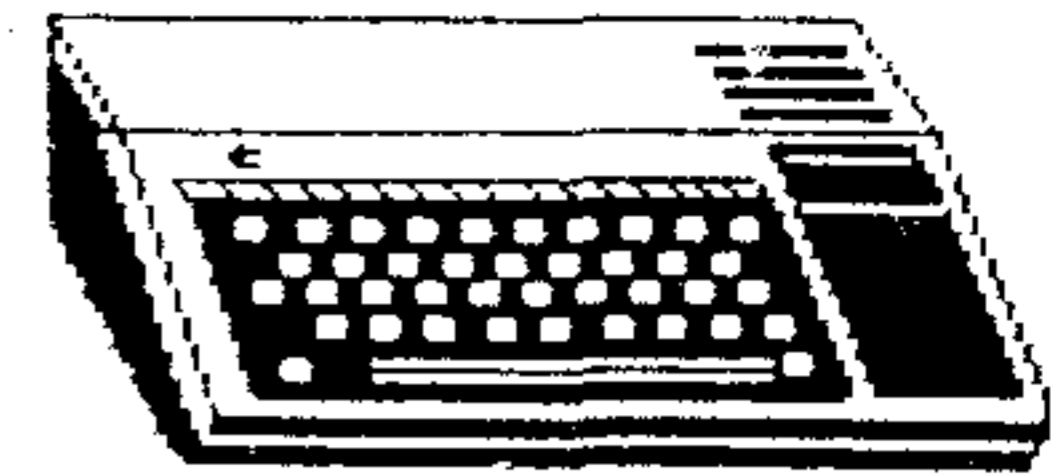


CENTRAL OHIO

Spirit of 99



NINETY-NINERS INC.

THE OFFICIAL NEWSLETTER OF THE CENTRAL OHIO NINETY-NINERS INC.

PUBLISHED MONTHLY IN COLUMBUS OHIO



T.I.,
STILL ALIVE
&
DOING WELL

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 lished for Central
 Ohio Ninety Niners
 Inc. by C.O.N.N.I.
 members and is the
 official newsletter
 of C.O.N.N.I. User
 Group.

Editorial, address
 is:
 181 HEISCHMAN AVE
 WORTHINGTON, OH 43085
 Subscription rate
 (USA) \$35.00 /1 year
 for newsletter and
 Disk of the Month:
 \$17.00/1 year, news-
 letter only. Third
 class postage paid

at Columbus, Ohio.
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 the exchange of Edu-
 cational and Scient-
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 the purpose of comp-
 uter literacy.

C.O.N.N.I. meetings
 are held the 3rd sat-
 -urday of each month
 at C h e m i c a l
 Abstract, 2540
 Olentangy River Road
 Columbus, OH. Meet-
 ing time is 8:30 AM
 til 2:30PM, Meetings
 are open to the pub-
 lic. Membership dues
 (\$30.00) are payable
 yearly to C.O.N.N.I.
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 check to our member-
 ship registrar and
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Please address it to:
 Harley Ryan J.
 4178 Chandler Drive
 Whitehall, OH 43213

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C . O . N . N . I . MINUTES

Saturday, 18 April, 1992

President John Parkins conducted the business meeting. Treasurer Everett Wade gave the treasurer's report. The Lima Fair was discussed, and most of those present indicated their intent to attend. Karl Romstedt is scheduled to demonstrate his Panorama program and Jim Peterson will demonstrate his Calculator program. Bud Wright announced his new

RAWLOOK program and agreed to demo it at Lima. The possibility of changing printers for our newsletter was discussed, but it was decided to take no action at this time. The selling of library disks and back issues of the newsletter at Lima was discussed. Chuck Grimes described the contents of the Disk of the Month. After the business meeting, Irwin Hott used 4A-TALK to access the Spirit of 99 BBS and the

Clearing House, and demonstrated its operation and the file libraries available.

Respectfully submitted,
 Jim Peterson, co-secretary

Wednesday, 22 April, 1992.

President John Parkins opened the meeting at about 8:10 p.m. with apologies for the late start. He introduced a visitor who has switched to another computer and came to sell her T.I. equipment, and then gave details from the preceding Saturday's meeting. He announced details for our participation at the Lima fair on May 18th, which will pre-empt our own meeting scheduled for that date. Jim Peterson will have software for sale and will give a demonstration of his programmable calculator. The previously-announced presentation by Karl Romstedt at Lima has been cancelled. C.O.N.N.I. will have a

booth to distribute information about both the club and the Clearinghouse BBS and will offer software for sale. Be sure to come to Lima if it is at all possible. John also discussed the October C.O.N.N.I. meeting which will be our special 10th Anniversary meeting. (In 1983 when T.I. pulled the plug, did we think we would have 3rd party programming support and usergroup support for our computer in 1992?). We discussed guests to invite and needs for that meeting. Bud Mills from "Bud Mills service" will attend and bring along his Mouse for demonstration. DON'T FORGET THAT BOTH THE OCTOBER AND NOVEMBER 1992 MEETINGS WILL BE AT THE MARTIN JANIS CENTER ON EAST 11TH AVENUE. John and I will check out the

facility some Saturday soon. Jim Peterson requested help getting a large quantity of disks containing articles placed in the proper location on the Clearinghouse. Harold Timmons volunteered. No treasurer's report was available. T.I. emulators for both IBM and Amiga computers were discussed. Following the regular meeting John Parkins gave an excellent demonstration on sector editors, principally DSKU and TURBO COPY. The evening ended at approximately 10:45 p.m.

Respectfully submitted,
 Dick Beery, Co-Secretary.

DUES ANNOUNCEMENT

Dues are usually paid at or before the March meeting, and are \$30 per year for full membership, library and voting privileges, plus the newsletter. You may also pay your dues in two installments if desired: \$15 in March and \$17 in September. If only the newsletter is desired, then payment is \$17 per year. Those who join during other months of the year pay a lesser, pro-rated amount:

MAR-30.00 APR-27.50 MAY-25.00 JUN-22.50 JUL-20.00 AUG-17.50 SEP-15.00 OCT-12.50 NOV-10.00 DEC-7.50 JAN-5.00 FEB-2.50



A DEAL
YOU CAN'T
PASS UP!
SUBSCRIBE TO BOTH!



Now you can have the best of both worlds-- Keep up to date on the latest news from the TI-99/4A world with a subscription to the Spirit of 99 Newsletter AND get an up-to-date collection of new public domain and shareware programs with the Disk of the Month--Both brought to you by the Central Ohio Ninety-Niners, Inc.-- No newsletter published in August.-- January newsletter is an index of all articles published during the previous year.-- 10-SBSD "flippy" DOM's published annually.-- At times, two diskettes depending on the availability of new material.--the NL is mailed 1st of the month-- DOM is mailed about the middle of the month.

SUBSCRIPTION RATES

Newsletter only---\$17/yr.(Continental U.S.)
 \$27/yr.(Outside Continental U.S.)
Newsletter PLUS---\$35/yr.(Continental U.S. EXCEPT Delaware, Franklin, Licking, Madison,
DISK of the MONTH Piqua, and Union Counties, Ohio)
 \$45/yr.(Outside Continental U.S.)
CONNI Club \$30/yr (see above information)
membership

CONTACT

HARLEY RYAN, Membership
Central Ohio Ninety-Niners, Inc
4178 Chandler Dr, Whitehall, OH 43213
(614) 231-1497

-NEW MEMBERS-
JOHN PLYMPTON
HERMAN HOVEY

BBS TAX RUMOR FALSE
Bluegrass 99'ers
Mar/92

Frequently, on BBBs everywhere you see a message or notice urging everyone to write their congressman or the FCC to protest a new tax to be placed on modem users. Supposedly it could add up to \$6.00 an hour for modem access to the telephone network.

Actually, no such tax is being proposed. The rumor started about five years ago with a New York Times article about the possibility of a surcharge on modem usage. A California radio talk show host read the article on the air and listeners started sending in letters of protest to the FCC. They also began to spread the word to other modem users through BBSs, even though Washington never followed up on the proposal.

Even though it is more than five years old, the rumor of a

modem tax still seems to resurface frequently, probably from old messages and notices on BBSs that get passed along to other boards in the same fashion as a chain letter. It is always similarly worded, mentioning the tax, the tax show host, and the House and Senate Telecommunications Subcommittees. Also included is a form letter to send to the FCC.

Over the years, people have sent thousands of letters to Washington in protest. A form letter is sent in return informing the citizen that no such law is being considered. An aide to Senator Daniel Inouye, whose committee receives the protest letters, said, "Please tell the people to stop writing. There is no such law."

Some of the information for the above article is from PC SOURCES Magazine, Nov. 1991.

END

C.O.N.N.O. CALENDAR

May 1992

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
MOTHER'S DAY	11	12	13	14	15	LIMA FAIR ARMED FORCES DAY
17	18	19	20	21	22	23
24	MEMORIAL DAY (observed)	26	CONNI MEETING	28	29	30
31						

PLEASE NOTE!

Since the Lima Conference and our monthly meeting fall on the same date there will be no regular meeting this month at the Chemical Abstract building 16 May, 1992. All members are invited to attend the Lima Conference. We will need people to help cover our table as we will be selling disk and old editions of our newsletters. There are many interesting events to attend and items for sale at the fair. Meet members from other user groups as well as people who are well known throughout the TI world. See page seven for more details about the fair. Our Wednesday meeting will be held as scheduled on 27 May, 1992 at McDonald's at Cleveland and Main in Westerville.

DON'T LET YOUR TI-99/4A
BECOME A PAIN IN THE NECK
by George Clark

When I developed a very sore neck by tilting my head back to read the (monitor) screen so that I could read it with my Bi-Focals each time I completed a keyboard entry, I decided that there must be a better way ...

I had my optician make me a different set of bi-focals ... with my regular reading lens at the bottom and a reading lens for about 18" at the top.

No more sore neck!

I just move my eyeballs ... and they move all the time, anyway, (mine haven't missed a pretty girl at 200 paces yet!).

MORE PAIN IN THE NECK
by Earl Ragues

I had the same problem as George, not a bifocal problem, but none the less, I was getting a very stiff neck after long hours at the computer. I had previously solved this for my 286 clone, by putting it upon a top shelf and placing the monitor directly on the desk instead of on top of the computer. Which is how my 99/4A was. I didn't know what to do with the 99/4A, because I did not have desk with high shelf, so I turned my 99/4A on end with the disk drives on top, then put the monitor beside it at low eye level. I like the disk drives at eye level that's nice. I was afraid that with the power supply at the bottom, that things would get too hot. Heck, they don't even get warm

Reprinted from
UGOC ROM April, 1992

WORD PROCESSING

There is so much to say when referring to Gen-Tri that to cover it all would be impossible in this short review, so I will just try to hit some of the more important elements of the program.

After selecting Word Processing from the main Gen-Tri menu the screen turns blank with a status line on the bottom of the screen which keeps you posted as to your showing:

- wrap/insert
- memory (left in doc.)
- date and time
- document #

To set the parameters for each individual document press Function 9, This transfers control to the Operations Menu which has all of the different functions to control your document.

- load
- save

- print - to screen, file, or printer.
- format - lines, page numbers, start with page #, omit # on page #1, header, and footer.
- file type - DV80 or DV128.
- generic export - move to new document - up to 9 at once.
- erase current document.
- disk catalog - copy, delete, move and view.
- alternate CHAR1 file compiler
- need CRLF
- output file name
- input file name

The operation menu also shows the current file type and the current document number.

Also available are the standard TI Writer Control U formatting codes but with a new way of inserting them and displaying them on the screen. You can also edit the macros to change these formatting codes at any time. I have done this to set up my Panasonic KX-P1180 printer to use the fonts and different printing types that are available to me.

As with most word processor programs this one has it's own style but yet it is similar to the others. Once you become familiar to using Gen-Tri you will like it, On the negative side, I feel that the manual needs some work to make the directions and explanations easier for less technical users. Overall, it takes TI-Writer to new heights in ease and useability.

Using Gen-Tri will delight you and give you a new feeling that there is something new in the TI-Geneve world and it is good.

The program is much more powerful than can be described here in a one page review so the best way to learn all of it's functions is to buy and use this fine product.

Keep on TI-ing.

GEN-TRI can be ordered from:

Coffey Software
9119 Tetteron Avenue
Viana, va 22182

Price is \$49.95. Please indicate if you can use DSDD disk.

There might be times when you would like to take a picture of your monitor or TV screen, be it to capture your stunning graphics creation or the super Parsec score that junior ran up in his twelve hour joystick workout. Whatever the occasion might be. Following are some pointers to make your photographs more successful:

1) Use a slow shutter speed (1/10 sec) to avoid video lines. Unlike a soap opera there is no fast moving action on your monitor that needs to be stopped thus a slow shutter speed is just fine.

2) Your monitor or TV screen picks up more reflections than you are aware of,

but your photo will show. Be sure that all room lights are off and the room is otherwise dark.

3) Turn the brightness control on your TV or monitor way down, since you are working with long exposures anyway, there will still be plenty of light for your film, but the characters on your screen will "bleed" less and thus look sharper in the picture.

4) Any commercially available black and white or color film will do. Film with a higher speed will allow you to stop down more for added depth-of-field which is needed since the surface of the screen is curved and not flat.

5) Move in close so that that which you want to show fills up the frame of your picture. The proportions of the TV screen and 35mm film do not match, thus unless you move in close there

will be dark bands at the top and bottom. A single lens reflex camera is best to assure good framing. If you use a view finder camera, read up on parallax correction in the instruction manual that came with the camera (on close distance the axis of your viewfinder and camera lens are no longer in alignment).

6) The center of the camera lens should be aligned with the center of the screen to avoid distortion. Hint: Use a rubber tipped toy dart as an alignment aid. Attach it to the exact center of the screen and then line up your camera such that no part of the dart shift is visible when looking through the camera finder! A sturdy tripod helps.

END

EASY SORT
 ASSEMBLY LANGUAGE SORTING OF XB DATA STATEMENTS
 reviewed by Charles Good
 Reprinted from BITS, BITES & PIXELS
 Lima 99/4A USERS GROUP 4/92

Many of us have our favorite extended basic name/address program, or household inventory program, or other "list of things" program. There are lots of these floating around in the TI community and the nice thing about them is that, since they are XB, the inexperienced user can modify them to the user's particular requirements. These programs either load in a separate data file to sort and display or they contain their data in XB data statements. Many "only know how to program in XB" users use data statements in such software. The advantage of using data statements is that the data is loaded into the computer just as fast as the controlling program. There is no need to spend time loading the program and then loading a data file. One disadvantage of data statements is the haphazard unsorted order that the data is usually entered into the program. New data, irrespective of alphabetical or numerical order, is usually added after all the existing data statements. Reading all this data into memory and sorting it in XB takes a lot of time.

Bruce Harrison to the rescue! Bruce sent me an evaluation copy of a new commercial offering which sorts data in data statements FAST. No assembly language knowledge is needed, just use the SKELETON program or add the appropriate CALL LINK to your own software. SKELETON is very flexible. Many different kinds of data can be sorted with a neat menu popping up at the start of SKELETON showing what the data is (video tapes, names and addresses, household inventory, etc). DATA statements can be part of the program, MERGED into the program, or loaded in from a sperate disk file.

Bruce's disk includes a demo name/address program that contains the addresses of many prominent personalities in the TI

community. The demo program itself is REALLY NEAT with quick sorting by first or last name, street address, city, state, or zip code. The list of TI personality's addresses is in and of itself useful to owners of TI home computers.

Below are excerpts from the letter from Bruce that accompanied my evaluation copy of EASY DATA:

"Here's our latest commercial offering, a little goodie we call EASY DATA. It's for unskilled XB programmers, so they can do great things with DATA statements and a little help from Harrison's Assembly routines.

"The package sells for \$6.00 including S&H for US and Canada customers. Its main ingredient is a routine called MSORT, which is supplied buried in XB program SKELETON. That XB program also contains a slightly upgrded version of our Menu Driver (QMENU), so the unskilled programmer can make nice looking menus from simple DATA statements.

"MSORT is a magical routine in many ways. It performs sorts by any two fields in the data, as designated in the LINK statement. The kind of sort performed (Numeric or String) is determined by the kind of variable that the field being sorted reports into. It does not waste time on the secondary sort unless the primary sort is a tie.

"Three demos are provided. The one called BIGDEMO sorts 55 records of six fields each on two criteria in a bit over three seconds. [Charles Good note: BIGDEMO is the name/address demo mentioned by me above.]... The time required to sort is essentially insensitive to the original ordering of data. Lists that are almost in order take no less time than list that are completely reversed."

EASY DATA is NOW available by mail for \$6.00 and will be available at the Lima MUG conference in May as well as some of the East coast TI shows.

Harrison Software
 5705 40th Place
 Hyattsville MD 20781
 301-277-3467

END

TI STILL CARES
 (Reprinted from PUG 2/92)

Texas Instruments still provides a great service to the TI-99/4a user by providing repair service for our computers: I called Texas Instruments at (1-800-TI-CARES) and asked about their repair service. I was told that they still repair all the equipment manufactured by them for fixed prices and if it could not be fixed they would replace it with on hand stock. The following is the prices that I received today, March 12, 1991 to repair the equipment:

EQUIPMENT	PRICE	S&H
TI-99/4A console	45.00	6
P Expansipn Box	70.00	6
RS232 card	33.00	6
32K card	44.00	6
Disk cont. card	4.00	6
Flex cable(fire hose)	25.95	5
SSSD disk drive	80.00	6
P-code card	33.00	6
Speech Synthesizer	30.00	5
TV modulator	12.95	4
Joy sticks	9.75	3
Power transformer	10.00	3

They also require state sales tax for whichever state you are ordering from. They accept Master Charge, Visa and personal checks. You can send your

broken equipment with the payment to:

Texas Instrument
 2305 North University Avenue
 Lubbock TX 79408
 ATTN: Repair Center

They will also repair CC-40 equipment at the following rates:

EQUIPMENT	PRICE	S&H
CC-40	60.00	6
Printer/plotter	55.00	6
Printer 80	55.00	6
RS232	33.00	6
Modem	33.00	6

END

LIMA MULTI USER GROUP CONFERENCE:

An all TI/Geneve event

4PM Fri May 15 through 6PM Sat May 16
REED HALL, OHIO STATE UNIVERSITY CAMPUS
Final update (updated 13 APR)

COST: Free! No admission charge; no charge for exhibit room tables.

HOW TO GET THERE:

The OSU Lima campus main entrance is on state route 309 approximately 3.5 miles east of the intersection of 309 and I75. Many of the hotels in our list published in the March newsletter are at this intersection. Turn left at the large highway sign to enter the campus. Then turn right at the first opportunity and park in the parking lot. Lima is served by Greyhound Bus. The closest airports are Dayton or Toledo OH. From these airports you have to rent a car or take the Greyhound Bus to get to Lima.

SCHEDULE AND SPEAKER LIST

Friday May 15: 4PM-8PM. Set up time. Disk copy stations will be available. This is a good time to meet informally with other TI computer users and maybe help us move tables and chairs. You can come and go as you please, but the doors will be locked after 8PM.

Saturday May 16:

7:30AM Doors open. Set up time. Disk copying until 6PM.

8:00-9:AM Room 101. Speaker Ken Gladyszewski-"Do it yourself products for the TI, including analog to digital conversion."

8:30-9:30AM Room 150. Speaker Charles Good-"A preview of FUNNELWEB v5 with a completely rewritten editor"

9:00-10:00AM Room 101. Meeting of "National Committee of TI Standards", Don O'Neil presiding.

9:30-10:30AM Room 150. Speaker Joe Ross- Applications for C-SHELL 99"

10:00-11:00AM Room 101. Speaker Deloris Werths "Programming music for the MIDI Interface; new music from Harrison Software"

10:30-11:30AM Room 150. Speaker Bill Nelson "Comrodine Products"

11:00-FOOD SERVICE OPENS

11:00-NOON ROOM 101. Speaker Mike Maksimik "The latest MIDI hardware from Crystal Software"

11:30-12:30 Room 150. Speaker Gary Bowser "Hardware and software from O.P.A."

NOON - 1:00PM Room 101. THE MULTI USER GROUP CONFERENCE, a meeting of user group officers to discuss our common problems and solutions.

12:30-1:30PM Room 150. Speaker Bruce Harrison "The latest non-music offerings from Harrison Software"

1:00PM FOOD SERVICE CLOSES

1:00-2:00PM ROOM 101. Speakers Eunice Spooler and Meaghan Good-"Teaching TI LOGO to a first grade student: A REAL lesson taught to a real first grader"

1:30-2:30PM Room 150. Speakers Mike Sealy and Mickey Schmitt "The latest software from MS Express."

2:00-3:00PM Room 101. Speaker Beery Miller "Software for the Geneve from 9460 news"

2:30-3:30PM Room 150. Speaker Jim Peterson "A Programmable Calculator"

3:00-4:00PM Room 150. Speaker Bud Mills "Products of Bud Mills Services"

4:00-5:00PM Room 150. Speaker Lee Bendick "A demonstration of the TI-99/8 and its unique set of peripherals"

5:00-6:00PM Room 150. Speaker Barry Traver "Porting MS-DOS text files and software over to the 99/4A"

(Due to unforeseen circumstances Jack Sughrue will not be able to attend.)

VIDEO TAPES:

Lima UG members plan to video tape all the formal presentations and also plan to have a roving camera person in the exhibit area interviewing the exhibitors

and videoing their products. This video record of the conference will be made available to the TI community at minimal cost. There should be 16 hours of viewing, and this will require THREE VHS VIDEO TAPES. Any paid member of the Lima User Group, any user group (attending or not attending), and any attending dealer can obtain these videos. To obtain a copy of the conference video record please leave EITHER three tapes and \$3.75 postage and handling, OR a check for \$15 at the Lima table. Make sure your tapes and/or money are clearly marked with a return address. If you can't attend the conference, you or your user group can send \$15 or three tapes and \$3.75 to the address below:

FOR MORE INFORMATION: (such as hotel phone numbers)

Write the Lima User Group at PO Box 647, Venedocia OH 45894 or phone Dave Szipp (419-228-7109) or Charles Good (419-667-3131) evenings eastern time.

COPYING DISKS FROM THE LIMA UG LIBRARY: Only those disks added to the Lima software library since April 1991 will be available for copying, at no charge, by a representative of any user group. Approximately 120 FLIPPY SSSD disks (240 disk sides) will be available for copying. An annotated description of these disks is being mailed on a disk with this newsletter to all Lima UG members and to all User Groups likely to attend the Conference. BRING YOUR OWN BLANK DISKS.

ATTENDING DEALERS:

- L.L. Conner Enterprise
- Competition Computer
- Comrodine
- Bud Mills
- Harrison Software
- Asgard
- O.P.A.
- Genial Computerware
- Ramcharged Computer
- Notung Software

We expect additions to this list. We also expect lots of user groups to have tables loaded with software and used hardware.

END

by Jim Peterson

Some 20 years ago, my late brother researched our family ancestry and gave me a copy of his work. I was not too much interested. It consisted of charts branching backwards in time, showing parents, grandparents, etc., much like a Biblical recitation of "and Jonah begat Abraham and Abraham begat Noah", etc., etc., except that in modern genealogy the mother who actually bears the child is at least given second billing.

But last year a gift of some old family photos and a visit to some graveyards kindled my interest. However, I wanted to do more than just trace that forking family tree backwards. I wanted to know who my grandfather's cousins were, and who their children and grandchildren were.

I was told that there was no really good genealogy program for the TI 99/A. I obtained a sample of a family group sheet, one of the standard tools used by genealogists, and began recording data on it. I soon filled a disk with D-V80 files of those, which printed out to a very thick file of pages with a lot of wasted space.

I thought of trying to write a genealogy program, but wasn't sure what I wanted. About that time, I had an amazing piece of good luck - I was put in contact with a distant relative in Sweden who had researched the family history back into the 1700s and beyond!

He sent me a 3.5 disk containing his genealogy program for the PC, and his files on 1400 family members. Since I do not own a PC and never intend to, I ran to Chuck Grimes for help. He accessed the program's options and printed out for me a list of all 1400 names, a cross-reference list of all children, and two cross reference lists of marriages, plus several of those family tree charts.

About 1000 of those 1400 names were of the Swedish researcher's father's relatives and his wife's relatives, which were of no interest to me, so I went to work to extract the 400 who were actually my blood relatives. After about a week of checking one list against another, back and forth, I was not too

impressed with the program.

So, again I thought about writing a genealogy program. I was not interested in being able to sort data seventeen ways from Sunday, and I did not care about printing out those bare-bones family trees, but I wanted to be able to easily find a person by name, and find a complete record of parents, spouse, children, biographical data, and sources of data.

Such a program would be difficult to write - and unnecessary. I realized that the best program for my purpose would be no program at all. The magic of Funnelweb and the efficiency of the TI disk controller was all that I needed.

I booted up Funnelweb, went into the Editor, set the tab at 39, and typed -

```
(1) JAMES WARREN PETERSON is the son of
(2)> NORTH EDWIN PETERSON and (3)>
LINNIE LEONA STEVENS. He was born 20/8
1923 in Pelican Rapids, Otter Tail County,
Minnesota. He was married 7/7 1956
in Tokyo, Japan to (4)> MIDORI IMAI.
Their children are (5)> MARIANN MIEKO
and (6)> ALAN EDWIN.
```

And that was followed with some biographical data. I saved it to disk, with SF to preserve the tab setting, as filename 001.

The > after an index number means that a file exists under that number, with information about the person. So, I typed up a similar file about my father and saved it as 002; and so on. Padding the number with 0's causes the disk controller to catalog filenames from 001 to 999 in numerical sequence.

Now, if I need to add to a file, I just load it into Funnelweb and go to work. Since it is in 40-column format, it is easy to edit on-screen.

The TI disk controller can only handle 127 files on a disk, but many of my 400 names are those of children listed in their parents's file without enough data to require a file of their own. When I do run over the 127 limit, it is easy to use an additional disk. If I get more information about such a child, I will just add a > after his number, and set up a new record for him.

What about a printout? I could easily create an .IF file listing all those

filenames in numeric sequence, and print them all through the Formatter, using dot commands to change them to 80-column width. I enclosed the index numbers in brackets so I could easily .TL to double-strike, emphasize or underline them.

However, I like 40-character 2-column text, so I wrote a little program to catalog drives 1 and 2 and print all the files in sequence in two columns.

Now, how about finding records? I booted up Funnelweb again, set the tabs at 5, 35, 50, 55, 60 and 65 and began entering names in index number sequence by index number, first name, last name, file number, father's index number, mother's index number and spouse's index number.

The resulting file was too big for a simple sorting routine to handle, so I tried using Peter Hoddie's fairware program SORT EXPERIMENT, sorting on the last name field with a secondary sort on the first name. I thought that it did a perfect job, until I found that many names were missing. The documentation for SORT EXPERIMENT says it will handle up to 1000 records or 24k, whichever comes first. It fails to mention that after reading in 24k of data it will begin to sort, without warning you that it did not read the complete file!

So I went to Dennis Faherty's TI-SORT, sold by Inscebot. The documentation for that program is very neatly printed but difficult for me to understand. I finally figured it out, and produced an index in alphabetic sequence. I plan to update it with Funnelweb, inserting lines in the proper place, so I will not have to sort it again.

I now have a text-format genealogy which I can easily and quickly update. I can print copies of the index and text to send to relatives who do not have a computer, and the printouts will be very easy for them to understand. If any of them do have a computer and a genealogy program, it will be very easy for them to copy the data.

So once again, the best program is the simplest program that will do the job, and the simplest of all programs is no program at all.

END

MDOS BUY-OUT

From: 9640NEWS To: ALL

Let's Buy MDOS !!!!

Let's Buy MDOS !!!!

By Beery Miller and 9640 News
P. O. Box 752465
Memphis, TN 38175-2465
(901) 368-1169 Home
(901) 368-0112 BBS

At the urging of many people, discussion is presently underway with Lou Phillips and Paul Charlton to buy the rights to MDOS source code.

Many people will wonder WHY !!! There are many answers, some of which you are probably already aware. To begin with, it has been over two years since any version of MDOS has been officially released. Those versions that have been released, 1.14F and 0.97H have several if not many bugs that must be programmed around to function properly with other programs. There have been many bugs that have been patched, modified, etc. so that the system will "run". This is not acceptable and we the users and owners of Geneve must act now to keep our machine alive and growing.

Nearly one year ago, discussion was initiated with Paul Charlton concerning the possibility of buying MDOS. At that time, the cost was ~\$10,000. This was too large of a sum for any individual to pursue. As a group (Geneve owners and TI-99/4A enthusiasts), we have in our grasp the potential to buy the rights ourselves and complete the development we desire. This will not be a cheap or easy task to perform.

Currently, many people have voiced support by offering to donate \$25, \$50, \$100, \$200, and up to \$250 to aid in the purchase of MDOS. Myself, I am "kicking-in" \$100 plus my personal time for these acquisitions and negotiations. I want to improve the Geneve and I hope you do to.

On Merch 12, 1992 Lou Phillips

returned my latest phone call regarding the acquisition. He felt things would work out if the money was raised on my end and felt the price tag may be less than originally estimated. How much less, I don't know.

I plan on negotiating for the following from Lou Phillips and Paul Charlton:

1) Latest fully commented source to 1.14F and 0.97H on floppy diskette and modifications if they are available.

2) all utilities (assemblers, linkers, debuggers, scripts, etc) required to compile and run the operating system.

3) insure that source I receive works with existing applications and versions of MDOS.

4) Require "hand" delivery. This will probably require a personal trip to meet with Lou Phillips and Paul Charlton to receive files. I do not want to depend upon the mail service to handle negotiations. This will protect me, and it will protect your investment.

5) Routines (>2x) that need de-bugging for HFDC support.

Where will the source code go??? Good question. There are many programmers that have expressed desire in developing or finishing where Paul Charlton left off. I will coordinate (and program too) the development with several of the talented programmers that exist to finish what should have been finished many years ago. This will be a group and cooperative effort. At this time, I see no reason why contributors shouldn't have access to the source code. For some, the code will be useless. For others, it will aid them in their knowledge of assembly language and creating other new and exciting applications. Not knowing the volume of interests in diskette copies of the source, I will say that once I receive the source, if you send me floppies and return postage or equivalent, I will send you a copy of the source code (this assumes you make an initial contribution for the

purchase of MDOS). DON'T SEND DISKETTES NOW!!! Wait until it is in hand.

There are several things that will need to be discussed. First and foremost is the release of official MDOS's from those writing the code in the development group. Unofficial releases will probably be released by different people, but we must do our best as a group to identify these copies.

In the next 30 to 60 days, I expect negotiations and a possible contract to be "in-hand". In order for me to pursue an agreement, I need your support now. This will be the last opportunity we have before it's too late. We must make this an open operating system for the Geneve to survive.

As a side issue, and something some people are going to think is why should I pay for something I should already have received from Myarc. Short of suing Myarc AND Paul Charlton, this is the other alternative. Any lawsuit against Myarc will probably crumble and dissolve Myarc leaving nothing for us except for empty pockets. The route of buying the rights to the operating system gives us hope and a longer future. If I have convinced you, then please do the following: 1) Write a check out for what you feel is appropriate. 2) My address is as follows: Beery Miller /9640 News P.O. Box 752465 Memphis, TN 38175-2465 3) Enclose a stamped self addressed return ENVELOPE. This will be used to notify you of the acquisition and/or where we stand. 4) Once your check is received, it will be deposited into a special account separate from any other personal or business account so that I will receive no "surprises" once acquisition takes place. Any interest that is made from here will support some of the necessary phone calls and travel expenses that are expected to take place in acquisition. Once MDOS has been purchased, numbers will be crunched tallying people's contributions and returning unspent money if contributions exceed purchases price and expenses. DON'T DELAY!!! BE THE FIRST ON YOUR BLOCK TO OWN AN OPERATING

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NEW STANDARDS PROPOSED FOR TI-99/4A
reported by Tom Wills
(taken from CPU6 Newsletter Apr 1992,
via the Southwest Ninety-Niners
newsletter dated March 1992-edited by
Jean Hall)

DATELINE: FEST WEST '92, Phoenix,
Arizona--in a "press release" on
Sunday, February 16, 1992, it was
announced the National Committee for TI
Standards (NCTIS) had been formed.
Following is the contents of that
release:

The National Committee for TI Standards
(NCTIS)

Committee proposal, generated at Fest
West 1992, Phoenix, Arizona

To form hardware, software, and
configuration standards to extend the
life of the 99/4A and bring order to
the community. In these hard times, the
TI community needs a direction to go.
In the past other committees have been
formed, such as the ANSI to generate
standards for hardware and software
developers to follow. The standards set
forth by NCTIS will aid the users and
developers in providing a better
software/hardware solution for you.
Once the standards are set, it is
recommended that all current and new
software is labeled as "Standard #1..."
compliant. The standards should have
acronyms for easy recognition.---The
following guidelines were discussed at
a "Vendors Forum" on February 15, 1992
in Pheonix, Arizona. These are the
recommended standards for the community
to ponder upon until May 1992 at the
Lima Fair, at which time the standards
will be decided and publicized.

Level #1: TI 99/4A console, 32k memory
expansion, cassette and (E/A, Supercart,
TI Writer, Multiplan etc.)

Level #2: Level #1 PLUS: RS232, DSSD
disk drive and controller.

Level #3: Level #2 PLUS: at least 128k
of CPU RAM, bankable at the >6000 space.

Level #4: Level #3 PLUS: 9938/58 VDP
with 192k VDP RAM.

Please remember that these are
recommendations generated by this first
meeting and are by no means locked in
stone. We're presenting these ideas to
you, the user, the developer, the
market. Please take our recommendations
and think carefully about them and
forward your ideas to your local user
group, and then on to the Lima Fair.

We appreciate your support.

This was the press release. If any
member of the TI community has feelings
on the above proposed standards, please
feel free to express your opinions to
the NCTIS committee. It would be best
if you direct them to Don O'Neil at the
following address:

Don O'Neil
c/o South Bay TI Users Group
PO Box 110037
Campbell CA 95011-0037

It is my opinion this is an action that
should have happened years ago. But, it
is better late than never. Through this
newly proposed set of standards, both
software and hardware developers will
be able to work toward the same goal.
That goal will be to have software and
hardware that will be compatible. And
with all TI'ers knowing where they are,
they will be able to upgrade their
systems knowing that support is
available. Don't be surprised if you
see software labeled at "Level #1(or 2
or 3 or 4) compatible" showing up real
soon.

It was decided that the Geneve 9648 is
already at Level #3 in its stock
condition. With a few minor additions,
Level #4 is easily obtained. Anything
above Level #4 is to the user's
benefit. Things like a hard disk,
megabyte ramdisks, etc., are all Level
#4 "plus".

Get behind this move and make our
machine even better. If you can't get
to the Lima Fair in May, then write Don
at the address listed above. Let the
committee know you support them, or
even if you don't support this proposed
set of standards. But do something!....

TOM'S OBSERVATIONS
by Tom Wills

Now that the Fest West '92 has taken
place, we can look back at what
happened with pride. The main reason is
that the TI community, even though
bitterly divided at times, has joined
together in a common effort to make the
TI a better machine in the years to
come. The reason for the pride? Why,
the forming of the National Committee
for TI Standards. What a good feeling
it is to know that both hardware and
software developers are joining
together to work toward a common goal,
and that is making their products all
compatible with each other!

The idea for this committee came from
Don O'Neil of South Bay TI Users Group
in California. As you may, or may not,
be aware, Don is working on developing
an accelerator card for the TI-99/4A.
This would allow the TI-99/4A to run at
much greater speed and with more power.
But, one of the things Don ran into
early in his project was the lack of
standards in the TI community. Everyone
seemed to be going their own way.

After some frustrating experiences with
the non-standard, Don left me a message
on Catus Patch asking for my opinion of
holding a Vendors Forum at Fest West
'92. I immediately realized the
potential of such a meeting and told
him to go for it. I mentioned to the
Fest West committee what Don wanted,
and that he would be contacting them
with more details soon, which he did.
And the rest is history.

The only thing I wonder about is why
didn't anyone think of (or at least
propose) such a standard years ago?
Thanks to Don O'Neil, we are now moving
forward with this idea. Some basic
standards were drawn up and approved by
the committee. They are included
elsewhere in this newsletter. PLEASE
READ THEM!

The meeting was quite an experience. I
sat in on it from 7:30 pm until just
after 10 pm. The actual meeting didn't
break up until around midnight. The
meeting started off as not much more
than organized chaos, but it slowly
settled down to some serious

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discussion. With Don chairing the meeting, and numerous vendors inputting some ideas, and arguing about other ideas, ideas slowly started coming together, and eventually, the proposed standards were accepted by those who were still present.

Vendors attending the NCTIS's first ever meeting included people such as Bud Mills Services, Gary Bowser of OPA, Ken Gilliland of Notung Software, Shane Truffler of ESD, Berry Miller of 9640 News and many more.

The committee has decided to get this information on the proposed standards into the TI community as quickly as possible through such means as BBS's, newsletters, and word of mouth. Feedback is very important to the committee in their efforts to make them a reality. In the separate article on the standards, is an address to write to with your comments, be it pro or con, so the committee can forge still

further ahead with the standards.

The committee will again meet in a formal session at the Lima (Ohio) TI Fair to be held this May. If you can attend this meeting, by all means, do so. This is open to both Hardware and Software developers, plus every member of the TI community. Make your opinions known!

The idea of standards is that when you purchase a piece of hardware, or more specifically software, you will know if your computer can handle it without any problems. For example, if your computer is at level #2 (see the standards for a fuller explanation) you will know not to buy software listed as "level #3 compatible". But, if it states "level #1 compatible" you can run it on level #2 computer. If you really want that level #3 piece of software, you will know exactly what is needed to upgrade to that level.

The scale is basically an open ended scale, going from level #1 to level #4. If you have additional hardware, such as a hard drive, you are better off. However, there will be no class for those, at least not at this point and time. The stock Geneve is at level #3. But many Geneve owners have already upgraded their Geneve to the level #4. And with the new hardware available to TI-99/4A owners, it will be a simple matter to upgrade to these higher levels. It may or may not be expensive, depending on what upgrade path you decide to take and how many levels up you wish to go.

In any case, the proposed standards deserve, in my opinion, wholehearted support by every member in the TI community.

END

ABOUT THE DOM - - -

ABOUT THE D.O.M. . . .

by Dick Beery

Last month's column described some common problems. This month we will look in some detail at the March '92 D.O.M.

Let's talk about needs. MIDISONG^ on side A and MIDI/BACH^ on side B, both archived (^) are not playable unless you have MIDIMASTER99 and a midi-compatible keyboard or other instrument. You can hear the glorious sound of MIDI at most of the TI fairs, including the one at Lima in May '92. Copy the MIDI files on this and other D.O.M.'s and keep the disk handy for when you do get MIDI. Watch for a column on this music capability.

PHANTOM^ on side A you can unpack and use right away with Extended Basic. It was written by a talented young programmer from the Lima group. Unpack it to a separate disk, select Extended Basic, and enjoy.

If there are game players in your household, try HONEY^ on side A or ADV/GAMES^ on side B. You will need either FUNNELWEB or the

EDITOR/ASSEMBLER cartridge to run the first; the ADVENTURE cartridge is required for the second, which is a text adventure game (no graphics).

The powerful FONTDES^ will let you design or modify your own fonts for use with TI-Artist Plus. You must have this program in order to benefit. If you don't but would like to use a drawing program, unpack DRAWMASTR^ from side B and you can at least draw, though not utilize the fonts already mentioned.

We include sources for the required cartridges and programs elsewhere in this issue. See you next month!

SOURCES FOR SOME TI PROGRAMS:

FUNNELWEB is disk-based. It is produced in Australia and is available from most dealers in T.I. merchandise and most user groups. Several versions are found on earlier C.O.N.N.I. D.O.M.'s (order from Chuck Grimes) or write to Charles Good at the Lima TI Users group in Lima, Ohio.

EDITOR/ASSEMBLER is both cartridge and disk-based and is available from various dealers such as Tex-Comp, P.D.

Box 33084, Granada Hills CA 91344 and others. Often available for much less from those selling their extended TI systems. The ADVENTURE module is available from the same sources.

MIDI99 is a cable and software available only from Crystal Software,

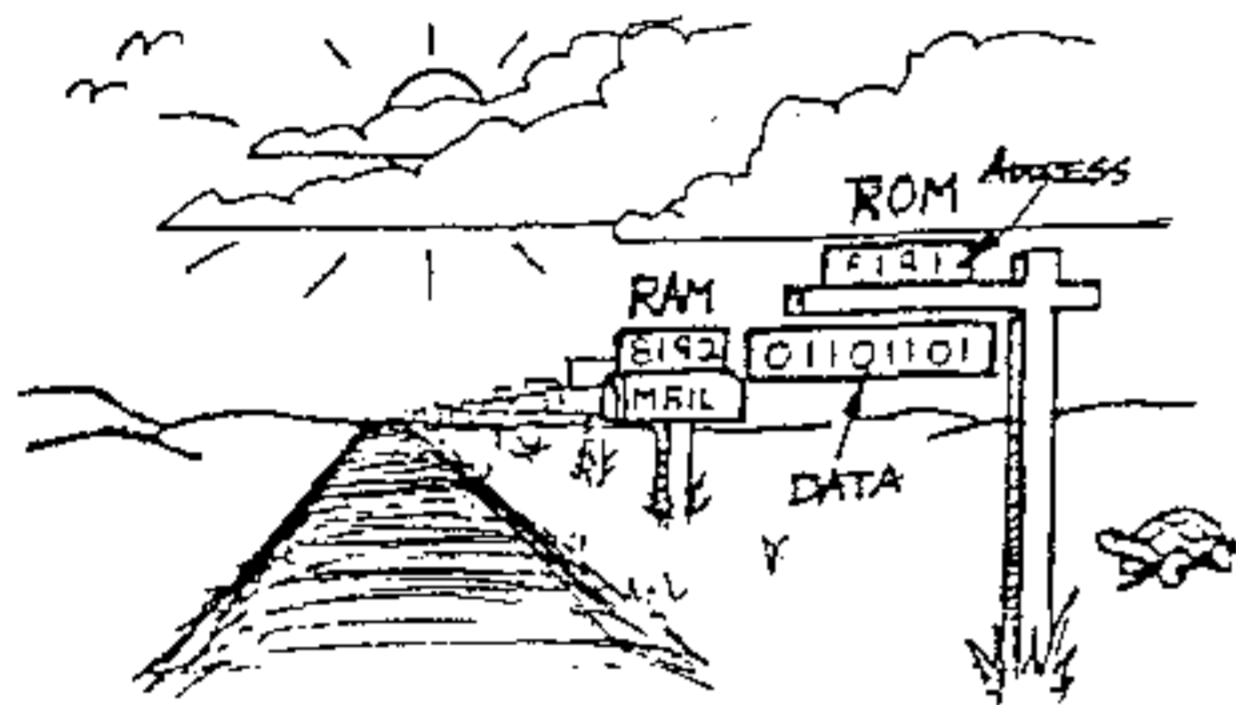
MIDI-compatible electronic keyboards are available from Casio. The MT-240 is inexpensive (under \$100 where available) though a bit limited. Casio sells other, more expensive, models as well. Yamaha produces the PSR-300 through 500 for prices in the \$300-\$500 range. Korg and others sell even more expensive ones. A Casio MT-240 or Yamaha PSR-300 will supply most of the capability for the non-professional person who wants to listen to MIDI music and maybe program a little.

John Johnson's BOOTMENU may sometimes be substituted for the EDITOR/ASSEMBLER in loading EA-5 or EA-3 files.

Hello again. Last months lesson was real simple. This time I'll dig a little deeper. Now, we all know that our 9900 Microprocessor does not actually travel down an Old Country Road. But, for our discussion I think it will make other points clear if we continue to use this analogy.

If you have any questions, or want to enlighten me on any points, please write. If you include a self addressed, stamped envelope I will try to write back in a prompt manner.

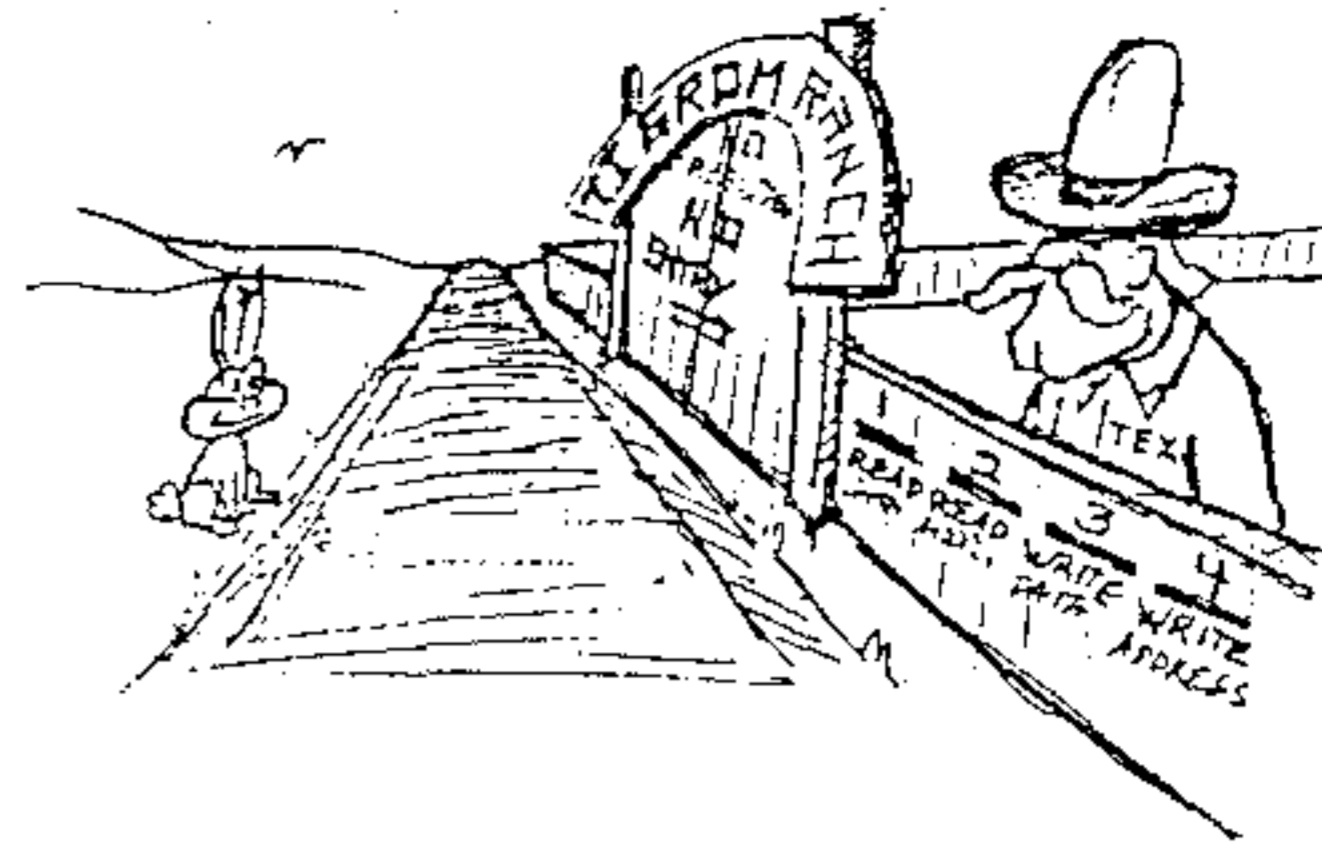
Write to: BOB WEBB
 P O Box 3023
 ARCADIA CA 91007



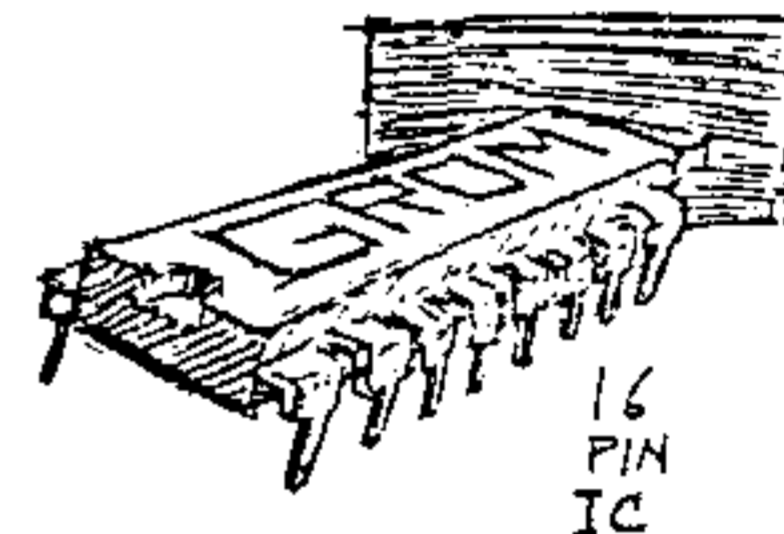
LESSON NUMBER TWO

As you will recall, our 9900 CPU has a clear and simple view of the insides of our Console. He looks at all of the Intergrated Chips of our computers from the inside and see's only a Long One Lane Country Road. The addresses, on only one side of the road, range from zero to 65,535 (when we have our 32k memory installed). The first 8,192 addresses have signs placed along the side of the road. These signs have 8 bits of data painted on them with permanent ink. This first 8k block of memory is known as ROM (read only memory). ALL PROGRAMS and DATA inside the computer are in Machine Code. The program stored in this ROM area is in Machine Code, zeros and ones. ROM, represented by signs at each of the first 8,192 addresses was written by Texas Instruments in Assembly Language. The BASIC Language built into our consoles is stored in Machine Code, but it was written by TI in a Language called GPL, or GRAPHICS PROGRAMMING LANGUAGE. In order for us to be able to run this BASIC Language program we must have a built in GPL INTERPERTER program. The actual BASIC Language program is stored in special IC Chips, isolated from our CPU, called GROM. The first program that is executed in any computer is known as the BOOT STRAP program. Our computers BOOT STRAP program is located in this first 8k of ROM. This Machine Code program was written in Assembly Language. It is a GPL INTERPRETER program that reads program written in GPL. All GPL programs must be stored in those special IC Chips called GROM Chips. In order for our 9900 CPU's to be able to read those GPL programs it must have a way to communicate with the GROM Chips. Texas Instruments built a huge Texas size Ranch along that Little Old County Road. On that big Ranch they

placed 3 GROM's. This Ranch is so big that there are 4 MAIL BOXES. The Owner of the Ranch is named TEX.



Old Tex named it GROM RANCH. The console Basic is written in GPL and is stored in GROM Chips number 1 and 2. GROM Chip number 0 has the real BOOT STRAP program that has all of the initializing routines, start up TI COLOR BAR screen and MODULE SELECTION LIST screen. GROM RANCH can be thought of as a second road with its own address space. This road starts at GROM ADDRESS zero and goes to GROM ADDRESS 24,575 in the first three GROM Chips. The Module Port in our Consoles is officially called a GROM Port. That is because Texas Instruments Modules can contain one or more GROM Chips as well. This extends GROM address space. So we can see that GROM RANCH can be modified simply by putting a Module in the Port. A module can have up to 5 more GROM Chips inside. The Editor Assembler Module has only one GROM Chip. But the EXTENDED BASIC Module has 5 more GROM's.



Why did Texas Instrument invent GPL and GROM's? (GROM RANCH). An Assembly Language Operating System or BOOT STRAP program would have been simpler and cheaper to produce. G R E E D !! This was done so that they could charge other companies for the right to use the GPL Language for their own Game Modules. This idea backfired. This type of system is called Closed Architecture. Other computers had an Open type Architecture and thrived. APPLE Computers had an Open System as well as IBM. This one element of our computer along with some other odd marketing ideas killed any chance for our computer family to grow. Software Companies did not want to pay the high royalty, or licensing fee's. So, they did not write many programs for our machines. Or, if they did write programs they were written in Assembly Language and bypassed the GPL interpreter. This made TI very angry. So, they Closed the Architecture even more. They came out with the Version 2.2 Console. If your Game Module did not have the special GROM Chips it would not run. MEAN OLD MR. TEX!

Their own need to control every aspect of the 99/4A finally wiped out their chances at success.

EXCESS PROFITS BREEDS RUINOUS COMPETITION.



NEXT PAGE

well, that's enough about that. Let's study GROM Chips a bit (Fun Intended).

GROM Chips are like ROM. They are permanent Read Only Memory Chips. In fact, GPL Language is almost identical to Assembly Language. It differs in one main aspect. The GROM Chips AUTO INCREMENT themselves as they are read. As the CPU fetches data out of GROM RANCHes Mail Boxes it does not need to tell the GROM what GROM Address space to read next. The GROM automatically fetches the data from its own next address. The GPL interpreter program causes the CPU to read the binary data in the GROM's READ, MAIL BOX. The GPL interpreter reads the GROM program from the Mail Box at GROM RANCH and only stops when the GROM program code includes some type of jump, or goto type statement.

Normal ROM Chips do not Auto Increment. You must tell the CPU what address you would like to access almost every time you give it an instruction.

This wastes time if you are only going to read the data in the chip. The CPU must make that many more trips up and down the road collecting the next address to go to. So, GROM's are quick. GRAM Chips are like RAM Chips. They Auto Increment just like GROM. I understand that TI never used any GRAM Chips in the Console or Modules of the 99/4A.

We programmers can do some fun things with the GROM Chips. The COLOR BAR TITLE SCREEN uses its own large style Character Set. With some programming savvy we can use the Character Set in our own Assembly Language programs. We write a Post Card or two to TEX at GROM RANCH and ask him to send out that Character Set through the GROM READ DATA MAIL BOX. Or if we want to use other parts of the BOOT STRAP program all we have to do is get a copy of the German Book called "TI 99/4A INTERN", by Heiner Martin. It is a copy of Assembly Language GPL Interpreter program in ROM. It also includes the GPL programs in the first 3 GROM Chips in our Consoles. When I bought it I did not know what it was. I buy TI books on impulse. But later, when I began to understand more about Assembly Language it gave me deep insight into our machines ROM and GROM Operating System.

(c) 1985 by Verlag fur Technik und Handwerk GmbH,
D-7570 Baden-Baden,
Postfach 11 28, West Germany
(ISBN 3-88180-009-3)

Printing: F.W. Wesel, Baden-Baden

This is not light reading. It is a lot of raw code and a little commentary. But if you are a nut like me and want to know what is in your consoles then this is for you.

We can not alter anything in GROM. Remember it is just like ROM. We can only read it. But there are great subroutines built into GROM that we can use.

We communicate with GROM RANCH in BINARY CODE written on POST CARDS. Each Post Card holds combinations of Zero's and One's representing Data or Instructions for TEX.

8 bits, or rather a Byte, of data fits on one Post Card. The CPU is like a lightning quick Mail Man. He delivers Post Cards encoded with data to and from GROM RANCH. The CPU and TEX do not talk to one another directly. They only use the Post. Here is a description of GROM RANCHes 4 Mail Boxes.

```

CPU      GROM
ADDRESS  FUNCTIONS ASSOCIATED
WHERE    WITH THE MAIL BOX
  
```

```

MAIL     AT THAT LOCATION.
BDX IS   TEX IS ON THE OTHER
LOCATED. SIDE OF THE FENCE.
  
```

38,912 = GROM/GRAM READ ADDRESS

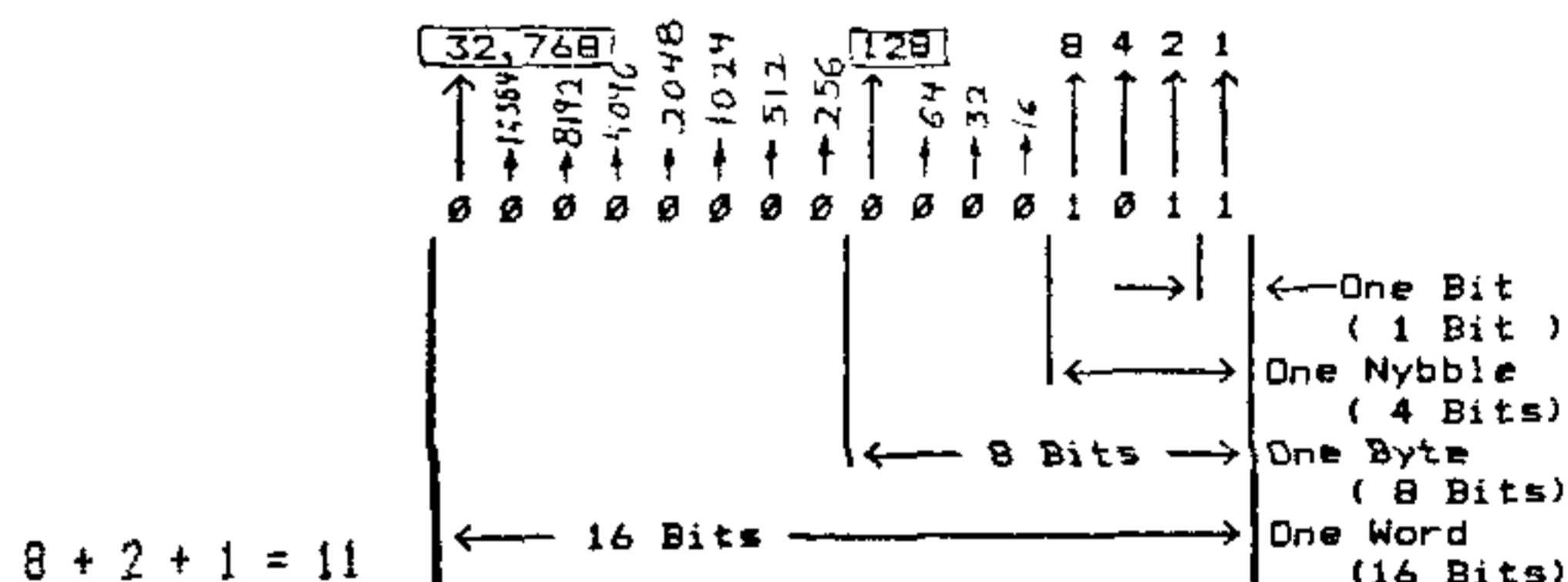
38,914 = GROM/GRAM READ DATA

39,936 = GROM/GRAM WRITE DATA

39,938 = GROM/GRAM WRITE ADDRESS

If you write to GROM nothing will be written. Only GRAM can be written to. So, the Write Data and write Address Mail Box would be used only if you found a way to install GRAM in the Console or the GROM Port.

Now if the Editor Assembler, Extended Basic, or Mini Memory Module is installed in the GROM Port this is our first chance to access the 9900 CPU's Address space directly. Most of the time our computers are speaking GPL. Now it's our turn to speak! The 9900 CPU only understands Machine Code. The position of the ZERO or ONE in an eight Bit Byte represents a given amount. Just like our Decimal System does. In the decimal numbering system 11 means eleven. In Binary 11 means three! Why is that? The first digit, or Bit, in the first position, on the right, represents one in both the Decimal and the Binary system. The second digit in decimal represents one group of ten ones. The second digit in Binary represents one group of two ones. So if a number one is in the second position, in Binary, it represents two. If a zero is in the second position it means no group of two, or zero(of course). In the Binary System each position to the left is double the amount just before it. So, this number in Binary means 11:



Now you are asking why did he draw 16 Digits? He told me last time that the Post Card in the Mail Box, and Painted Signs, only held 8 digits, or Bits. Yes! Each address along the road is capable of holding only one Byte, meaning 8 Bits. The reason I drew 16 Bits of data is because the 9900 CPU is capable of reading 16 Bits, or a WORD, of data at a time. This is where the term 16 Bit Microprocessor comes from. The CPU can read a Bite of data or a Word of data upon command. Most of the time we will talk about a Word of data because more work gets done in a shorter period of time. If our CPU was only capable of reading a Byte at a time it would be called an 8 Bit Microprocessor (another name might be Commodore VIC-20). Wait a minute Bob! You said each address only holds a Byte of data! Yes. If you tell the CPU to grab a Word of data from address 2, it studiously goes to address 2 and picks up its first Byte. We will call this Byte the MOST SIGNIFICANT BYTE, or MSB.

NEXT PAGE

Then he moves automatically to address 3 and grabs the next Byte. We will call this one the LEAST SIGNIFICANT BYTE, or LSB. When the CPU reads ROM or RAM the contents at those addresses are not harmed or altered. The CPU merely reads the data and stores it elsewhere.

The CPU always thinks of this Word of data as having the MSB on the left and the LSB on the right, unless you tell it otherwise. So, our Word of data looks like this:

Address 2 and 3
 Binary DEC
 0000000000100100 = 36

MSB LSB
 00000000 00100100
 Address2 Address3

In fact all of memory is used by the CPU this way. It thinks and acts in terms of Words. I think we now understand why our memory stops at the 65,536th memory address. The CPU can only look at 16 bits at a time. If every one of those 16 Bits were one, or on that would represent the number 65,536. 65,536? Yes! Remember the first address is zero. So, there are exactly 65,536 addresses!

Boy, Oh Boy! What does all of this mean? It means Machine Code is a pain in the posterior for mere mortals like you and me. I think it would be wise to buy a \$20. Scientific Calculator if you want to experiment at all. I use the Texas Instrument TI-35 PLUS. It converts Decimal to Binary and back. It also converts Decimal to Hexadecimal. This is a Base 16 Numbering System, just like Decimal and Binary. The reason I bring this up is because most Assembly Language requires that you write your programs in this format. It is not hard to learn. And in a short while you will begin to think in Hexadecimal just like a real nerd!

Hexadecimal is like Decimal but instead of counting from one to ten you count from zero to fifteen. For a total of 16.

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
HEX															
DEC										11	13	15			
1	2	3	4	5	6	7	8	9	10	12	14	16			

If you write numbers in Hex how do you know its Hex and not Dec? You put a greater than symbol in front of it like this:

>0024

MDDS BUYOUT
 from pg 9

SYSTEM TO A COMPUTER. (grin) Please, if you are able to support this, please send your check as soon as possible. A delay could inhibit or cancel these plans and forever keep us with our

current operating system.

Beery Miller

* * * * *

(This article is was taken from The Tacoma Informer April 1992)

END

If you write in Binary you will usually put a lower case b behind it like this:

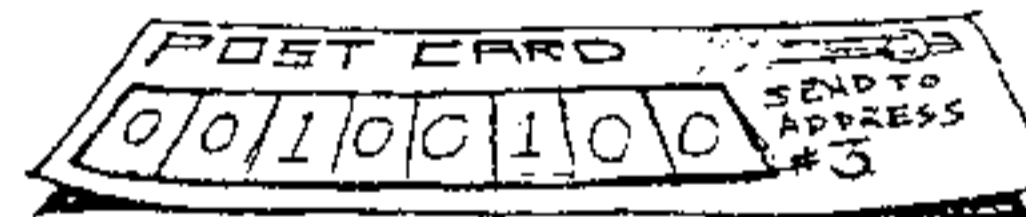
0000000000100100 b

If you write numbers in Decimal you will write it like you have since the first grade:

36

The sharper people out there will have already noticed that all three of the numbers above are the equivalent to Decimal 36. Decimal 36, or Hexadecimal >0024 happens to be the number at address 2 and 3 in most of our Consoles, if not all of them. This is the beginning address of the GPL Language program in ROM. Our CPU's use this address like a GOTO statement in BASIC. When we first apply power to our consoles the CPU performs a LEVEL ZERO INTERRUPT which is a RESET. Then it reads the data at address 2 and 3, to collect a full Word, and JUMP's, or GO's TO, Address >0024. This is all well and good but why does it start at the third address in memory and not 0? It does. I was saving this until I thought you could follow along.

-----> Address ZERO and ONE contain the Hex number >83E0, in all Consoles. This number is also an address. Beginning at this address, >83E0, is another block of memory that the CPU sets aside as a Scratch Pad, or Workspace. It needs an area to store numbers and addresses while it performs calculations and operations on them. The Block of memory is 16 Words long. I will be going into detail on this little workspace later. Just know that for now there is a 16 Word Workspace set aside by the CPU in an area of the fastest RAM in our Consoles. This RAM has a 16 Bit data path. All of the other blocks of RAM are in our 32k cards in the Peripheral Expansion Box and are sent down the P E Boxes Firehose connector in an 8 Bit data path. There is no way to change this. It is hard wired this way. Our computers can perform MATH quickly in the 16 Bit data path Work Space.



Thats all for now. Next Month I will get to the really fun stuff! VIDEO DISPLAY PROCESSOR RAM!!!! BYE!

END

LETTER WRITING
by Allan Cox

Since I write a lot of letters using my TI-WRITER, written by Funnelweb Farm, and because I like my printing to be dark, I have modified this program, adding the following:

```
201 OPEN #1:"PIO"
202 PRINT #1:CHR$(27)&CHR$(71)
203 CLOSE #1
```

This produces double-strike printing from the parallel port and line 201 can be modified for serial printing. Also, when this program is booted up it will not finish loading until the printer is ON, which waves a flag at you to put the printer on line. When it is on line the program set the printing commands without having to set the commands from another disk.

Also, on the file disk in use, I have a program named "FORM" which I call when the TI-WRITER is booted up. On this file I have set my standard margins and tabs that I use all of the time.

Since I am lazy, and always seek to find the easy way of doing things, I use the above combination of programming to begin a letter. Since I am also older and sometimes forgetful, it keeps me from having to go back and correct something I might have missed. When I save the file I give it a new name.

I also use my TI-WRITER disk to program other printing projects. On some of my programs I also enter the printing commands into the program to avoid using another disk to set the printer. Instead of the double-strike command, you may want to use the emphasized command (69), or whatever you may desire.

Speech (Part 1)
HARNESSING THE POWER OF SPEECH

by Craig Dunn

(reprinted from the HOCUS 99 newsletter
Nov 1991, via the Central Texas 99/4A
Users Group)

The TI Speech Synthesizer is an amazing little device. It was a breakthrough for the lower end (priced) computers. Unfortunately, many 99/4A owners still don't know how to access speech along with all its little features. Sure, a lot of games use speech to add interest and excitement, but the applications of speech goes far beyond games.

One of the major features of the speech synthesizer is its ability to let you add speech to your programs. There are several ways to do this, including TI's Terminal Emulator II, XBasic, and through the use of assembly language routines. XBasic provides a rather limited vocabulary (unless you are using one of several recent utilities that give you unlimited speech in XB, but that's another story). TE2 allows for unlimited speech directly from BASIC. This built-in text-to-speech capability of TE2 will be the focus of this article.

First, plug in the TE2 command module, turn on the computer, and select TI Basic. Now type and run the following program:

```
100 OPEN #1: "SPEECH",OUTPUT
110 INPUT A$
120 PRINT #1:A$
```

```
130 GOTO 110
```

If you get an error, make sure you have the speech synthesizer connected properly to the side port. Now we have a very simple text-to-speech editor. Line 100 contains the OPEN command needed to access TE2 speech capabilities. Line 120 sends the text strings that you type in to the text-to-speech interpreter, which then sends the info to the synthesizer. Experiment with this for awhile by typing in phrases, followed by an <ENTER>.

In the above example, you were in the default speech mode. This means that no commands have been sent to alter the voice. We can change the voice easily using the "/" command. The proper format is:

```
// PITCH SLOPE
```

```
ex. //34 118
```

The pitch is a number between 0 and 63. A zero causes the speech synthesizer to whisper phrases. Pitches from 1 to 63 range from the highest pitched [1] to the lowest pitched [63]. For the best sound, figure the SLOPE using the following formula:

$$\text{SLOPE} = 32 \times (\text{PITCH}/10)$$

Round this result to the nearest whole number. Now, when you enter the command along with these two numbers, it will appear that nothing has happened. But type in a simple phrase and press <ENTER>. You'll notice the

change in voice. For example, at the prompt in our simple little speech editor, type "//55 176" and press <ENTER>. (Be sure to include a [space] between the numbers). Nothing happened, right? Well, now type something in and press <ENTER>. See how the voice changed? It becomes deeper. Now try "//0 0" and press <ENTER>. Again, type in a short phrase. Another voice tone! Experiment with these and other PITCH/SLOPE combinations to get the feel of working with these.

Before we wrap up this tutorial, we'll take a look at the INFLECTION symbols. The symbols are " " (carat), "_" (underline), and ">" (greater than). The " ", when placed in front of a word, indicates a primary stress point to the text-to-speech interpreter. Only ONE " " may be per string. The "_" is used to indicate a secondary stress point and may be used without limit throughout the string. The ">" will shift the stress points within the word. Experiment with all of these to make words sound better and more human like. Remember, all inflection symbols must precede the word they are to affect.

One final note, remember that the text-to-speech interpreter is not perfect. Sometimes you might have to alter a word's spelling drastically to make it sound right.

**MEETING DATES
FOR
1992**

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3RD SATURDAY
--- 16 MAY 1992
20 JUN 1992
18 JUL 1992
15 AUG 1992
19 SEP 1992
17 OCT 1992
21 NOV 1992
19 DEC 1992

-- No meeting
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4TH WEDNESDAY
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22 JUL 1992
26 AUG 1992
23 SEP 1992
28 OCT 1992
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