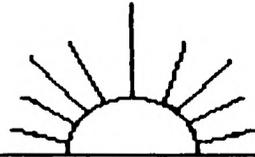


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NEW HORIZONS



NEWS LETTER

NORTHWEST OHIO COMPUTER CLUB FOR THE TEXAS INSTRUMENTS 99/4A

AND THE NYARC GENEVE 9640 PERSONAL AND HOME COMPUTER

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THIS MONTHS MEETING JAN. 12, 1991 SATURDAY AT UNITY CHURCH 12:30 PM.  
Behind Wendy's off Secor Road on Executive Dr.

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ATTN EARL H. MOFFSIS

PRESIDENT'S MESSAGE

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Earl Hoffsis

Here's hoping you had a great Christmas and a pleasant New Year's Eve with best wishes for 1991.

With the Christmas rush and activities relating, our group was down in attendance even for election time.

Hopefully, in accepting the position of President, I can be helpful in promoting the TI and keep our group together and in action for the good of all.

Because I've taken the president's job, we must select a person to fill the treasurer's position. One person will be chosen for this slot at the January meeting.

As you know, we exchange newsletters with some 50 other T.I. groups and these are formatted by Burr Mallory into books for each month. These are available for your use with return at the next meeting. You will find many articles valuable to you in expanding the use of your T.I.

In the coming week I plan to get on task to set up some direction of the club along with member wishes.

NEW HORIZON MINUTES

December 8, 1990

The meeting of the New Horizon Computer Club was called to order at 1 p.m. on December 8, 1990, by our president, Charles Strobell. There were 14 people in attendance.

Because some people had

to leave early, the drawing and 50/50 were held first. There were 6 prizes and they were won as follows:

- 1 - Label Making disk - Margaret Dixon.
- 2 - Candle - Dan Block
- 3 - Candle - Andy Andrews
- 4 - Vase - Jo Symington
- 5 - Candle - Burr Mallory
- 6 - Figurine - Marilyn Schafstall

The 50/50 drawing of \$12 was split by Burr Mallory and the Club.

The secretary read the minutes of the November meeting. Margaret Dixon moved and Jo Symington seconded the motion that they be accepted. They were approved as read.

The Treasurer's report was read by Earl Hoffsis. The balance on hand December 1, 1990 was \$417.03. Dan Block moved to accept the report as presented; Margaret Dixon seconded; report accepted.

Burr Mallory reported that he found and brought with him "The Writers, a guide to the use of Ti-Writer and It's Clones", 2nd edition, by Harry Brashear. This was written primarily for people who do not have the original instruction book for the Ti-Writer, but also include hints that he found useful in working with the Ti-Writer.

The chairman of the Nominating Committee, Jo Symington, presented the slate of new officers to the members:

- President - Earl Hoffsis
- Vice President - Bud Mills
- Secretary - Marilyn Schafstall

Treasurer - Earl Hoffsis  
Roger Feinauer moved that we accept the slate and a unanimous ballot be cast for the officers as

presented. Jo Symington seconded the motion. The motion was approved.

Marilyn Schafstall as the new Editor of the Newsletter asked each person in attendance how he/she uses his computer most. Among the answers given were Ti-Base, Games, Accounting, Writing (Ti-Writer), Superforth, PC transfer. This will give us some direction for articles for the letter. Because her background in the use of the computer is less than that of our previous editor, Marilyn asked for articles from each one for the newsletter this year.

A member needs joy sticks, and several suggestions were made and schematics were found in another newsletter's article. Charles Strobell will check out the diagram. Jo Symington will look for the phone number of a company in Wisconsin that can supply them.

The meeting was adjourned at 1:50 p.m., after which Roger demonstrated the Archiver 3.03, a program that joins files together.

Respectfully submitted,  
  
Marilyn Schafstall,  
Secretary

USING TI-BASE - Part 1  
  
by Richard Taylor

This is my first attempt to write an article like this. So I hope you will please bear with me. If you find something that is not right then please call it to my attention, so that we both can learn.

This will be the first of several articles on the TI-BASE for beginners like myself. I am running mine on a horizon ramdisk from Bud Mills but it can just as easily be done with one or two disk drives. Two disk drives would be preferable to save you the changing of the disks all the time. The ramdisk is only faster but the set up is not any different.

The old journalistic questions would work here to answer some of the basic questions about TI-BASE. The "who" would use this data base is simply everyone who needs to store information and get it back again but not necessarily in the same order. You do not have to be a rocket scientist to use it.

You might be asking yourself, "What are the uses of this software?" How about a lot of records that you want to keep track of or movies on VCR tapes or articles in the Micropendium? If you want to find a specific item, the data base can help you to locate it. If you want to reorganize the data, you can do that without reentering it. It can help you to organize data into ways that you didn't originally intend for it, again without doing it over again.

"Where would you use this software", you ask? Well, I am glad you brought that up. All you need is a TI99/4A, 32k extended memory, and a disk drive. With this you will need one of the following: extended basic, editor/assembler, or mini-memory cartridge. It would be easier on you if had two disk drives and even better if you used a

Next month I will cover data base setup. What goes into it and how to do it.

\* \* \*

NEWS FROM ROGER FEINAUR

Hello everyone, bet you thought last month was going to be the last time you would be reading anything written by me. Well, guess again! It is my belief that as a member, I should still contribute to the club. It's just that after three years as the newsletter Editor I felt it was someone else's turn to add their something to it, that is, the club's newsletter.

This starts the second year of the 90's, and with this let me say I still haven't seen the so-called GPL if you're using the Geneve, or the TI994A mode on the good ol' TI maxed out as yet. "Surely," some of you say "why bother?" Well, I know a lot of fellow TI'ers have gone on to PC land, and I must admit I have been tempted a good many times, but find myself coming back to my senses; the reason is value. That is to say, I'm just too cheap to change my whole system over and learn a new operating system. I would venture to say that 75% of my computing has to do with word processing. Which leaves me with about 25% for the rest of my computer activities. To me I find that Myword on my Geneve and Fnl/web do just fine for my word processing, and if I need Graphics there are many graphics packages that will work with these.

These are my views toward making out the TI.

Let's start with the speed. There are a couple o ways to do this: one that comes to mind is to put 32K on the inside of the consol and I'm sure a number of you have already done this; but there is a little problem with this. That is the 8 bit wait that was used by TI, because the P-box only supports 8 bit logic. And so some software uses this fact and may lock up the system or not as it should. Why not support two types of memory instead. Let's say we add a prompt with the software which, when you start the system, says:

PRESS 1 FOR 8-BIT MEMORY  
2 FOR 16-BIT MEMORY

Now here is where I and the rest part company. On the sixteen bit buss run a ribbon cable out to a card in the P-box from the console. Use the built-in CRU address system with this card with a memory management function built into the card. This could used to keep track of the pages of ram. Because we would be using a 16-bit address paging we could conceivably have up to 16 mg. of fully usable memory on a 16-bit memory buss. As a matter of fact, we could have both types of memory in the one card and let the software do the selecting of either 8-bit or 16-bit memory.

Part 2 of more speed is a math co-processor. The reason for this is that most of the time a computer is crunching numbers at the low level, that is machine level. So why not make another computer for the TI and give it the responsibility of doing all the math functions. Let's say we use a Z-80 plus cpu with 64k memory. The reason for this is that it is an

8-bit processor & could be put in the P-box and read on the 8-bit buss in the P-box. The Z-80 runs about 16Mhz, which is about 4 times faster than the 9900 cpu, at about 4Mhz. And as an added bonus we could also run Z-80 software such as the old Adam computer software from our TI's.

Let's talk about Rambo for a minute. Rambo uses cpu >6000 for its page of memory, which is also the same area used by Extended Basic for its bank switch Rom area. For those who don't know, this area can be used as either Rom or Ram, but can't be used as both at the same time. Why not move the bank switch rom of XB from cpu >6000 to Grom/Gram area >E000 which isn't used by XB anyway. Then add to the Rambo card the following routines, that could be called with the CALL SUBROUTINE FROM XB. Call EA which would page in at Gram/Grom >6000 all the assembly routines that some of the programs require to run and look for at >6000 such as Rock Runner from Asgard. Another could be CALL EA3 which would load the option 3EA load on the screen. Some more could be called CALL ED and still another could be CALL ASSM. Get the picture? the best of both worlds! Might this mean that the XB programmer could possibly use Rambo's pages of Ram also?

The next piece of hardware that I often wish for could be called a Super Buffer. This device would work like a ram disk, but would be more of a buffer. It would have its own computer to operate itself when not in direct link with the TI. It would sit in the P-box and the with a programmable Ros-like

system. About 3 years ago I asked the inventors of the Horizon Ram disk about this but about that time they were trying to get out the ramdisk business, and weren't interested. But they did say they thought it couldn't be done because the TI didn't have enough memory. Well, I thought about this. And said to myself, "What if this device had a special 64k buffer chip that could make a copy of all the cpu and vdp memory and hold it"; then page its software into memory. When you were finished with the super buffer it would then page back the old cpu memory and you would be right back where you left off. I think this device should be able to store both disk space and 2 printer buffers.

First the printer buffers: there would be two 64k buffers, each one should be able to store and hold information to be printed on the printer. Unlike other printer buffers it would also, on command, allow you to view the buffers. This part would be like a ramdisk, not only could you see how much and how full each buffer was, but also view what was in the buffer files. It would also have multiple commands that would allow you to use a print part of a file like TI-Writer's print file line number function - not just one file, but many. To do this the buffer's cpu memory will need an area to allow the storage of script commands, and it would also have to have its own command set program language.

The disk buffers of this card would be able to store up to two floppy disks; which would mean, when you set it up, you would have to tell the buffer

system your highest floppy drive. As there wouldn't be any need to use it with ramdisks, I think the low disk buffer should have a default of dsk1. and the high disk buffer would check to see if you'd changed floppy; if so it would warn you to place it back in to up-date the file information. After everything is o.k. it will let you place a different disk in the drive or change drive numbers. Maybe you should also be able to call up the card and tell it to not be a buffer, but to be a ramdisk instead. All of this could be possible.

One last device that is long overdue is a hand scanner. What is this? It is a device that connects to the computer via a cable either through the serial port or through an expansion card connected to the computer. You can drag it over a picture or text and it will place whatever is scanned into the computer memory. With the right software these images can then be saved to disk in a graphic format that can be used in the computer later, such as Ti-Artists, or Page Pro 99.

There you have it - some ways the 99/4A can be expanded to the max from my point of view.

A few last minute thoughts about this buffer card. If this card was battery backed-up, which it would probably be to hold the Buffer Operating System or BOS for short, the 64K cpu memory holder chip (which holds cpu memory while the buffer card is on line) could perform a function called HOLD. What good would this function have? If you were in the middle of running TI-WRITER

and needed to go somewhere not wanting or having time to save your file) you could call up the Hold function, turn off the computer and go on your merry way. When you return you could turn on the computer, making sure you had the TI-WRITER cart in. Press 1 for TI BASIC and on the command line type in a command like CALL RECOVER and bang, you would be right were you left off. Too bad we don't have something like it.

Now, how about software. XB has a very nice command called MERGE but it only works at the command line editor of XB and not from a running program. Could it be possible to add a new command that would work from a running XB program? We could call it CHAIN. How would it work? Chain Command could be used in a running XB program to read in and use files that were stored in merge format with XB's MERGE command. To keep from messing up the line number tables and such you would have to declare an area in the XB program such as CALL CHAIN (beginning line no., ending line no., line no. increments). All of the program segments would then have to be with the same number of line numbers and follow the same number of increments. Any line numbers not used would have to still be there but would have a REM statement to keep the line numbers even. This would allow most anyone to make an XB program as large as his or her disk space.

From Rocky Mountain 99er. Apr. '90 comes:

"...and from the HV99ers comes this neat tip...You can eliminate the need to use the arrow keys to go to the actual filename when you load or save a file. The Editor doesn't care if there are a couple of spaces after "LF" or "SF" Cmd. So if you type in:

LF <space><space>

you will find the cursor positioned on the actual filename when it appears on the screen."

(Why didn't I think of this one?)

~~~~~

A FORTH TIP

From the QB Monitor comes this:

"He who goes forth  
with a fifth on the Fourth,  
May not go forth on the Fifth!"

~~~~~

XBasic Tip

John Dunning of the EAR 99ers reminds us that:

"When you type in a line number in the command mode and press Fctn +X, that line is brought up on the screen. If you continue to hold the two keys down the next line appears, and the next, and so on. But did you know that once you have started to bring the lines up you can let go of the Fctn key and just hold the 'X' and the lines will continue to scroll up the screen. Handy if you need to have your right hand free to follow a print-out, etc.. It also works with the 'E,S, and D' keys.

~~~~~

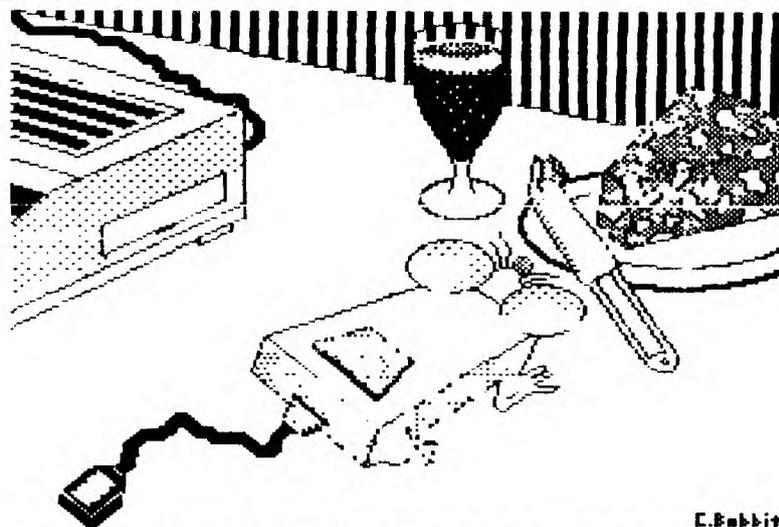
"The most costly mistake you make will not cost you money, but will cost you by not learning from the experience."  
Anon

This will be a short article on the CRU address system on the 99/4A of our computer. First of all this will be a very simplified description of what it is and does. What does C.R.U. stand for? Well it stands for Communications Register Unit. Where is it located on my computer? On the 9900 chip not only can it process 16 bit and 8 bit information, but also has two single lines that allow the 9900 chip to send and receive data one bit at a time, and the microprocessor can respond to a combination of signals going back into the 9900 chip. Where are these line coming and going from? From an auxiliary chip called the 9901 programable system interface. The 9901 chip handles all the serial information. That is to say it tells where and to the signals are to go to. When an interrupt is called. What is an interrupt? In the TI is a machine language command that will pause what ever is running on the computer, and with the right code call in a request for a certain serial code. All important information about the program that is running is stored and the new information is paged in and run via the this CRU addressing. So what does this have to do with me? Well on the TI, there is a space in memory at hex >4000 that is call a memory mapped area of the computer. This word memory mapped means this area is reserved for special purposes. On every card and also other devices such as Key board controll, joystick the four serial outputs of the rs232 card, and disk controller, as a matter a fact the bank switch of Extended Basic are through

( continued on page 7 )

( continued from page 6 )  
 Extended Basic are through  
 This CRU addressing. Back to  
 the Interrupt, after the  
 data for the running program  
 is stored, because let's say  
 the software needs to save a  
 file. Well all the CRU's are  
 check in the 9901 until a  
 match is made. When the  
 match is found it oks the  
 card to page in >4000 its  
 own support software while  
 its being used. When it's  
 not used it's paged out for  
 some other card or device.  
 This is how as many as 104K.  
 of Roms can exist on a 32k.  
 system. After the file is  
 handle and done the  
 interrupt is turn off at the  
 same time the data needed  
 by the running program is  
 restored and takes off as if  
 it wasn't paused. I just  
 thought this would be  
 interesting to any one who  
 who has a romdisk and  
 wondered why it was so  
 import to set there CRU  
 address so it wouldn't  
 conflict with any other  
 card.

I hope this gives you a  
 little insight into what is  
 still possible with our TI  
 computer. I hope this also  
 gives a little idea of what  
 in a way to set up an  
 exponed memory system if  
 someone wanted to spend the  
 time and money to develop  
 it. I hope this little bit  
 above gives you some idea of  
 the power still locked up in  
 this our computer.



C.Babbitt

/X

This program gives you the  
 same capability with your  
 Geneve investment as you  
 could get from one of them \$  
 1.33 K-MART calculator  
 specials!

Actually, this is my first  
 attempt (version) of a more  
 sophisticated calculator  
 program I hope to develop.  
 This version will only do  
 integer math (+, -, \*, /)  
 with less than 6 digits,  
 whereby any operand is less  
 than 32767.

Input can either be on a  
 single line ie: 2+3=5 or 55 /  
 11 = 5

OR

the enter key can be used  
 after each numeric operator  
 ie:

5

+

5

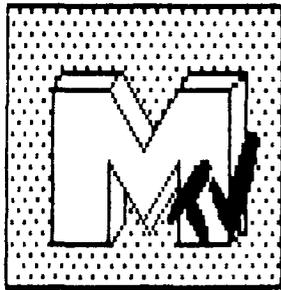
=

10

To exit program press  
 (control-c)

I've included the source  
 code as an aid for those of  
 you interested in learning  
 c89 or if you'd like to  
 modify the program to suit  
 your own needs.

JCP



M  
D  
O  
MUSIC

My first three attempts at MDOS and C99. The files are public domain with certain restrictions. They are not to be sold in collections or by themselves for profit by any commercial firms (Yes, that includes TEXCOMP). They may, however be sold through User Groups to bolster their treasuries.

REKN is my first attempt that the c99 language, it plays a short theme from Mozart's "Eine Kleine Natchmusic" and displays the date, time and day. It's perfect for your AUTOEXEC file.

TAHNSTAR is try number 2 and is WAGNER's "Oh, Evening Star" from his opera, "Tannhauser". There's two chorus's and the words match the music so feel free to sing-along when no one watching!

EKN (EKO, EKNP and EKNQ) is my first serious attempt at a REAL Program. That's right one with Music and Graphics on a grand scale. It's the Allegro from Mozart's "EKN" and I'm sure you'll all know this one by heart.

If you wish to support my efforts, please support them by purchasing my Fairware or Commercial products out on the TI Market, or tell me you like or hate the stuff. I'm at 7647 McGroarty Street in Tujunga, CA 91042 (818)951-2718.

My commercial efforts included (from ASGARD): Artist Fonts 1, Disk of Dinosaurs,

and Disk of Pyrates.

Fairware available from me include: The TE-2 Encoder, 1986 and 1989 KBGB Girlie Calendars, The South Pacific Album, The Music Man Album, The Wizard of Oz Vocal Scores, Best of Patsy Cline, The Star Trek Album, Richie Wagner's Greatest Hits and Wagner's Ring. All are just a mere \$5.

Thanks!

--Ken Gilliland

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The latest in neat software for your Geneve...

The handy dandy MDOS interpreter for your INFOCOM Games!

(not for you folks with SSSD drives)

Place your GAME1 and GAME2 files on the same disk or HFDC subdirectory, name them anything you want to, put ALL of your INFOCOM games in the same subdirectory for convenience.

Enhanced STORE/RESTORE to let you fully specify the filename, understands the MDOS current directory and current drive.

Enhanced scripting allows output to any file, even on disks.

Load it with either of the following commands:

- 1) INF GAME\_NAME
- 2) INF GAME\_NAME, SCRIPT\_NAME

Have at it folks!  
-THE EVIL TWIN-