



NET 99er HOU
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NEWSNET99ER

Newsletter of the NET99ER TI-99/4a and Geneve 9640
Computer Users Group

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**NEXT MEETING:
SECOND!!!
SATURDAY**

SEPTEMBER 12th

9:30 AM at the North Richland Hills Community Center
Loop 820 at Rufe Snow Drive

CLUB OFFICERS

Barbara Massey	President
Jim Leshar	Vice Pres
Cal Koether	Treasurer
JoNell Thompson	Secretary
Barbara Massey	NL Editor
Tom Collins	BBS SysOp
Jeff Drinan	Librarian
Bill Duncan	M/S Chrmn

Call the

NET99ER BBS
300/1200/2400 BPS
7E1 - 24 HRS
237-3409

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-----BAM's BABBLES-----

School has once again started, for those of us with kids our routine has been once again been totally blown out of shape. Before long the cool weather will be driving us indoors and then we'll be willing to spend more time with our TI. This summer has been so mild that it is hard to stay indoors.

Has anyone called the BBS lately? The new number is 217-3409. Get out your manuals, dust off our modems and give it a call. We have some really great programs for downloading, all you have to do is call.

Bob Bernatcher is going to be giving us a demo on some programs he wrote/adapted and uses. This will be something alot of us have never seen and I for one am looking forward to it.

Glad to see Gordon Winfield again. Gordon has been busy on Saturdays (building a real airplane!) and hasn't been able to make it to the meetings.

The Club has a number of new items for sale. A Milton Bradley Expansion System, a Super Sketch, 2 consoles, an empty PE Box and a number of disk drives.

Just you forget, our next meeting is Saturday, September 12th, at the North Richland Hills Community Center, Rufe Snow Road and 820. We start at 9:30 am - hope to see you there!***BAM***

-----MINUTES OF NET99er MEETING
of August 1, 1992-----

Barbara Massey called the meeting to order at 1:30am Sat., Aug. 1, 1992. The minutes and treasury reports were read and approved. Jo Nell Thompson gave a demo of several programs on the DOM 11'88 and DOM 12'88 that were complimentary files. Thanks to Jim Lesher for the use of a printer.

Next we had a swap and sell session with 16 people present. ***Jo Nell Thompson***

-----TREASURY REPORT-----

The month of June started with a balance of \$993.88. We had \$59.40 in expenses and a deposit of \$41.00 leaving the Club with an ending balance of \$975.88. ***Cal Koether-Treasurer***

-----RENEWALS DUE-----

The members who are now past due with their membership dues are Mike Bowen, Ron Ferguson, Dino Mironacci, Gary Hutchinson, Gale Jones, Glenn Lindley, Loran Mann, Dr. Mcendon, Gary Owens, Peter Rokkas, Rosie Stevie, and Lou Stone. If you have renewed your membership and I have not recorded it correctly, please let me know. Please be sure to check your address label. If your membership expiration date is incorrect please let me know.

I want to thank all of those who have renewed. However, recently we have

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had to drop quite a few members who were over three months past due. If you are unable to attend a meeting, you may send your \$20.00 membership fee to NET99er ICUG, c/o Barbara Massey, 1209 Amber Drive South, Fort Worth, Texas 76133

Also, be sure to check the expiration date of your MICROpendium subscription.

-----I WISH-----

by Jia Peterson

I wish that someone would write a rapid disk copier, like Rediskit, that would allow me to specify the drive I wanted to copy to each time, so that I could be able to load a disk into one drive while the disk in another drive was being written to.

Even better, I wish someone would write an even faster disk copier that would read in as much as possible and then write it to two or more drives.

I wish that someone would figure out how to put four more tone generators under the hood of the TI-99/4A, with software to access them.

I wish that someone would write a LINK to assembly to store strings in the expansion memory; the limitation to console memory in Extended Basic is one of the worst, although least-known, faults of the TI.

I wish that someone would write a library of links to assembly, to do the many things that Extended Basic can't do or can't do fast enough.

I wish that the anonymous genius who created the Ernie and Bert programs would share his secret with us. He seems to have achieved better sound quality, in far less memory, than Sound P/X.

I wish that someone would rewrap the keyboard to simulate the Dvorak type-writer.

I wish that someone would write a tutorial on programming in assembly in very simple language that I can understand, using three-letter words to replace such intimidating terms as "least significant byte" and "floating point accumulator".

I wish that someone would write a music composing program. A person with a good knowledge of both music theory and programming should be able to do so, because music is basically mathematical in concept - sounds must vibrate a certain number of times per second in order to be recognized as musical tones, and collections of those tones must be arranged within certain parameters, definable by music theory, in order to sound musical. It should be possible to randomly produce phrases within those parameters and allow the user to select a phrase to be further randomly developed, until a complete melody emerges.

I wish that someone would write a really complete tutorial article on the various types of disk files and the means of accessing them.

If those folks who like to brag about the lightening speed of their low

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level languages are actually writing programs in those languages. I wish they would share them with us.

I wish that my new Star XI:020R printer had, among its many character sets, those handy graphics characters that were accessible in ASCII 225-254 in the Star emulation of the old Gemini 101 and S4-10.

I wish that the suppliers of products for the TI, and developers of new products, would advertise in MICRO-pondium so we could find out what they have to offer.

I wish that printers were made so that they would continually shift either the print head or the ribbon up and down, so that we could use up the entire width of the ribbon instead of that narrow strip down the center. Considering their outrageous prices for ribbon cartridges, they owe us that much!

I wish that the local stores would get together and set up a computer information service so I could use my modem to find out what stores have what I am looking for, and what their price is.

I wish that manufacturers of electronic equipment would stop labeling all the controls in raised black letters on a black background.

I wish most of all that Texas Instruments had continued developing our computer, that we now had a TI-99/9Z.

THE CUTTING EDGE OF TECHNOLOGY IN COMPUTER SCIENCE ROBOTICS I

A couple of months ago in a popular science magazine an article appeared about a new super computer, called the Hillis Computer, named after the man who designed it. The concept is not new, using possibly a thousand CPU's in a single computer, however, no one previous had been able to design software to utilize all those CPU's. Now Hillis has configured 65,535 CPU's (2 to the sixteenth power) and written a program to use that massive power. It is far less expensive than the Cray Super Computer, four times faster at number crunching, and 10 times faster processing television images for a sighted robot. "Jim Leshner"

----PASCAL PROGRAMMING----

by Stanley Katzman

If you can add anything to this body of information, please write to me so we can share information. If anyone knows of any commercial programs for the p-System please write and tell me what they are, where they can be purchased and what the cost is. TI sold one program, that I know of, and that was an income tax program.

I have made a few programs for my own usage which I would be happy to share. The programs are a Rollbook program (I teach collage), a Gas and

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Electric bill analyzer program and several chemical calculation programs. All of the programs work for me. I have been in correspondence with the USUS group but they do not have many programs for the TI. The majority of their programs are for the Apple. They want people to translate Apple programs to the TI. I do not feel that the USUS group is for me because there is very little support for the TI community.

NOTES ON PASCAL OPERATING SYSTEM

Error message "Can't allocate global data" when program is executed means 1) the arrays are too large and have to be made smaller or 2) the string variables are not limited and they are too large for the number of variables that are present or 3) a combination of both one and two.

Notes on strings: Strings are defaulted to 40 characters if not limited. The maximum size of a string variable is 256 characters. Anything under or over 40 has to be indicated eg. Name:String(30);

Sometimes if the program is too large the compiler will give a message about not being able to implement the assignment. The compiler sees that more memory will be needed than is present. In this case the program will have to be modified so as to cut memory usage.

Notes on putting a file on the #4 drive. If you want to put a file on the #5 drive you will encounter no problems. You might get an error message when putting a file on #4, at run-time. Under normal circumstances you boot the machine with the "Pascal" disk in #4 and the data disk in #5. When you put the program disk in #4 and call the program. If you try to put a file on #4 under these conditions you will get an error message, the program will quit, no file will be made and you will have to reboot the system. In order to put a file on #4 drive write the program so as to put a file on #4 as normal and then transfer "System.Pascal" to the program disk. Now boot (or reboot) the computer with the program disk containing "System.Pascal" in the #4 drive and the data disk in #5. Under these conditions a file will be created normally on drive #4 or #5 as desired. If you use a "System.Pascal" from one disk and put a "System.Pascal" from another disk an error will occur when a file is placed on #4. (I think this might be due to the fact that the system looks for the diskname that booted it originally, and if during file formation a different diskname is present an error message is produced).

DISK FORMATING: In order to format disks as something other than single-sided single-density which is what the DFORMAT program will give you, despite what it says) use FM-1000 and format the disks for the mode you wish (in my case double-sided single-density) and then go to the "ZERO" mode in the Pascal Filer and zero the disk for 360 sectors. If you use the Pascal formater you will only have a single-sided single-density formatting irrespective of what your disk drives are capable of doing.

PROGRAM CHAINING: If one desires one can "chain" programs (that is have one program call another program). The chaining process "gets rid of" all

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data that the calling program might have in memory. Therefore I feel this process should not be used if one program's data is needed for the next. (If there is data dependency write the programs as one program and use the "segment" process between different procedures.) If you do not care that data is lost then chaining is a good process. In the process of programming one uses the "COMMANDIO" unit on the compiler disk. In order to access this unit one enters the program heading and then right after it the following "Uses(SICommandio. Code|Commandio;". Then anywhere in the program you enter the name of the program you wish to call such as "Chain('15:Rollbook');". If the program Rollbook is in disk drive 15 it will be loaded and run automatically.

SYSTEM.STARTUP: If a program is on the 14 disk drive and it is named "SYSTEM.STARTUP" upon starting the system from "scratch" the program named "SYSTEM.STARTUP" will be loaded and run from the beginning without any prompts of further entries. In order to do this, compile the program under one name and then go to the filer and change the name of the compiled program to "SYSTEM.STARTUP".

WITH statement in Pascal. If you use a **with** statement in conjunction with a **Repeat.Until** statement the **with** statement must be within the **Repeat.Until** pair. Example;

```
Correct
Repeat
With Hello Do
Begin
Statement;
End;{end of With}
Until(_);

Incorrect
With Hello Do
Begin
Repeat Statement;
Until(_);
End;{End of with}
```

If the program is set up in the incorrect method the compiler will say that any field present will be "Undeclared Identifiers". This seems to be a strange quirk.

-----DM1000-----

by Jim Ilesher

If for any reason you would want to save a directory of a disk to a TI WRITER format, press FCTN 3 at the main menu, when the menu comes up, it will ask for a device name where the PIO is now, type: DSK1.FILENAME then press

FCTN 9. This should take you back to the DM1000 main menu, then you can carry on as usual, except your catalog or (directory) will now go to a disk in drive #1.

Of course if you want to do another on the same disk, you must change the filename. Also you can change the disk drive number.

WHERE AND HOW DID ALL THIS BEGIN?

by: Wayne Garrison WDC-RCC STL 99ers

Part III

In this, the third and final part of this series of articles, we will examine some of the breakthroughs in electronics which have allowed the advancement of the computer; without which these things would have been virtually impossible. We will mark the advancement with their invention.

COMPUTER GENERATIONS ---

Computer evolution from World War II until the present can categorically be divided into five generations.

1st Generation: 1951 to 1958 Vacuum tubes - Univac computer

Generation one computers, roughly 1951 through 1958, were characterized by their use of vacuum tubes. The one that stood out the most was the Univac (UNIversal Automatic Computer). It was the first true general purpose computer because it could be used not only for numerical functions, but also alphabetic uses. This new feature made it possible to be used in business as well as the science and military world.

2nd Generation: 1959 to 1964 Transistors - Higher order languages

The introduction of the transistor by Bell Labs made a big difference to this growing new field. This new little device replaced the bulky vacuum tube. Besides its small size, it generated far less heat and required a fraction of the power to operate.

Though there were no famous computers during this generation, great progress was made in programming. Higher order computer languages were developed which meant that it would now be possible to program using English-like commands instead of strings of numbers. COBOL for business and FORTRAN for scientists were the two premier languages of the era.

3rd Generation: 1965 to 1970 Integrated Circuits - IBM 360 and other minicomputers

1965 to 1970 saw the introduction of the integrated circuit by Texas Instruments Incorporated. Does that name ring any bells? Large circuit boards could now be replaced with such smaller ones because whole circuits would be reduced to a single silicon chip. Two devices made their debut in this era: the IBM 360 Series Mainframe computer and the Minicomputer.

The minicomputer was more or less equivalent to the larger computers, but it didn't offer the faster processing speeds and large memory capacity,

however it did make it possible for small businesses to have their own computers.

4th Generation: 1971 to 1981 Microprocessors - The personal Computer Microprocessors, which were made possible by integrated circuit technology, allowed for even more miniaturization. Now it was possible to have a computer on an office desk, thus the term "Personal Computer". The computers of the 4th Generation were more than 100 times smaller than those of the 1st Generation and many times more powerful.

5th Generation 1981 to ... Microcomputers - Laptops and ... Micro-miniaturization has opened the door to computers which can be contained on a single chip. The laptops of the early 1980s used a series of chips, each containing thousands of circuits, to make up the computer. This new technology has been refined to the point that now we are seeing pocket which will perform the same as the PCs of the early 1980s and have more memory capacity.

THE FUTURE ---

Usually it's pretty hard to predict what the future will bring. As far as computer technology goes, you can bet that it will be interesting considering the progress which has been made in the last forty years. Modern-day computer systems are becoming more and more intelligent-like. There's another area which is growing like crazy. The so-called field of artificial intelligence. Simply defined, a computer which is able to gather information and make appropriate decisions. To me it's kind of scary. Nothing important should be left to a machine to decide, for nothing has or ever will compare to the human mind. Over the years I have seen this field grow with monumental successes, or which I base this observation; Though the technology has progressed, the computers have gotten "smarter", but people are losing their ability to use their minds, to think. Computers are great tools, but let's not let things get out of hand with the evolution of the human brain. We can't stick a floppy in our mouths to make us smart. Education must never be abandoned.

Well there it is. I hope you enjoyed my little history lesson as much as I enjoyed doing it. I really don't see an end to this ever growing field. I only pray that future advancements will be good for mankind. Though computers have become valuable tools in many areas, they have at the same time been responsible for the "tracking" of people and in some cases invasion of one's private life. In some cases they have cost people their jobs due to automation. To me, one of it's horrors is that it has reduced us all to just a number in a data bank. Let's hope that future computer generations will be good for us. Amazing to think that it all started with a hand full of stones.

ST. LOUIS COMPUTER BRIDGE (MAY 1982)

----VERTICLE TABS FOR THE GEMINI PRINTERS----

by Jim Leshar

For some of us who have yet to access the full potential of our printers, this may be one step closer. Verticle tabs. Looking in the list of commands where it says ESC P nn.n NUL 80 n n 0 50 n n 00, in the gemini 10x user manual really don't help much. The manuals for the later models are a little better. But what it all boils down to is this: the P alerts the printer that it is going to get some information for verticle tabs. The CHR\$(XX) numbers that follow are the line numbers to which it is to tab to. All numbers must be in an ascending order. Lets take this one step at a time. Suppose you want to start the next line of your text or list or whatever at about the center of the page which would be at the 33rd line. This is how you would set it up: I put line 30 in there because if the commands are not cleared each time the program is RUN it can distort the outcome, especially if we are struggling with a problem.

```
10 REM VERTICAL TABS
20 OPEN #1:"PIO"
30 PRINT #1:CHR$(27);" ";
40 PRINT #1:" ZERO VERTICLE TAB "
50 PRINT #1:CHR$(27);"P";CHR$(33);CHR$(0);
60 PRINT #1:CHR$(11);"line 33 ";
```

Now if you want to do 2 tabs, one at the 22nd line and the other at the 44th line, then you do this:

```
10 REM VERTICAL TABS
20 OPEN #1:"PIO"
30 PRINT #1:CHR$(27);" ";
40 PRINT #1:" ZERO VERTICLE TAB "
50 PRINT #1:CHR$(27);"P";CHR$(22);CHR$(22);CHR$(0);
60 PRINT #1:CHR$(11);"line 22 ";
```

As you can see, when you add another tab setting, you must add a CHR\$(XX) to line 50 and add another line at the bottom of your program. And the numbers are additive. So to make another tab stop at line 55, you would add a CHR\$(11) to line 50.

----THANK YOU KING BELL----