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**THE HUGERS
 HOOSIER USERS GROUP**

JANUARY, 1985

THE HUGERS NEWSLETTER

VOLUME 2, NUMBER 10

THE OFFICER'S CORNER

Happy New Year! As you can see, my space here is breif this month, so I'll keep the chatter down to a minimum.

Our Christmas Party was very nice. Everyone had a good time. I would like to thank Gary Rhodes and Helen Chastain who came early to help us set up, Without Gary and Helen's help, everything would not have been ready at meeting time.

To bring you up to date on the FORTH manuals, I still need 4 pre-paid orders before I can order the printing. As I mentioned in earlier Newsletters, the manual, which costs \$20.00, has over 100 (double sided) pages with an index card stock cover and a spiral "GBC" binding. If you would like to order one or more FORTH manuals, please see Pam or myself at the meeting. (Or send your deposit to our P.O. Box).

This month's workshops features two new products to the TI Computer market. They are Navarone's Data Base Management (DBM) and MBP's Clock/Analog to Digital Converter Card (ADC). DBM is a second generation Personal Record Keeping. The ADC opens many doors previously closed to the TI'er. This card could actually allow your TI to control your home lights, appliances, etc.

This looks to be an exciting year unfolding for TI Home Computer.! Stay tuned to your Newsletter!

See you at the January 13th meeting. J. Steven Sims, Pres.

THE NEXT MONTHLY MEETING WILL BE
JANUARY 13, 1985
 STARTING AT 2:00 PM AT CREATIVE LOGIC!

WORKSHOPS: FORTH DATA HANDLING
 NAVARONE'S DATA BASE MANAGEMENT
 MBP'S CLOCK/ANALOG TO DIGITAL CONVERTER CARD

SOUTH REGIONAL MEETING

January 19, starting at 2:00 pm
 (Library Hour 1:00 to 2:00 pm)

(See Page 2 for more details)

LIBRARY NEWS!

For our active members who can't make it our meetings (or those who live too far away), we are now offering our library by mail. Library disk may be purchased either in packages or singular.

Individual disk may be ordered for \$3.50 and \$1.50 postage each.

Library packages may be ordered for \$30.00 and \$3.50 postage. Each package comes with a nice smoke colored disk storage case. Library Packages are set up as follows:

- Package 1: includes disk named Basic 1 through 10
- Package 2: includes disk named Basic 11 and 12
 Extended 1 through 7
 Speech 1
- Package 3: includes disk named Texas 1 through 6
 TI Forth
 Forth-Demo
 Forth-Copier
 Mini-Mem 1

Library packages 2 and 3 will change periodically as our library grows.

To order Library disk or packages, please send a check and specify what you want to order to:

P.O. Box 2222
 Indianapolis, IN 46206

Your order will be sent to you within two weeks of receipt.

Note: Library listings are available through the mail, see the directory page for details.

HAPPY BIRTHDAY!

A Happy Birthday to these January, 1984 members: Ruth Lankford, Bob Slomka, Craig Yount, Jon & Cathy Jo Cripe, Don & Vicki Gandolf, Paul & Mary Ann Vollenweider, Tony & Shirley Bentenhausen, Jack Brown, Mike Garvey, Gary Rhodes, Frank & Mid Chase, Charles Williams, Robert Sobeck, Galen Minton, Steven Dubeansky, Tom Shuee, William F. Godby, Gloria Ransom, Karen Moore, Bob Whiteside, Jennifer Keller, Bill & Carolyn Brittan, Edward McCartney, Lonnie Eaton, Robert Shaw, Cptn. Donald Taylor, Durham Construction, Ros Gater, Gary McQuade, Daniel Poe, Gerald Scott, Russell Pitz, Richard Burnette, Mike & Mirian Fuqua, Clarence Todd, Sr., Randy Morgan and Doris Wills.

WELCOME!

A New Years Welcome to these new HUGgers who joined in the past month: Pat McGraw, Wayne Wilkerson, Cletet Woest, George Kruggel, and Joseph Minielli.

WELCOME BACK!

Welcome back to these renewing HUGgers: Jim Westover, Mike Oeth, Michael Updike, John Schneider, Gordon Edwards, Wendell Bunting, Bill Cagle, Mark Wels and Charles Trotter.

REGIONAL NEWS

SOUTH REGIONAL MEETING

The southside group will reconvene after the holidays on Saturday, January 19. The library will be open from 1:00-2:00. The meeting will begin at 2:00. The meeting will be at my home, 4582 Moccasin Pl., Greenwood. You can call me at 881-5918 for information or directions.

Dennis Sherfy

FOR SALE

TI DISK CONTROLLER CARD with cables, Disk Manager II Module and manual. \$75
Call 291-3995

CONSOLE COMMENTS

by Bill Jones

I purchased a copy of THINKING FORTH by Brodie and read it cover to cover last night. The book is definitely advanced, but, as the author says, is not just for FORTH programmers. Brodie defines the discipline of programming, as professionals do it. Most of us amateurs learned to program thru the school of hard knocks, and that school teaches some bad habits. I wish Brodie had written this book when I was just starting out.

THINKING FORTH clearly explains the best ways to bring a project from start to finish, producing code that is more than functional-it is elegant. 90 percent of this books contents applies to any language, not just FORTH, because it describes a programmers philosophy that caused FORTH to be created.

If you do any serious programming, READ THIS BOOK!

ASSEMBLY LANGUAGE FORUM

Editor's Note: Vic Kelson was unable to finish his Assembly Language Forum due to console problems and prior commitments. You see, Vic's prior commitments include the planning for his upcoming wedding. Vic says that he plans to have an article ready for the February Newsletter. Now anybody who has been involved in planning a wedding knows how time consuming that can be, and I feel I can speak for all of the members by saying..... Vic, forget about the Forum for January and February, we'll be looking forward to your Forum in March! Have a great wedding and a fantastic honeymoon. Congrats!

DEBUGS!

A typo appeared in the /4A Disk Format article which appeared in the December, 1984 issue of the HUGger Newsletter. The typo was in the section "Sector 0 contains the Volume Information Block". The erred line is reprinted and corrected below:

MICROS IN ACTION

by Bill Cagle

While on a plane, I read an article in a newspaper about computers. This article was based on the time spent on home computers and where this time came from. This data was obtained by a poll sent out by a computer magazine and of the fifteen hundred people responding, fifty-four percent said that they spent less time watching television. They also stated that most of the computer time was spent in playing computer-games with other members of the family or by themselves. This sort of information makes me feel good about the future of computers in our country. I am also glad that computers are beginning to be considered by the lay public as an entertainment device. Just think, if we could also see a swing to programming as a national pastime, imagine what an enormous amounts of software a million people could write.

I also noticed an article in this same paper, about kids and computers. This article was about an undercurrent in our industry, that holds to the notion that "If a child doesn't have a computer by age five, it will be unemployed by twenty-five". That just isn't true, because computer operation can be learned just like anything else and as software becomes more user friendly, the task of operating computer systems will require less and less training. As hardware designs mature more and more, we might see the day of computers without keyboards. This makes the future look very bright indeed.

Recently, my son talked me into seeing a movie named "The Terminator". This film is based on the premise that at some point in the future, the world leader's will put the security of the world, into the hands of a global computer that has the ability to learn and when this computer learned enough to get tired of the frailties of human nature, it decided to be done with all humans. To accomplish this, it created a global nuclear holocaust. The first thing wrong with this concept, is that computers can not reason or learn. The very best they can do, is to compare numbers and detect the bigger or the smaller and sometimes look for a comparison. While some software is so sophisticated, it creates an illusion that the computer is "thinking", while all it is really doing, is just going through a series of, "if then's" and "goto's", etc. There is some research going on at present in the field of artificial intelligence and maybe I will do an article in the near future, on that subject. One example of software that causes the computer to appear to think, is the program called Eliza. This program will be available on our Bulletin Board Service as soon as Bill Jones gets it done.

There is another disturbing trend beginning to move into the white-collar industry. The bigger and better "work station" on your desk, the more powerful you are and the more prestige you have. You will notice that in that last sentence, there was no mention of being able to use the power (of the work station). To make things even worse, the computer industry has responded to this trend by advertising the "up" features of their product. This will, in time, force these user's to buy computers with features that have no bearing on the job that they will be performing. This will tend to produce a sellers market and will probably inflate the price of the "top of the line" business products.

Another year has seen it's last and in retrospect it has been a very full one for the HUGgers. We have seen the BBS be installed and then we have watched with great pleasure as Steve Sims and Bill Jones reworked it till the original identity is almost completely gone. For the next year we are going to undertake a massive membership drive and this will give us some new blood. We are also going to continue with the multiple workshop concept for our meetings. There is going to be some effort expended to install more assembly and Forth programs into our club library. The future looks better and better for our club, doesn't it?

Go FORTH young man and program the world to your likeing.

DOUBLE-DENSITY FORTH

by J. W. Vincent

Editors Note: The following article was copied from the September, 1984 issue of "The National 99'er", Newsletter of the 99'ers Users Group Association; Bakersfield, California.

This article is intended for all TI FORTH users who have (or plan on having) double density and/or double sided disk capabilities. While the techniques described should work with any disk controller capable of double density, the author's CorComp 9900 Disk Controller Card is the only one that has been tested. The purpose of this article is to illustrate both how to access the additional screen capacity and how to modify the FORTH words and disk to be compatible with the new format and Disk Manager. Throughout this article lowercase letters used in a FORTH definition will indicate a variable value to be entered. The following terms will be used to refer to the various formats a FORTH disk may have.

90 SCRNI or SSSD - the original 90 screen single sided single density format
180 SCRNI - either a SSDD or DSSD disk when comment applies to both
360 SCRNI or DSDD - a double sided double density disk
SSDD - a single sided double density disk
DSSD - a double sided single density disk

The first step is to use Disk Manager to format (initialize) a 180 or 360 SCRNI disk. Next you must copy FORTH from the 90 SCRNI disk to the new 180 or 360 SCRNI disk. The disk copy feature of CorComp's Disk Manager will do this properly for you. If you have two drives, the FORTH-COPY word in the -COPY screens will also do it properly (do 0 DISK_LO ! first). However, if you are using TI's Disk Manager II, after copying the three files you must use FORTH to copy screens 1 to 9 because Disk Manager II puts them in the wrong place! To do this, enter the following for each of the nine screens.

n BLOCK UPDATE (where n is the screen number to be read from old disk)
FLUSH (after inserting the new disk - note: up to five screens may be entered at a time)

Now edit screen 3 of your new disk and add the following commands:

x DISK_SIZE ! (where x = 180 or 360 as appropriate)
y DISK_HI ! (where y = x times 1, 2, 3, or 4 depending on the number of drives you have)

Unfortunately, TI FORTH does not provide a method for configuring each drive individually. Therefore, the user must be cognizant of which screens are available on each drive when there are differences between them. At this point, FORTH can be booted and it will recognize the full capacity of your 180 or 360 SCRNI disk. You can create, edit, list, and load from screens greater than 89. However, neither Disk Manager nor FORTH-COPY will recognize this disk as having more than 90 screens. To fix this problem you must modify the -COPY screens (39 and 40), the disk header (sector 0) and, the SYS-SCRNS file header (sector 4). First edit screen 39. Change the value 90, which appears once in DTEST and twice in FORTH-COPY to 180 or 360 as appropriate. Next edit screen 40 as follows:

Line 3 - change 168 to 208 for 180 SCRNI or 500 for 360 SCRNI
Line 4 - change 944 to 1244 for SSDD or DSDD (no change for DSSD)
Line 5 - replace entire line with:
DUP 10 + 2028 SWAP ! DUP 12 + a SWAP ! DUP 14 + 24 @ FILL
where a = 0201 for DSSD, 0102 for SSDD, or 0202 for DSDD
Line 10 - change 165 to 2CD for 180 SCRNI, or 59D for 360 SCRNI
Line 13 - change 4816 to C82C for 180 SCRNI, or C859 for 360 SCRNI

Next edit screen 33 to modify the FORMAT-DISK word to:

: FORMAT-DISK 1+ a 33616 ! 18 SYSTEM ; (where a = 258 for DSDD, 513 for SSDD, 514 for DSSD)

--NEW FORTH--

LOADS FROM EXTENDED BASIC AND OTHER CARTRIGES!

by Bill Jones

Most HUGgers know Greg Goodwin as something of a patriarch to the Hoosier Users Group's FORTH interest group. He is also a professional programmer who spends his days writing assembly programs on the 'big boys' and comes home at night to relax by writing programs in FORTH on his TI. His popular KIBBIT graphics program in FORTH is well known among us and his programs frequently appear on the bulletin board.

Greg didn't stop there though. He wasn't satisfied with programming in a language that only people with the Editor/Assembler (or the new CorComp disk controller) could use. He picked the FORTH source code apart and came up with the modifications that made it possible to load the language through several TI cartridges. Greg has been able to make FORTH load from Extended BASIC and TI Writer. Now anyone with a disk drive and memory expansion can use FORTH even if they only have one of these cartridges!

I'm told that two different modified versions are used, one that loads from Corcomp, Minimem and the Editor/Assembler, and one that loads from the Extended BASIC and TI-Writer cartridges. With Extended BASIC, loading is done the same way as any other assembly language program file, then you CALL LINK and you're in FORTH! Imagine that as an autoloading program. Greg tricked TI-Writer into thinking that FORTH is one of its utility programs.

Since it would be nice to combine BASIC and FORTH programs on our bulletin board, I asked if it would be possible to switch back and forth between the two languages. He said although he hadn't tried it yet, a routine similar to FORTH's MON word could possibly cold-start Extended BASIC. One hitch to that is that both BASIC and FORTH expect to load from disk 1.

Greg decided to release this version of FORTH to the users groups, and says that the Hoosier Users Group may send one copy of the disk to each group that asks, for \$5. He cautions that he is not giving it over for public domain, but sends it to each group along with a limited license to produce copies for members of that group. It contains the FORTH that TI released to public domain with some exceptions. It loads with other cartridges and it has a fix for a bug in the graphics mode that TI never fixed. He also added routines to allow speech and sound.

This new addition to our library will open FORTH up to a second generation of TI FORTH users who, I'm sure, will find FORTH as fascinating and useful as I and many other FORTH enthusiasts already have. Thanks Greg!

This disk is, of course, free for the copying to active HUG members; other clubs wanting a copy may send \$5 to the Hoosier Users Group at the address below.

HOOSIER USERS GROUP DISK
PO BOX 34334
INDIANAPOLIS, IN 46234

DOUBLE-DENSITY FORTH, cont'd.

Finally, you need to create a word that will modify the header sectors on your new disk. This word only needs to be executed once since copies of this disk, once it's modified, will not require modification. Here is the way to do it:

```
HEX 0 DSKLLO !           ( removes disk fence)
: DD-FORTH 0 BLOCK UPDATE ( read screen 0 and mark as updated)
  DUP A + a SWAP !       ( a = 200 for 180 SCRIN, 5A0 for 360 SCRIN)
  DUP C + b SWAP !       ( b = 944 for DSSD, 1244 for SSD0 or DSDD)
  DUP 10 + c SWAP !      ( c = 2028 for all versions)
  DUP 12 + d SWAP !      ( d = 201 on DSSD, 102 on SSD0, 202 on DSDD)
  38 + C8 FF FILL        ( flag all sectors as in use)
  1 BLOCK UPDATE         ( read screen 1 and mark as updated)
  DUP E + f SWAP !       ( f = 2A0 for 180 SCRIN, 570 for 360 SCRIN)
  DUP 1C + g SWAP !      ( g = 4D20 for 180 or 360 SCRIN versions)
  DUP 1E + h SWAP !      ( h = 2805 for 180 SCRIN, 5205 for 360 SCRIN)
  20 + i SWAP !          ( i = F029 for 180 SCRIN, F059 for 360 SCRIN)
  FLUSH ;                ( write modified screens to disk)
DECIMAL DD-FORTH         ( execute it)
```

Now your new high capacity copy of FORTH is fully compatible with Disk Manager, the FORTH format, copy, test, and header words and your double density and/or double sided disk drives and controller. Enjoy!

LIBRARY BITS

by Dennis Sherfy

Extended Basic disk 3 contains TI/DEMO. You have to run this program in color to appreciate it. It is a demonstration of sprites and speech. Since I don't have the speech synthesizer I cannot report on that portion of the program, however the sprite demo is worthwhile in itself. This program puts a moving color pattern on the screen different than anything you've probably ever seen on the TI. When you think of sprites, you usually think of moving aliens which you are supposed to mindlessly zap until they eventually get you. This use of sprites is well suited for program titles which grab the viewer and get him/her expecting something impressive.

Extended Basic-1 contains WORLDMAP. This is a good demonstration of mass character re-definition. You must re-define most of the standard ASCII codes in order to put this kind of detail on the screen. The program opens by asking you how many points you want. At first I thought it was some kind of game. There are no instructions. The program wants you to specify up to 28 points on a world map, identified by latitude and longitude. After you input all pairs of coordinates, the screen is cleared and an outline of the world is drawn on the screen (orange on white back-ground, at least that's what it looked like on my screen). As soon as the map is completed, the points are displayed in blue. They appear very quickly. If you don't know where to look for the points, you might not see them, particularly if a point is close to a map line. As a refresher, latitude is the distance north or south of the equator in degrees. Plus is north, minus is south. Longitude is the distance in degrees east or west of a line drawn between the north and south poles, in particular, the line passing through Greenwich, England. The program accepts 0-360 degrees, and plus or minus degree entries. It is interesting to enter a series of points with 0 degrees latitude, and a variety of degrees longitude. This will produce a line showing the equator. You will find Indianapolis at about latitude 40, longitude 86. This is an interesting program for you to share with your school-age children.

HOOSIER USERS GROUP DIRECTORY

HOOSIER USERS GROUP OFFICERS

President.....Steve Sims 631-7255
Vice-President.....Bill Cagle
Secretary.....Barb Uhrig 357-8268
Treasurer.....Bill Jones

HUGbbs INFORMATION

317-631-994A

The HUGbbs operates on a 24 hour basis.

COMMITTEE CHAIRPERSONS

Regional Centers:
South.....Dennis Sherfy 881-5918

Documents.....Don Donlan 882-4544
Membership.....Pam Sims 631-7255
Newsletter.....Pam Sims 631-7255

MEETING LOCATION

Creative Logic
8240 Indy Lane
Indianapolis, IN 46224

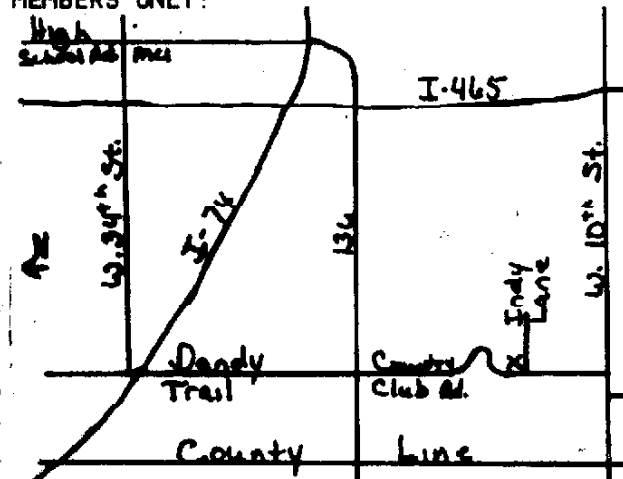
(About 1800 North Country Club Road)

NEWSLETTER EXCHANGE

The Hoosier Users is participating in a Newsletter Exchange program with other TI Users Groups. This offer is made with the understanding that, with proper credit, your Users Group can reprint articles from the Hoosier Users Group Newsletter, and with proper credit, we can reprint articles from other TI Users Groups Newsletters.

PRINTOUTS

Printouts of library listings can be ordered for \$.25 & a self addressed envelope with \$.37 postage. Printouts of the HUGbbs Reference Guide can be ordered for \$.50 and a self addressed envelope with \$.20 postage. Please send orders to our P.O. Box. SORRY, PRINTOUTS WILL BE SENT TO ACTIVE MEMBERS ONLY!



SPONSOR THE HUGbbs: Any member or retail business can sponsor the HUGbbs. For a \$5.00 donation, you get 5 (40 column) lines on the Log-On Title Screen for a week (or for a \$10.00 donation, you get 10 (40 column) lines) plus a 24 line by 40 character ad in the Sales option of the File Module. To sponsor the HUGbbs, send a check or money order to our P.O. Box (or turn in at our Monthly Meeting) specifying how many weeks (and how many lines) you want to sponsor, your name (or company name), address, phone, what you want to say, and the week (and an alternate week) you want the ad to appear.*

BACK ISSUES

Back Issues purchased at the monthly meeting is \$1.00 each. Mail order price is \$1.50 per Newsletter (postage included). Orders will be filled within 3 weeks of receipt by the Documents Committee.

ADVERTISING POLICIES

There will be no charge for advertisements submitted to the HUGger Newsletter by members (for private sale only). Format for the advertisements is 45 characters wide by 10 lines long. The Ad should be typed or hand printed exactly how it is to appear in the Newsletter. Deadline for an ad to appear in next month's Newsletter is the 2nd Saturday of the month.*

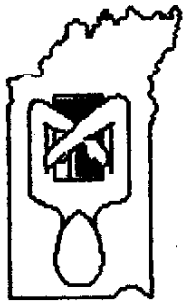
For companies who wish to advertise in the HUGger Newsletter, our rates are as follows:
Pre-Printed Inserts (one page) \$20.00
One Full Page (one sided) Ad: \$25.00
One Half Page Ad: \$13.00
One Quarter Page Ad: \$7.00

All ads must be in a ready to print condition. Advertisements must be in our P.O. Box before the 2nd Saturday of the month to appear in the following month's Newsletter.*

*NOTE: The Officers of the Hoosier Users Group reserve final approval on all advertisements submitted for the HUGger Newsletter and the HUGbbs. The Officers and the Newsletter committee are not responsible for typographical errors due to illegible advertisements. All proceeds are accepted as donations to the Hoosier Users Group.

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INDIANAPOLIS, IN 46206-2222
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APPLICATION FOR MEMBERSHIP

Below you will find an application for membership to the Hoosier Users Group. Active membership entitles you to the Newsletter, up and download on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year. Subscribing members will receive the NEWSLETTER only.

Make check or money order payable to HOOSIER USERS GROUP. Send completed application to:

HOOSIER USERS GROUP
P. O. Box 2222
Indianapolis, IN 46206-2222

----- please print ----- cut on dotted line -----

Check One:	NAME _____	TODAY'S DATE _____
Active Member	ADDRESS _____	APT # _____
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Subscribing Member	COMMENTS _____	
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