each month on the 3rd floor of the General Services building of the University of Alberta from 7:00 till 10:00 PM and are open to all members in good standing. Non-members may attend their first meeting free of charge. The Executive Committee meets monthly. Members may attend these meetings as observers or to address a particular issue. Arrange with one of the officers listed above if you wish to attend.

ADVERTISING: Commercial advertising space is available in this news letter at the following rates: FULL PAGE--\$20.00, HALF PAGE--\$15.00, 1/4 PAGE--\$10.00. Discuss your commercial needs with Paul Helwig at the next meeting or write to the P.O. Box above. Members may advertise their personal computer related items for free but are asked to limit their ads to about 20 words. Mail your ads to the EDITOR'S ADDRESS or hand it to him at the general meeting; newsletter deadline 15th of the month.
MEMBERSHIP FEES: FAMILY---12 MONTHS, \$20.00, 6 MONTHS, \$15.00. STUDENTS---12MONTHS,\$15.00, 6 MONTHS, \$10.00.

NOMINATIONS

Below is a nomination form for your use. Please do the following to assure your nomination is valid:

1. INCLUDE YOUR NAME AS THE NOMINATOR
2. CONFIRM WITH YOUR NOMINEE THAT HE/SHE WILL STAND FOR ELECTION
3. MAKE SURE THAT YOUR NOMINATION REACHES THE NOMINATING COMMITTEE BY MAY 28th, 1985
4. NOMINATE ONE PERSON ONLY FOR A POSITION
5. TO BE ELIGIBLE, BOTH THE NOMINATOR (YOU) AND YOUR NOMINEE MUST BE MEMBERS IN GOOD STANDING OF THIS USER'S GROUP
6. PLEASE PRINT!

--CUT-----CUT--

NOMINATION FORM

NOMINATOR'S NAME: _____

POSITION	INCUMBENT	NOMINEE
PRESIDENT	BILL CANNON	
VICE PRESIDENT	PAUL HELWIG	
TREASURER	EVAN SMITH	
SECRETARY	SUSAN LIVINGSTON	

--CUT-----CUT--

This years nominating committee is Bob Pass and Bob Chapman. There will be a box set up at the May 14th General Meeting. (General Services U of A) for your forms or you may mail them to the P/O Box (address is on the front of the newsletter).

WHAT'S HAPPENING?

NEXT MEETING - The next meeting will be held on the second Tuesday in May (ie May 14th, 1985) at 7:00 PM in room 849 of the General Services Building on the U of A campus. This is building number 16 on the campus map and is located on the east side of 115 St about 2 blocks north of the Jubilee Auditorium.

LAST MEETING - Unfortunately, due to a mix up, Mr. Martin Kratz was not able to get to our meeting as promised. (He will be at the May meeting to continue with his lecture regarding the law in the field of computers and related security.) In lieu of the expected lecture, we discussed items of general interest and then we broke off into our own special interest areas. Our hardware corner was a busy gathering point for many people and it appears to be a popular addition to the group.

Some new members were welcomed to the group. Seems they heard of us through Tom's BBS. Speaking of which.... Tom brought us up to date with the latest developments on the system. We now have 70 or so users logged into the board and things are becoming more active. Michal Jaegerman did considerable Assembly Language development and

created a working downloader for the board. This means that Tom can and will provide a selection of programs that can be copied directly from the board to your disk in **RUNable** format using the TE II module. If you have not tried this new service we are offering and you have the equipment, be sure to have a look; you will be pleasantly surprised! You can reach the board at 424-3258 almost any time.

FLOPPIES - Do you have enough floppies to last the summer? Bob Pass will be taking orders again at the May meeting for diskettes for delivery at the June meeting (or pick up at his house if you need them sooner and don't mind a drive to St. Albert!) The price is \$16.00 for ten and they are guaranteed **SSSD** quality by the manufacturer; however if you have **SSSD** drives, Bob will personally replace any disk that will not format to spec. In order to save Bob from cleaning out his piggy bank, please pay cash in advance when you order for delivery at the next meeting.

NEWS LETTER FILES - For those who signed out a news letter file

at the last meeting, please remember to return them to Greg Sears so that circulation is maintained to others.

GUEST SPEAKER - At the next meeting, as promised for the April meeting, Martin Kratz will return to finish his discussion of the legal world and computing. The fall session covered topics concerning software copyrights and piracy and was most interesting. If you missed Martin last time, be sure not to this time around.

ELECTIONS - A reminder that June is the month when we vote in a new executive body. Nominations are must be received by May 29th, 1985. You can turn them in at the May meeting or mail them in to the P/O box listed on the front page. Please use the nomination form on the front page or pick one up at the May meeting.

Be warned; your current executive cannot stand again this year and there will have to be some new talent forth coming. **All four executive positions will be vacated.** If you need more information regarding the responsibilities of the various positions before you nominate, please see one of the current executive at the next meeting. As a courtesy to your nominee, please confer with him/her before nominating them.

THIS NEWS LETTER - This month ay thanks once again to Tom Hall for his articles. Tom seems to be a bottomless source of information and ideas of interest. He makes ay job much easier. Also, another regular contributor deserves ay thanks; Greg Sears has once again skimmed cream from our latest newsletter file and his submission this month is a neat X-Basic utility that will allow you to write basic programs using the TI-WRITER or EDITOR/ASSEMBLER full screen editor. This is one of the advantages of maintaining a newsletter network with other groups. Michal Jaegerman has contributed another article in his interesting series of TI-FORTH modifications; this time, lower case letters for FORTH. For those of you having problems with TI-WRITER, John Harbour has started a tutorial on this word processor in this month's newsletter. A tip of the hat to Michal and John! **LITTLE GEMS** this month are devoted to products you might find of interest. If any of you have an idea for an article, jot it down and let me know at the next meeting. Even better, write the article and I'll get it into the next newsletter! Any ideas for a new column out there?

MEMBERSHIP LIST - In order to improve communications between our members, we are contemplating listing all our active members in next month's news letter along with current phone numbers.

IF YOU DO NOT WANT YOUR NAME AND/OR PHONE NUMBER PUBLISHED in this news letter, please notify Susan or Paul at 432-0613 before MAY 15th, 1985.

CONTESTS - We have still not received an entry for our **LETTERHEAD** contest. The objective is to use any of the TI programming languages to create our logo (as it appears on the face sheet of the newsletter); society name, and mailing address at the top of a blank page. The only other requirements are that the output device must be a dot matrix printer and the programmer must be an active member of the society.

At the April meeting, Bob Pass challenged the group to improve the label program that was printed in the April newsletter. Please refer to that copy for a listing and the associated challenges. Deadline for this contest is the June meeting.

Prizes will be awarded in September to the best entry(s) in each contest provided that the entry meet minimum criteria. Bill Cannon assured the group that the prizes will not be imported from Disney Land! Your entry should be self documented if possible or at least have written documentation. The entry must be on tape or **SSSD** disk. If on tape, provide a backup on the flip side. Make sure your entry is clearly labeled with your name and phone number. We will also expect the winner(s) to allow publication of their entry in the newsletter. Naturally, this means that your entry must be original with you else we could all be sued for copyright violation; remember, this newsletter goes to over sixty other groups and word gets around!

ADVERTISING - Jim Mulligan has kindly volunteered to look after all the commercial advertising for the newsletter. Please see Jim for your advertising needs; he is at every meeting.

DISK LIBRARY - Another volunteer! Ken Godbeer has assumed responsibility for organizing our software library which is no small task! I am sure that once Ken has things organized, he will be pleased to accept your creations and make them available to us all.

THANKS - To our volunteers - Ken, Jim, & Greg. Through their efforts, this group will remain viable, dynamic, and fresh. Thanks guys, your commitment is appreciated.

UMBBS - A PILOT PROJECT

by: Tom Hall

UMBBS01 LOGON IN PROGRESS AT 19:34:47 ON FEBRUARY 20, 1985

On Friday Jan. 19, 1985 UMBBS was shutdown. The main reason was the cost of providing this service. After a review, the board may be back. Thank you for your cooperation and support. Comments, questions, etc. may be mailed to:

Mark Evans
Dept. of Computer Science
University of Manitoba
Winnipeg, Manitoba R3T 2N2

UMBBS01 LOGGED OFF TSO AT 19:34:58 ON FEBRUARY 20, 1985

If you call DATAPAC now, and enter the number 93200233, you are connected to the mainframe Andahl 470 computer at the University of Manitoba in Winnipeg. Typing BLDGON UMBBS provides you with the message which appears above.

For approximately three months, the University of Manitoba Computer Services Department sponsored a unique experiment in electronic bulletin boards: The University of Manitoba Bulletin Board System, or UMBBS, as it came to be known. For the first time anywhere, there was a multi-user bulletin board which was available FREE OF CHARGE to any caller, anywhere in North America, who had the basic equipment necessary to contact other computers.

UMBBS supported a total of 14 sub-systems, most of them dedicated to specific computer types. Unfortunately, the board didn't last long enough for the TI 99/4A to get its own board, so TI-ers all over North America congregated on the "general" board, and amidst all the tomfoolery you might expect, a lot of valuable information pertinent to the TI was exchanged, and a lot of new friendships forged.

This writer first heard of UMBBS when he got a call from Francis Gaston, one of our members in Saskatoon. Francis told me about this fantastic bulletin board system in Winnipeg which was available at no cost through DATAPAC, and where a lot of TI-related information was flying thick and fast.

Well, yours truly wasted no time in signing on to the board, and as a result, I've made several new friends, exchanged an incredible amount of software --- and picked up John Clulow's BBS system for the TI, which I hope to have up and running within the next few weeks. (Fait Accompli; see other articles in this newsletter - ed.)

Perhaps the most exciting aspect to the UMBBS experiment was the concept itself. In the last few weeks of the board's existence, a real-time chat program was installed, and it was actually possible for as many as 10 people to be simultaneously connected to the board from any place with access to DATAPAC or TYMNET (DATAPAC's American counterpart), and these people could electronically "chat" with one another -- virtually as good as a long-distance call, but FREE!

But for me the best part of all was finding out about other groups like ours in Eastern Canada and the States, and especially discovering that there were only two TI bulletin boards in all of Canada, and that ours could be #3. All kinds of neat information was there for the

taking, including a fairly comprehensive list of TI boards all over the States. If anyone would like a copy of that list, just contact me and I'll be glad to supply you with one.

As the message at the beginning of this article said, there's a slim chance that UMBBS will be back, but considering that it was costing the University of Manitoba an average of \$4000 a month to keep it going, I wouldn't hold my breath!

LIBRARY NEWS

by: Gord Bradley

I have prepared a list of the books and magazines available in the group's library. The list gives the title, author, year published, and general subject matter. If you wish to borrow any of this material for a month, (or even better, donate material forever!) please see me at the next meeting.

BOOKS

Computers & Common Sense
S.Greenblatt, 1979
Understanding

Computers
Paul Chirlane, 1978
Understanding

Computer Systems
Sol Libes, 1978
Handbook

Personal Computing
Dan McGlynn, 1977
applications

Computer Terms
John Prentis, 1977
Dictionary

Home Computers
Miller & Sippl, 1978
Guide

Executive Computing
John Nevison, 1980
Guide

Home Computers
Rich Didday, 1976
Question & Answer

Home Computers
Steve Ditlea, 1979
Simple Guide

Home Computers
Scott Corbett, 1980
Simple Guide

Computers
J.Fahnstock, 1959
How They Work

Basic Handbook
David Lien, 1980
Computer Language

Electronic Computers
H. Jacobowitz, 1963
Self Study

User's Guide To TI
Consumer's Guide, 1983
Software

The Soul Of A New Machine
Tracy Kidder, 1982 Pulitzer Prize
Engineering, True Story, Easy Reading

**TI WRITER TUTORIAL:
LET'S WRITE A LETTER**

by: John Harbour

I wonder how many of us have a TI Writer, but are experiencing difficulties with the different formats etc. I had quite a time before I eventually got my TI Writer to format letters properly --- in fact, many hours of frustration! But although I am not an expert by far, perhaps there will be somebody out there who will benefit from my mistakes. I have written a "template" that will format for you a personal letter; if it is loaded into your TI Writer, it is practically self explanatory. All you need is the TI Writer module and Program Disk, an extra initialized disk we will call the file disk, 32K memory, printer compatible with Epson, and away you go.

First, insert the module into the CONSOLE, then, insert the Program disk into disk drive #1, press 2, twice (this will display the TI Writer Menu), select Editor(1), and wait for the program to load. (For those of you fortunate enough to own two drives, insert the file disk into drive #2 while you wait for the program to load). The cursor is now on the Command line. Press CTRL 3 to toggle screen/character colors to something you like. We now change disks, (that's if you are like me and cannot afford two drives), loading your file disk - that's the one you have saved your template on (see below), type in LF (for Load File) press enter, type in DSK1.filename and press enter. You will now have in front of you a letter template; make sure you have a back up copy before you start messing with it. All you have to do for now is to fill in the X's, or type over my words. The screen version explains all the commands; the comments following the period &CD are the brief explanations. I recommend that you read the users manual regarding "TRANSLITERATION" (see page 107). Also, reading pages 142 through 146 and page 98 will be helpful. Not all are used in this example but leave them in the template for now. In a later newsletter, I will show you how to use them.

Type in your letter, starting with your sender's block, lines 13,14,15,16. Line 17 just requires a carriage return (press enter) or CTRL M (when using this control, you must cancel the following line, with FCIN 3). Continue to line 32 and start your salutation, eg. Dear John. Goto line 39 and begin the body of your letter, entering all your text. As you type, the lines will automatically scroll down. Leave one space after each punctuation character but two spaces after each period. At the end of each paragraph, place a carriage return, (ENTER). This may seem trivial at the moment, but attention paid to carriage returns can save you grief later! If you wish to type a **BOLD** word, prefix it with an "a" symbol. Prefixing a word with "u" will cause it to be underlined, while prefixing with both will cause the word to be **BOLD/underlined**. The same features may be applied to a phrase provided you use the "CARET" symbol (SHIFT 6) as a word separator instead of a space. If you want to print an "v" or "x" symbol, simply type two of them and the printer will print one as usual without any fancy stuff!

Continue your letter until you have finished, then move down to line 55. Please note that from here on, the line numbers are in reference to the template **before** you added your text. As you added text, the original line 55 was pushed down. Now, you are going to set up to address the envelope; fill in lines 55-58, then lines 53-56.

The next step is to save what we have done up to now. Press the following key combinations: FCIN 9, 3F, ENTER. At this point you will be requested to enter a filename

MAGAZINES

Enthusiast '99
Vol.1 No.2, July/83
" " " 3, Sept/83

Personal Computing
Vol.7 No.11, Nov/83

Hobby Computer
Fall, 1983

99'er Magazine
Vol.1 No.1, May/June 1981
" " " 2, July/Aug "
" " " 3, Sept/Oct "
" " " 4, 22 1982
" " " 5, 22 "
" " " 6, 22 "
Vol.2 No.1, Nov. 1982
" " " 2, Dec. "
" " " 3, Jan. 1983
" " " 4, Feb. "
" " " 5, Mar. "
" " " 6, Apr. "
" " " 7, May "
" " " 8, June "
" " " 9, July "
" " " 10 Aug "
" " " 11 Sept "
" " " 12 Oct "
" " " 13 Nov "

LITTLE GEMS

Two new products from Starsoft for the serious programmer who needs some new tools (read "toys") in his collection. First is the Disassembler which can do it's thing in text, data, or mnemonic instruction formats and direct output to screen, disk, or printer. It will also disassemble system ROM routines (!!!) and programs loaded from disk. Requires 32K memory and Editor Assembler module.

Their second offering is Disk Editor which allows disk access by sector and byte rather than by filename. Sector contents are displayed on screen and you can edit the data in Hex or ASCII format. Requires 32K memory and one of X-Basic, MiniMemory, or Editor Assembler. Price for either product is \$19.95 (US) and can be ordered from:

STARSOFT
501 ALLEGHANY ST.
BLACKSBURG, VA 24060
U.S.A.
1-703-753-1490

and the last filename you used will be displayed as a default (DSK1.S/P/L) which you can select simply pressing ENTER (thereby overwriting the original file) or you can save it to a new file by editing in a new name, eg. DSK1.JOHN, or whatever. This will not destroy your sample, DSK1.S/P/L.

Now to print. Change back to the program disk and enter the following key strokes: FCTN 9, 0, ENTER, E, ENTER. The main TI WRITER title screen will now appear. Press 2 once to select the TEXT FORMATTER program. While it is loading, turn on the printer and set up your paper stock. When the formatter command screen appears, change back to the file disk, type in DSK1.JOHN, or whatever filename you used, then press ENTER. The next line contains printer parameters. If these are not correct for your printer, edit this line to the correct values, then press ENTER. Press ENTER again until you reach the prompt, STOP AT THE END OF PAGE Y/N; type in Y and press ENTER. The printer should now print the pages, stopping at the end of each page. After it prints the signature block, remove paper and feed in the envelope, preferably, the long business size, 9"X3 1/4". Again press enter, as you did between the previous page breaks; if the bell sounds when you are printing out the envelope, just insert some scrap paper over the "out of paper" switch under the roller to close it until the envelope has been printed out. Put a stamp on it and --- well you know the rest!

Your first problem however will be to type in the template. After reading the above, and by thumbing through the TI WRITER manual, you should be able to get a copy onto disk. Enter the template just as it appears below; bear in mind that the carriage return symbol is not printable and does not appear on the template. Simply type it in like a program and press ENTER at the end of each line. Line #0043 appears blank; it actually is a carriage return to create a single blank line. Lines 0029, 0031, & 0048 may cause problems. Read the recommended (see above) manual pages for further information and consult your printer manual as well.

For you more fortunate people who have modems, phone me and you can have a copy of the template direct; you can obtain my phone number and address from the executive if you are a bonafied and payed up member. I require some response however, to find out if this project is going to be worthwhile, so dust off your printers and get cracking by sending me your first letter!

JOHN.....

LITTLE GEMS

Interested in learning more about computers and their electronic environment? TI is releasing its "UNDERSTANDING SERIES" of books designed for those who want to learn more about today's technology. Ten titles are due for 1985 out of a planned thirty-six. Subjects in the first ten include: Automation, Automotive, Solid State, and Digital Electronics, Communications, Telephony, & Microprocessors. Retail price is \$14.95 (US). Contact:

TEXAS INSTRUMENTS INC.
P/O BOX 225474, MS 8218
DALLAS, TX 75265
U.S.A.
1-214-997-3926

TI WRITER LETTER TEMPLATE

```

0001 .ET;LM 10;RM 70;.CO SETS,MARG AND
0002 .CO FILL
0003 .PL 50;CO PAGE LGTH
0004 .IN 32;.CO TAB FOR ADD.
0005 .CO 33,42,37,43,CHECK ASCII
0006 .CO CODE,TL(TRANS LITERATE)
0007 .CO 14,15,18,20,CHECK PRINTER
0008 .CO CODES
0009 .TL 33:14
0010 .TL 42:15
0011 .TL 37:18
0012 .TL 43:20
0013 YOUR ADDRESS
0014 !EJMONTON@
0015 !ALBERTA@
0016 XXXXXXX
0017 Dec 29,1984
0018 .IN +0;.CO CANC TAB TO LM
0019 .SP 2;.CO LEAVE 2 BLANK LINES
0020 .CO TO WHO EVER XXXXXXXXXXXXXXXX
0021 .CO THEIR ADDRESS XXXXX XXXX
0022 .CO FTR. YYYYY
0023 .CO RETURNS 33 TO NORMAL FUNC
0024 .TL 33:33
0025 .SP 2
0026 .CO CHANGES TEXT FORMAT (ITALIC)
0027 .CO SEE PAGE 146 TI WRITER,USING
0028 .CO CTRL "U",FCTN "F",METHOD
0029 'b
0030 .CO SETS EMPHASIZED FORMAT
0031 'b
0032 My Dear XXXX,
0033 .AD;.CO ADJUST
0034 .SP 2
0035 .CO .CE
0036 .CO REF:*****
0037 .LS 2;.CO SETS LINE SPACING
0038 .IN +5;.CO PARA TAB
0039 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0040 .IN +20;.CO SIGNATURE BLOCK
0041 sincerely yours
0042 .CO GND/SPACE/SIGNATURE
0043
0044 *****
0045 JOHN,
0046 .CO CANC/FORMAT
0047 'b
0048 .IN +0;.CO CANC/TAB FOR ENV
0049 .CO XX/xx
0050 .SP;.CO STARTS NEW PAGE/INSERT
0051 .CO ENVELOPE,USE FRICTION FEED
0052 .LS;SETS LINE/SPACE TO NORMAL
0053 .TL 42:15
0054 .TL 43:18
0055 YOUR NAME
0056 ADDRESS.
0057 CITY, PROVINCE
0058 POSTAL CODE
0059 .SP 4
0060 .IN 25
0061 .TL 33:14
0062 .TL 37:20
0063 !SEND TO NAMEX
0064 ADDRESS
0065 CITY, PROVINCE, COUNTRY
0066 POSTAL CODE
0067 .CO CANC EMPH/FORMAT
0068 'b F
    
```

lower case FOR TI-FORTH

by: Michal Jaegermann

If you think that the standard lower case characters for the TI-99/4A are plain ugly - well, you are not the only one. From TI-Writer and Multiplan updates, one can infer that even Texas Instruments shares that opinion. There is no good reason not to enjoy nice, well formed letters in TI-Forth too! So let's install them.

First, we have to define our new characters and store them somewhere among the Forth screens. On the system disk, screen 67 contains a definition of a character set for the 64 column editor and more than half a screen is actually empty. It looks like a good place for us to store our character set and logical too.

Forth writes to disk using BLOCKS. If you execute 67 BLOCK, then screen 67 will magically appear in the computer memory and the first address of that area will be on the stack. Let's change some values among the next 1024 bytes. Now FLUSH ...and nothing. Contents of the disk are untouched. What happened? FLUSH will write to the disk only if it finds that BLOCK was UPDATED. So you have start with 67 BLOCK UPDATE. Now if you make any changes in the disk buffer and FLUSH, they'll find their way to the disk.

In theory it is possible right now to manually store updated data in different places and write all that stuff to a disk. But that would be a lot of work that would be quite error prone. Let's do it instead using Forth. First load DUMP (-DUMP will do that). We will use it to check our work. Next change the number base to HEX (we will see why in a moment) and define from the keyboard the following two words:

```
: CHDEF QUERY 4 0 DO 20 WORD HERE NUMBER DROP OVER !
2+ LOOP DROP ;
: LCDEFS DUP 8 - 10 DUMP CR
43 BLOCK UPDATE 278 + SWAP DO
CR I . SPACE I CHDEF 8 +LOOP ;
```

The first of these two words requires on the stack an address - like 21DA. It will print it out and it will wait for you to enter four hexadecimal numbers. Put **exactly** one space between them and hit ENTER after the fourth one. You may skip leading zeros if you wish. If you make a mistake - too many spaces, not enough numbers - you will see "?". Press ENTER - computer will respond "ok" - type HEX, the same address as before and repeat CHDEF. If you think that sequences you are entering look familiar, you are absolutely right. They are exactly the same as character defining sequences from the Basic CALL CHAR command, only with extra spaces between every group of four hexadecimal digits which makes proof reading easier. Did you realize that you were "talking hexadecimal" before?

LCDEFS is our main tool. Type 43 BLOCK 180 + LCDEFS and type in the whole table given below. Addresses in the first column will be supplied by the computer. They will be the same as here if you renumber to EMPTY-BUFFERS before starting. All remarks on mistakes and restarting for CHDEF also apply in full here. Once you are through, check your job with DUMP and when you are convinced that everything is all right, type FLUSH.

This table is my proposition for a lower case character set. You can always introduce small changes with CHDEF or redefine it completely to suit your style and LCDEFS it once again. But just for a start:

2192 2010 0800 0000 0000

219A	0000	3008	3848	7400
21A2	5020	3824	2424	7800
21AA	0000	3844	4044	3800
21B2	0C08	3848	4848	3C00
21BA	0000	3844	7C40	3800
21C2	1824	2070	2020	2000
21CA	0000	3C44	443C	0438
21D2	5020	2834	2424	2400
21DA	1000	7010	1010	7000
21E2	0200	1808	0848	4830
21EA	2020	2428	3028	2400
21F2	3010	1010	1010	7C00
21FA	0000	A854	5454	5400
2202	0000	3824	2424	2400
220A	0000	3844	4444	3800
2212	0000	7824	2438	2020
221A	0000	3048	4838	080C
2222	0000	5824	2020	2000
222A	0000	3C40	3804	7800
2232	2020	7820	2024	1800
223A	0000	4848	4848	3400
2242	0000	4444	2828	1000
224A	0000	3454	5454	2800
2252	0000	4428	1028	4400
225A	0000	4444	443C	9418
2262	0000	7C48	1024	7000
226A	1820	2040	2020	1800
2272	1010	1009	1010	1000
227A	3008	0804	0808	3000
2282	0000	2054	0800	0000

What remains right now is to inform our Forth that we have new character definitions. One may always read the data screen into a buffer and move the data to the proper location in VDP memory. Since I do not want to be tied to the system disk when I am changing different display modes, I decided to store them in memory. This is easy to accomplish as follows:

```
HEX 0 VARIABLE 1c FB ALLOT 43 BLOCK 180 + 1c 7C MOVE
```

This will put the fruits of your labor into a 248 byte long table whose start address is given on stack by 1c. Try 1c 40 DUMP to see for yourself. I propose to put the line above on the very beginning of screen 20 of the system disk because this will be executed at the very start of a standard LOAD sequence. Actually, if you rearrange things a little bit, you may free up on screen 20 four extra lines needed for all definitions. This is a little bit tight but it can be done. Do not move only the MENU text, which starts in line 9. We need the mentioned extra definitions since all standard upper case characters will now be one pixel too low - not leaving a space for descenders. Instead of redefining them in an explicit manner I have chosen to move them up with the following word which starts by loading the upper case set into the VDP address found on stack:

```
: PXL DUP 834A ! 0 873C C! 18 A SYSTEM 0 PAD 6 + !
DUP 200 + SWAP DO 1 + PAD 7 5 SYSTEM PAD 1 8 2 SYSTEM 8
+LOOP ;
```

All those fancy system calls instead of GPLLNK, VMBR and VMBW in order to make PXL independent from a screen which contains appropriate definitions. Now write : NCHRS DUP 200 + 1c SWAP 8 2 SYSTEM PXL ; 200 NCHRS and you are done. At least for the 40 column text mode. How about GRAPHICS or SPLIT modes? Right now this is a breeze. Modify on screen 55 line 5 to read WPILL 3100 NCHRS and line 10 to read 2100 NCHRS. On screen 55 replace lines 4 and 5 with 900 NCHRS and that's it.

Next project - redefine the character set for the 64 column editor. This is quite easy though tedious. So I will leave that morsel to you.

EDISON ~ BELL

* formerly "THE GAMES GANG FAMILY COMPUTERS" — (Same guys, just new ideas).

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THE EDMONTON TI BBS

by: Tom Hall

After much work and planning, our group now has its own bulletin board! The Edmonton TI BBS officially opened on March 18, and I am quite pleased with the response it has received so far. As far as we know, there are fewer than a half-dozen TI BBS's in all of Canada, and with the exception of a TI board in Saskatoon, the nearest Canadian TI board is in Ontario!

Putting the Edmonton BBS together was really a joint effort. First of all, John Clulow and Ron Gries of the Northwest Ohio Users Group developed the original software, which included schematics for a rather ingenious device which interacts with software. It can detect the ringing telephone and automatically put the modem on line, wait for a carrier, and either hang up and wait for another call (if no carrier was found), or, if someone suddenly hung up in the middle of a session, the program will detect the loss of carrier and take appropriate action via the device to hang up the phone and await the next call!

The software was sent to us by Terry Atkinson, sysop of the Dartmouth TIBBS in Dartmouth, Nova Scotia. Bruce Benoit, himself the sysop of a local Edmonton Apple board, did the actual construction of the device, even going as far as re-designing it once he discovered that, as specified, it wasn't going to work as we wanted it to.

Michal Jaegermann tackled the machine language portion of the program -- which was supplied completely devoid of any documentation. Michal was able to develop a routine to suppress echoing at the entry of passwords (which simply means that when you type in your password, nothing appears on your screen!). He also came up with a scheme to make maximum use of disk space in maintaining the user file by developing a keyfile system whereby each record in the user file is associated with a given key in a second file, very much on the same principle as the bit map table in Sector 0 of a TI disk. If an existing record position in the file is tagged as being available, then the next new user information can be written to that spot in the file instead of creating a new record and thus increasing the size of the file unnecessarily.

A short while later another assembly language routine arrived: an X-Basic rendition of the Terminal Emulator II file transfer protocol. Unfortunately, it didn't work at all, and after a considerable amount of work, Michal Jaegermann all but rewrote the source code from scratch, and finally got it to work. I can safely say that if it weren't for Michal, the BBS software might never have gotten off the ground!

The Extended BASIC portion of the program has been extensively modified, since the original program had no provision for any kind of user file, and I've even added some "jerk" traps to make it extremely difficult for people whose only purpose is disruption to gain access to the board.

All in all the board is doing quite well, and is receiving excellent support from the modeming community -- both TI and non-TI. As of the April meeting, there are nearly 65 users on file, and I expect that number to grow considerably as word of a new TI BBS in Edmonton spreads to the rest of the country!

QS-XREF: A SOFTWARE REVIEW

by: Tom Hall

A while ago I received a software package from Quality 99 Software called DATA BASE 99, which I reviewed in an earlier issue of this newsletter. I've had the occasion to use that program quite extensively, and in the course of using it, I discovered a couple of bugs. I wrote a letter to the company in Washington, D.C., and a short while ago was pleasantly surprised by a parcel in the mail. In that parcel was a very nice letter from Larry Hughes, the company's Director(?), thanking me for bringing these bugs to his attention. Included in the package was a disk, and Mr. Hughes said in his letter that the enclosed disk contained a copy of their very newest, yet-to-be-released product, QS-XREF.

For those of you who have TI's PROGRAMMING AIDS III, you'll recall a package called Cross-Reference, which consisted of three programs: LINPUT, CREF, and CREFPRINT. While quite a useful utility, the TI package has one serious drawback: it is SLOW! An average-sized BASIC program could take as long as an hour to run through the Cross-Reference utility.

Well, the QS-XREF program is light-years ahead of the TI program. The program is an auto-loading Extended BASIC program which you first load into memory. All instructions necessary for running the program are displayed on the screen, and all you have to do is specify what output device the listing will go to. The next step is to load in the BASIC or Extended BASIC program you want to cross-reference, and then execute one of two LINK statements. The only difference between the two statements is that one is a shorter version which only dumps variable names, subprogram calls, and line number references. The longer version will also list every major keyword, auxiliary keyword and built-in BASIC function.

Once the CALL LINK statement has been issued, the listing begins IMMEDIATELY on both the screen and whatever output device you specified when loading the program. I might add that the output device name can be changed at any point prior to commencing the actual listing. This is accomplished by means of another CALL LINK statement.

In my opinion, this is perhaps the best utility ever from Quality 99 Software, and I even telephoned Larry Hughes to tell him so. The program is blindingly fast; an 80-sector Extended BASIC program is completely cross-referenced on the screen in about 2 minutes --- 3 minutes if the printer is used.

There's even one feature which was added to QS-XREF that the TI version never included: in the variable name listings, all line numbers in which a given variable is referenced is listed; if the line number is starred with an asterisk, it indicates that the variable in question has had its value changed in that line. I'm sure any BASIC programmer can see the beauty of that function! At a glance you can tell exactly where in your program each and every variable is being altered. Another feature not included in the TI version is that if a variable is named more than once in a given line, the line number will appear in the listing once for every occurrence of the variable itself. In other words, if variable A\$ is mentioned three times in line 1570, then in the variables listing, the variable A\$ will show three occurrences of the number 1570, once for each occurrence of the variable.

I can't quote the price on this utility, since at the

time I received it, it was a complimentary copy and the program had not yet been officially released, but I would imagine that it'll be about the same as most of the other Quality 99 Software, i.e., in the neighborhood of \$35 U.S. While the exchange rate on our dollar isn't the best right now, I would not hesitate to say that 99-XREF is definitely worth the money!!

Editor's two cents worth! Having used the TI Cross Reference Utility and after seeing Tom's demo of this package, I can join in Tom's enthusiasm. It is a **MUST** for any BASIC programmer's Tool Box. In Tom's case, some good things are free!

LITTLE GEMS

HOME COMPUTER MAGAZINE has been printing some excellent programs lately! Many of you are already aware of "Snapcalc" that appeared about 4 months ago and you have heard some of the comments about it. Well the two most recent issues (Vol.5 No.1 & No.2) contain an excellent program called "THE ORGANIZER" with the main program in the earlier issue and a printer option in the second. This program is a unique approach to planning a project or organizing collections of data. I think it could be easily applied to family trees for example. The program is in X-Basic and requires a disk drive and 32K memory is probably required as it is a BIGGIE! I strongly recommend that you read Vol.5 No.1 and assess the potential of this new concept in programs.

BASIC: Full Screen Editing is Finally Possible !

by: Frederick Hawkins
LEHIGH 99'ER COMPUTER GROUP
Allentown, Pennsylvania

John Hamilton, writing a column called "99 Tips" in the Central Iowa 99/4A 06 "The 4A Forum", (c/o Robert Utter, 3013 E. 32nd St., Des Moines, IA 50317), is up to tip 81. We don't know about the first 80 but the last is a real huuuinger.

John's crucial insight into TI's MERGE command (X-Basic) makes this program tick. What he noticed, (and TI didn't document, naturally), was that the MERGE command doesn't check for syntax on the way back in.

In other words if your disk file is:

1. DISPLAY, VARIABLE 163
2. EACH RECORD STARTS WITH A LINE NUMBER
3. THE LAST RECORD IS HEX FFFF. (CHR(155) twice)

Then you have a merge format file!

BASIC: Full Screen Editing

Notice that the file DOES NOT require any BASIC syntax! You could create a DIS/VAR 163 file that consists of a grocery list, and it will MERGE!



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Why is the ability to create a MERGE file so earthshaking? Because now you can use TI WRITER, or the EB/ASSEMBLER to write your BASIC programs. You can have all of the features of their Editors like Find String, Move, Copy, Include Files and so on and still be able to RUN the program. You can also RUN a LISTed program (obviously it has to be on a storage device, not a printer). Other uses include being able to RUN screen dumps from the Terminal Emulator II environment.

(Lately, there's been a virtual storm of activity on the SOURCE, around something called "SUBFILE99". One of its attractions is a "SUBFILE DOWN-LOADER". I haven't really checked it out, though I'm certain it uses this same technique; a good idea spreads like wildfire. The DOWNLOADER is pretty long-winded though, running to about 140 lines. We'll settle for 6. If you're intent on getting the DOWNLOADER, use ours to translate it.)

TRANSL

DIS/VAR 90 to DIS/VAR 163 file conversion program. Idea by John Hamilton, Central Iowa 99/4A Users Group; modified by Fred Hawkins, Lehigh 99'er Computer Group

```

%1 CALL CLEAR :: OPEN #1:"DSK1.TESTER" :: OPEN
%2:"DSK1.OUTR",VARIABLE 163
%3 LINPUT #1:L$ :: S=POS(L$," ",1):: ON ERROR 6 ::
N=VAL(SEG$(L$,1,S))
%4 ON ERROR 5 :: A=INT(N/256):: A$=CHR$(N-A*256):: PRINT
L$
%4 PRINT #2:CHR$(A);A$;CHR$(131);SEG$(L$+A,80);CHR$(10)::
GOTO 2
%5 PRINT #2:CHR$(255);CHR$(255):: CLOSE #2 :: END
%6 ON ERROR 5 :: RETURN 2
    
```

How to use TRANSL: The program expects a standard DISPLAY, VARIABLE 90 file. Each line in the program text must begin with a line number; Error trapping on lines 2 and 6 will discard any line that has no line number. The program text line numbers DO NOT have to be in order; the MERGE command will put them where they ought to go.

If you use TI-WRITER, be sure to use the FIXED cursor mode, ie the cursor that is open rather than solid. Otherwise each line will have a carriage return affixed to it and you'll get a syntax error. TI-WRITER will also save a TAB line if you use Word Wrap (solid cursor) mode. Keep lines shorter than 80 characters because TRANSL will clip off extras. (It is possible to get around that, so go ahead and chance it.)

You may modify line 1 to OPEN different files. As the program RUN's, each line is displayed to the screen. Watch for truncation on a LISTed or downloaded file. When X-Basic returns READY, type the following:

```

NEW
MERGE "DSK.OUTR" ! or whatever you named the merge
file. If you RUN the MERGED program now, nothing will
happen. Each line is a tail REMark. Edit the program
from the top down, using FCTN X and L. As you delete
each "!" and cursor-down, the X-Basic system retokenizes
(ie converts ASCII characters into command "words") each
line into a RUNable statement. If you get a syntax
error, look first for a truncated line. Second, insure
that you didn't use word wrap in TI-WRITER. For a quick
check from the X-Basic environment, enter the following
in the command mode:
    
```

```

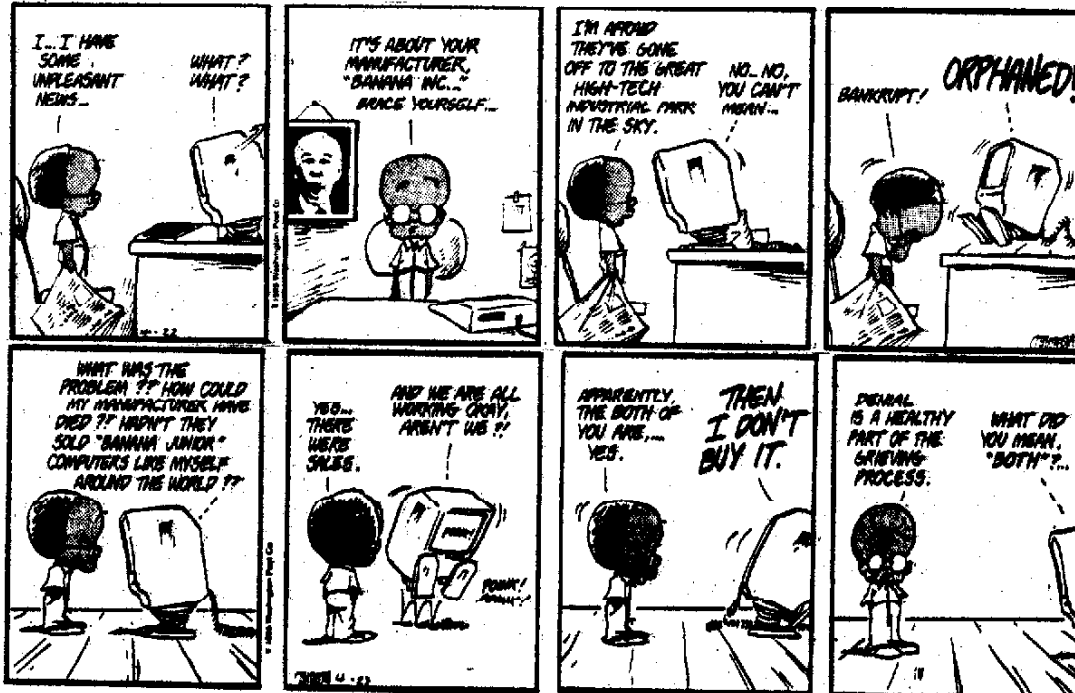
CALL SCREEN(14):: FOR A=0 TO 12 :: CALL
COLOR(A,16,15):: NEXT A :: ACCEPT AT(4,4):A$
    
```

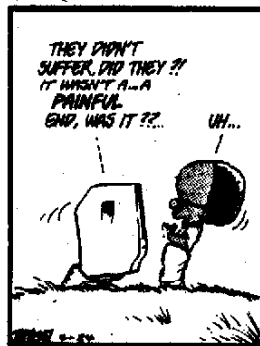
Don't answer the ACCEPT, but rather CLEAR it with a FCTN 4. Now LIST the program. Anything that looks like a red box is probably bad.

TRANSL is a handy program. If you've a routine inbedded in one program that would be handy in another, simply LIST the required lines to disk using LIST "DSK1.TESTR":(1st line - last line) and RUN TRANSL against it. Voila! Here's your routine in a MERGE format.

TRANSL can have all sorts of bells and whistles, like INPUT "text file?":A\$, etc. Personally, I prefer the straight-to-the-jugular approach for this utility.

ADVENTURERS: - Stuck in the Pyramids of Inca? Well, as Steve Martin once said, "Dead guys don't hear plaid". That may be a hint.





LITTLE GEMS

GOOD NEWS! Extended Basic is once again available. Under license from Texas Instruments, Microsphere is turning out "MICROPAL" which is guaranteed 100% compatible with the TI-99/4A and all programs written for the original X-BASIC module. Price is \$89.95 (US) and is available from:

MICROSPHERE, INC.
14009 E. JEFFERSON BLVD.
MISHAWAKA, IN 46545
U.S.A.
1-800-348-2778

A new product from "Down Under" is GRAPHX. This is a graphics design program for the TI-99/4A that can be used alone or as an Editor Assembler program tool. You can free hand draw, zoom in on sections for fine work, move sections of the picture, repaint parts of the picture to new colors, create line segments, circles, or animation, and add text where you want it. Requires a Disk Drive, 32K memory, and Joysticks. Price is \$50.00 (Austrian?). Write to:

GRAPHX
P/O BOX 0568
SYDNEY, NSW 2000
AUSTRALIA

Do you have an Epson RX80 or a Gemini 10X/15X printer? Gembar Graphics has released printer utilities (called "TICKLER") for these machines that allow easy selection of fonts, form feeds, margins, print pitch, tabs, etc. Available on diskette only at a cost of \$11.95 (US). Requires 32K memory and X Basic. Specify printer type when ordering from:

GEMBAR GRAPHICS
455 AMHERST CIRCLE EAST
SATELITE BEACH, FL 32937
U.S.A.

LITTLE GEMS

AUTO SPELL-CHECK: If you have purchased this potentially great package from Dragonslayer, you are no doubt painfully aware of it's one fault - lack of speed. According to a letter from Dragonslayer in the April issue (Vol.5 No.2) of Home Computer Magazine, a new version has tripled the execution speed. To get the updated version 1.1, send in your original diskette and \$5.00 to: DRAGONSLAYER 65C
2606 PONDEROSA DRIVE
OMAHA, NE 68123
U.S.A.

You can also order the program from the same address if you don't have it yet. See a review done by Tom Hall in a previous 99'er ONLINE newsletter for price and other information.

A new Joystick for the TI-99/4A is available from Suncom. The TAC 3 is said to be totally accurate, has three fire buttons (two in the base, one on the stick), has a two year warranty, and a tag of \$14.95 (US match). Send your order to:

SUNCOM
260 HOLBROOK DR.
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TI GAME CARTRIDGE TRICK: - Some of you may be aware of the feature in MUNCHMAN that allows you to select a starting level. This is great for the expert game players who want to bypass the earlier screens and get right down to it at their challenge level or for the fumblingers like me who will never get to an upper level and are curious about what they're missing. When the starting screen appears, hold down the shift key and quickly type 838. You will then be queried for the screen level to start on. This much is "old hat" for those of us who got our 99/4A's before the machine became the "89.99 eh?" wonder! (Remember the bargain prices?) This feature is also active in MOONMINE, ALPINE, HOPPER, MUNCHMOBILE, and perhaps others which are not documented.

