Vol.7 No.10 December 1989

NEW HORIZONS
NEWS LETTER

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

AND THE MYARC GENEVE 9640 PERSONAL AND HOME COMPUTER

This newsletter is published by New Horizons TI-99/4A Home Computer User's Group. Material may be reproduced without permission provided that the Author and the source are Acknowledged. For more information consult one of the following officers: Yearly Dues $15.00 per Family or Individual............
  THIS MONTHS MEETING DEC.09,1989 SATURDAY AT UNITY CHURCH 12:30 PM.
        Behind Wendy's off Secor Road on Executive Dr.

```
TI-COM BBS....................1-419-385-7484

PRESIDENT....Don Turner      1-419-474-6135
ADDRESS 3413 ANDERSON PK. TOLEDO  OH.  43606

VICE-PRES... Jo Symington     1-419-474-4128

SECRETARY..Marilyn Schafstall 1-419-882-6870

TREASURER..Earl W. Hoffsis    1-419-475-0461

SOFTWARE LIB.John&Chris Dewey 1-419-475-3871

NEWSLETTER LIB. Burr Mallory  1-419-882-6769

EDITOR....Roger Feinauer      1-517-263-6
```


Merry Christmas

N.W. OHIO 99'ERS USER GROUP
FIRST CHURCH UNITY
3535 EXECUTIVE PARKWAY
TOLEDO OHIO 43606
ATT EARL W. HOFFSIS

Dallas TI Home Computer GP
~~c/o Louis Guie~~
PO Box 29863
Dallas, TX   75299

PRESIDENT'S CORNER
Don Turner

Seasons^Greetings to all the members of NEW^HORIZONS !! I am hoping that this year will be the very best for all of our members and that next year will be even better. We had eighteen members at last months meeting. four prizes were awarded and one member won the 50/50 drawing. This month PAGE^PRO^99 will be one of the prizes awarded.

Be sure to attend this month or you could miss the best part of the meeting this month, the party. We will be meeting at UNITY CHURCH on Executive^Pkwy at 12:30 December 9th.

This month we will have a new club disk available. The new club disks will be on sale at the club sales desk. See Earl for more details. Attendance is still down, but improving.... Myself and the officers would like to see that trend change for the better. Your attendance is what makes the club an enjoyable experience.

There will be a 50/50 raffle this month so be there early to get your tickets. Officers have been selected by the nomination commitee. Please be sure to vote. @Club^dues^^are^^due this month. $15.00 will be needed to maintain membership. The cost has been the same for the last three years. A cheap price to pay for getting everything you wanted to know but was afraid to ask.

As always this month we will have at least one demo. Roger Feinauer will be demonstrating his own PRLD program wich will be our D.O.M. (disk of the month). will be available as usual. I am hoping to have at least three new disks available. Anyone having anything they want to show, bring it in and give us a demo please feel free to do so.

MICROPENDIUM is available each month at the club sales desk. Unfortunately the prices has increased, but it is still quite a bargian. These are in limited quantities so be sure to get yours while they last. MICROPENDIUM has some of latest news and software concerning the TI-99/4A and the GENEVE 9640. Also it has reviews on software/hardware and much much more.

Anyone who has borrowed from the lending library and the exchange newsletters should return them this month so that we can update our library and get it ready for January. Please return the exchange newsletters to @BURR^MALLORY and the software to @CHRIS^DEWY.

In closing I'd like to wish everyone a joyful holiday season. A very Merry Christmas to all and an exciting happy New Year !! Thank you all for the wonderful support and help. And to the club officers a very special thank you!

Don

EDITOR

Tis the season to be jolly, and hope all of you fill the same as we bring a close to the end of the year, and in this case a decade. The 99/4A has come a long way in the last 10 years, an looks like it's only the begining. We have seen many changes an if they keep going for little while, which I hope.We can see a pleasent future for our great machine. most happened after TI stop production on our little machine. Most of what is now availible is only there because of a market for it, whether the case be it software, or hardware.

One only wonders what will be their in the next ten years but, in all cases it will all rest on you the user what you will be willing to pay for. Buy the way speaking of paying have you paid the renewal to the club dues for 1990 yet? If not please try to do so.

I was wondering the other day why no one has ever changed the MERGE funtion of Extended Basic. You see all of the wonderfull options. Such as in the Super Extended Basic, XXB, ect. What I am getting at is why couldn't it be made to work from a running program. This save a lot of memory in long programs. It could be something like this, NN$="JOHN :: CALL MERGE("DSK6.J",P/SEG$(1,4,NN$)) /200. What the following line would be doing would be to look at a merge file called J, parse

the file and look for the string JOHN in the file of J and if it is the first four characters of a record of J then merge it in at line number 200. And do this while the program is running wouldn't this be great. And if you could parse a record by a string also wouldn't be nice to be able to also take segments of a file and and MERGE it in as follows such as CALL MERGE("DSK6.J",/L 230,20,300) this would cause the program to look for a file called J find line number 230 an start from line 230 and the next 20 lines and merge in the the next 20 lines in the running program starting at line 300. Maybe there could also be some save merge optinions, but these first two would do for starters.

One of the on going projects that I am trying to do is set up a hard drive for my brother in law. And at the time I first started it my Geneve was working and things was going quite well. By the way which is still at Myarc stll getting fixed, and only owning one TI makes it very hard to set up both. Anyway I find the hard drive controller very slick. You are probly wondering were this is all leading well one of the options is to emulate dsk1 what really happens is as follows. From the hard flopy disk controllers disk manager select emulation dsk1. You will then be sent to the present root directory. then you must select a sub director. at this point the system asks the name you wish to call the dsk1.emulation. You have the same 10 character limit as on all files. Then you asked to put the disk in drive one you wished to emulate. What happens is that all the files on the disk are put in a special archive file with the name you gave it from above. To use the file use the CALL MDM which will reload the hard drive manager sellect the option to activate this option. You will be then greeted with with the directorys again get back to the

file you created and press enter and you will notice that a reverse vidio 1 will be next to the file name . This tells you it is set. from this point on all references to drive 1 will be to this file, not drive dsk1. This isn't a good option to use if you only have one disk drive. If the programs weren't written for a hard drive. Also dont try to copy files back to the flopy in drive 1, while in this mode as it will copy them back to the floppy ok but messes up the manager. you will then have turn off the hard drive and and boot the disk manager from the disk drive then erase that emulation file then everthing will work fine again . Well in closing I will see you at the Christmas party if not I hope each and everyone and theirs all the best this year and the next.

I HOPE YOU CAN USE THE TEMPLET PICTURE I HAVE INCLOSED WITH THIS TEXT FILE. IF YOU BOUGHT TI-ARTIST, YOU CAN, FOR SURE! In the TI-ARTIST PLUS docs they tell you that you can only use the middle third of the picture for the BANNER printout. It may take you quite a few sheets of paper to figure out where they are talking about or you can use this little templet. Just put your information in the blank area in the middle, and that's all that will print out on the banner.

Now, this is not the only problem you will experience when you are getting to know TI-ARTIST PLUS. There are lots of great new features in this program that will probably cause you an equal amount of grief. That's why Paul Schiedemantle and I are going to prepare SUPPLEMENT #3 of Home Publishing on the TI99/4A. There will be at least thirty-two pages of extra tidbits and illustrations showing you how to

handle this monster program. There will also be some information included on other great new additions to TI graphics, if we have room.

Included also will be a disk of graphic utilities by Paul and Bob Coffey> (The printer code genius that created the Artist Photographic on our last disk.

Bob has made a new program called Artist Sampler that will put 20 Artist pictures on a page with the file names and disk name. The pictures are proportional and print from any size media automatically.

Paul is making up some new font utilities that any serious graphic person won't want to be with out. The main one will be able to justify any font of any size so that spacing is proportional. It will also be able to add pixels to some of those tight fonts you may have.

We expect to get this package out around the first of January but if you order by December first, we will also include an extra disk of graphics. I'm not sure what they will be yet, but I guarantee they will be useful.

The whole package will $10.50 which includes the postage and handling. Group rates of 12 or more packages will be $9.75 per package.

Make checks payable to: Harry T. Brashear
2753 Main Street
Newfane NY 14108

P.S. Thanks to the four hundred people that bought the original Home Publishing package. You're the ones that helped us decide to do this. -htb-

----

IMPACT/99

BY JACK SUGHRUE

TI-BASE: PART TWO

Last time in IMPACT I waxed enthusiastic over Dennis Faherty's TI-BASE. In the few days since I wrote Part I of this review I have grown even more fond of this fantastic database.

You can throw out all your others, just as you did your old TI WRITER and DISK MANAGER cartridges after FUNNELWEB came out.

TI-BASE is perfect for business, school, home, and playtime. This can handle anything you want a database for and lots of things you didn't know you wanted one for before seeing this creative package.

But before I list a pile of its operational properties. It might be beter to start (as I had to) with the simple things. Last month I said I wanted to create a personal library catalog of works by comedy author P. G. Wodehouse. It could just as easily be a video library or recipes or a checkbook or mailing addresses or whatever. It does all these simple tasks more easily than any other database I have used for the TI. Its input has no restrictions, nor does its output, as you will see.

The Wodehouse collection I have includes paperback books, hardbounds, multi-book anthologies, short stories, tapes, videos. I have a numerically-assigned bibliography. I alo have sheets of paper with the various titles under which the same books were printed. And I have a lot of odd pieces of information about many of the printed materials from different sources, including some library research. And, of course, I have many of the books.

So I first had to decide how I wanted this information collected and how I wanted it to appear in final screen display and hard copy forms.

I have over 200 separate items, but for our purposes I'll use the first few. All books.

At first glance I realized that th pro-computer operation is similar to many databases. I have to construct a field(title,original publication date,asigned number for cross-referencing [like K235 for Mozart's works] and so on).

I'm allowed 17 different fields on each record page. More than I'll ever use. I'm allowed up to 255 characters for each field. Again, more than I'll use. And I'm allowed over 8,000 records per database. Definitely more than I'll ever use. And I can create an infinite number of bases.

So, I put my TI-BASE in drive 1 (though I can assign it to any drive or RAM) and my initialized blank disk for creation of the database in Drive 2 (though I could initialize it from inside the program itself while I'm using it) I load TIB automatically by choosing Extended Basic.

TIB takes about 97 seconds to fully load. Then you are asked for the date in this form: 09/18/88. This info goes onto your disk and database, so be sure the WRITE-PROTECT TABS are not on ether disk. And be sure you made backups (as recommeded by Faherty) and keep your originals safe.

Next you'll be presented with a STATUS report with these defaults:

```
DATDISK=DSK2.
PRGDISK=DSK1.
PRINTER=PIO.
LINE=80
PAGE=56
HEADING=ON
TALK=ON
SPACES=1
RECNUM=ON
LSPACE=256
DATE=09/08/88
```

I stuck with the data and program drives and with the printer. I changed line to 134 because I wanted a condenced printout. I kept the Page Lenght of 56 lines.

I shut OFF the Heading because I planned to print out lots of different hardcopies and didn't need the heading. I retained TALK which displays the commands as they are being executed. And the Spaces between columns at 1 and the 256 character Lspace for the variables I was about to create. I shut OFF the Record Numbers because my assigned numbers (which start at 1 instead of 0) would give me a cleaner, more relevant printout, as well as screen display. There is no cursor here. Just a dot in the lower left corner. That means TI-BASE is ready for your command. I had to make tose changes above, so I just typed SET LINE=134 <ENTER> and SET HEADING=OFF <ENTER> and SET RECNUM=OFF<ENTER>. I then typed at the dot DISPLAY STATUS just tc see that everything got in okay. It did. Simple.

Now I typed CLEAR to clear the screen (and ENTER, of course, after each command).

But I don't like the screen colors of white on dark-blue. So at the dot I type COLOR BLACK DARK-YELLOW. Foila! A nice crisp black-on-yellow screen, though I could have chosen any combination I wanted.

Have you noticed that at the command dot I simply type in a word or two that DIRECTLY and INSTANTLY performs the operation? At last, I am ready to create a structure for my P.G.Wodehouse database.

At the dot I type CREATE DSK2.WODEHOUS (8-letter DE title). This sets up the base automatically for my personalized structure.

Up on the screen comes a #1 followed by a long slash and a couple of short ones. I type NUMBER in the long slash and ENTER. The cursor jumps to the first short dash. I type N over the default C because this is to be a Number instead of Character. When I get to the next small dash I type 3 because my Numeration will never reach into the thousands, so a three-place

didgit is sufficient for my needs. An extra box

appears. This is for the decimals. I type 0 because I'm only going to deal with whole numbers. (When I eventually do my CHECKBOOK database someday, I will use this.) When I press ENTER here, the cursor jumps down one line and a #2 and similar slashes appear.

The top line now reads like this: 1 NUMBER (This is the field for the biographically assigned numbers) N 3 0. The next line will be typed in as this: 2 ORIG_DATE N 4 0 for the original publication date and a number which will take up four spaces.

The next six fields (all characters) are done as follows:
3 TITLE C 26
    4 H_P_T_S_O C 1
    5 JV_BL_OTHR C 2
    6 FIRST?YNM C 1
    7 OWN?YN C 1
    8 COMMENTS C 255

I assigned title 26 characters because that is the most characters any novel or play title has; #4 merely tells me the item is about JeeVes, BLandings, or OTheR; #6 asks if this is a first edition. The M is for Maybe (to check later). #7 wants to know if I own it; and #8 lets me input comments up to 255 characters long. That way I can list alternate titles, descriptions, characters, plot,whatever.

So my very personal 8-field record structure is finished in about a minute. Before we leave this, though, I check it out. The cursor can be run all over the screen for any changes easily. Now I Execute (Fctn/8) to continue the process of creating my database. At this point I was asked if I wanted to input data. I did, so I pressed Y. (At this point I could have created some more templates, as TI-BASE handles 5 databases simultaneously by providing slots for each base.)

My next step (as record #1)appears on the screen) is to simply fill in the blanks I created. Here is what I typed for the first record:

1 001 (for BIB #)
2 1902 (orig pub date)
3 POTHUNTERS, THE (title)
4 P (paperback)
5 OT (ther than Jeeve or Bland)
6 M (not first edition)
7 Y (I own this book)
8 First book of PGW. "Turn of the century" English public school tales. Mostly boxing. St. Austin's boarding house. In single-book collection with A PREFECT'S UNCLE 7 TALES OF ST. AUSTIN'S (#2 #3).

I check it out, make any changes, and press ENTER. It automatically records on DSK2. my "WODEHOUS" data disk.

This TI-BASE is fast, simple, and direct. My second record template is waiting for me to just fill in the blanks. I continue on and on until about two dozen records are established. Then I quit for dinner by typing CLOSE ALL. The program takes care of all my database records. Then I type QUIT.

Stuffed with roast turkey, I return to my TI. load up TI-BASE and type again the date.

Once the command dot appears I type USE DSK2.WODEHOUS. Bang! It's ready for me. I type DISPLAY STRUCTURE just to see my template. Still there. Perfect. I type EDIT 5 just to see if it'll pull up my fifth record page. It does. Instantly. I run my cursor around just playing with the editing functions. The program comes with a key strip and most functions (such as INSERT [FCTN/2]) just toggle on and off. In the EDIT mode I page FORWARD an BACK with the 5 6 keys. Neat and easy. And instantaneous.

But I'm ready to add more. I just type APPEND and the next blank record (#25) comes up. I just go on filling up record after record as effortlessly as buttering hot corn muffins. This is fun.

All the time I'm doing this stuff I keep thinking of more and more uses for TI-BASE.

After a while I stop (after 83 records) to try out some other features.

I type SORT ON TITLE. Zip!!! My 83 records are now sorted alphabetically by title. To prove it I next type DISPLAY ALL TITLE NUMBER. You guessed it. This gives me two columns: the titles alphabetially with its biblio number in a neat column just to the right in the 27th screen column. So I type DISPLAY 10 and get the first 10 records displayed alphabetically with all 8 fields. Then I type SORT ON NUMBER. Zip !! I type DISPLAY ALL TITLE NUMBER OIG_DATE OWN?YN [I must type my original template names.] Now I get four nice columns all in numerical order.

I play, thus, for about a half hour trying all kinds of configurations.

How do you suppose one goes about getting a hardcopy? Right! I type PRINT with all the same combos as DISPLAY. With the identical results on paper. The printer is on and starts rigt up printing exactly what I asked for in numeric order: PRINT ALL NUMBER TITLE ORIG_DATE OWN?YN. I had already set my NX-1000 for condensed. A beautiful four-column readout is in my hand. I type SORT ON TITLE: ther PRINT ALL TITLE COMMENTS and get a quick, alphabetical column of titles followed by my complete comments.

I guess I don't have to go on with this, but if I want to delete I type DELETE (and what I want deleted) and later I can recall it (by typing RECALL and the item).

I cannot imagine what could be easier. This is wonderful! And I haven't even tried the Tutorial Disk yet, nor have I even begun to explore even a small part of what this database does. This is going to take me months. I don't care. I can use it instantly for 99% of all my database needs without even looking at the manual any more. It's that easy.

But I still want to discover the secrets of TI-BASE still hidden from me.

However, most TI users (if you're like me), will need just the stuff I dealt with during these first few hours with this new software. For those people who need a professional database of the highest order, they are in luck.   It's here, also, I've never unconditionaly recommended any commercial software in the 7 years I've been reviewing stuff for the TI, but I d now with TI-BASE. The price of $24.95 is ridiculously   low   for   such software and is offered   even lower to user groups ordering in any size bulk. It comes with two disks, a 40-page manua (which I wish were bigger and in black and white instead of blue and grey and had some step - by - step tutorial   -   type   instructions), and a functon key strip.   Send your order (with $1.50 SH) to _____   Texaments,   53   Center Street, Patchogue, NY. 11772 or credit charge at (516)475-3480.

I think we're going to be seeing lots of companion disks, templates,   and   textware   for TI-BASE from users world-wide.

Excuse me, I think I'll get started on a few more templates. [Jack   Sughrue,   Box   459, E.Douglas, MA 01516]

```
Y 001 POTHUNERS, THE
Y 002 PREFECT'S UNCLE, A
Y 003 TALES OF ST.AUSTIN'S
Y 004 GOLD BAT, THE
N 005 WILLIAM TELL TOLD AGAI
Y 006 HEAD OF KAY'S, THE
Y 007 LOVE AMONG THE CHICKEN
```

SAMPLE: 3 fields, ascending numeric   order   by   biblio number;columnized   by "own","#",and "TITLE" --printed exactly as is (and as desired) directly through printer.
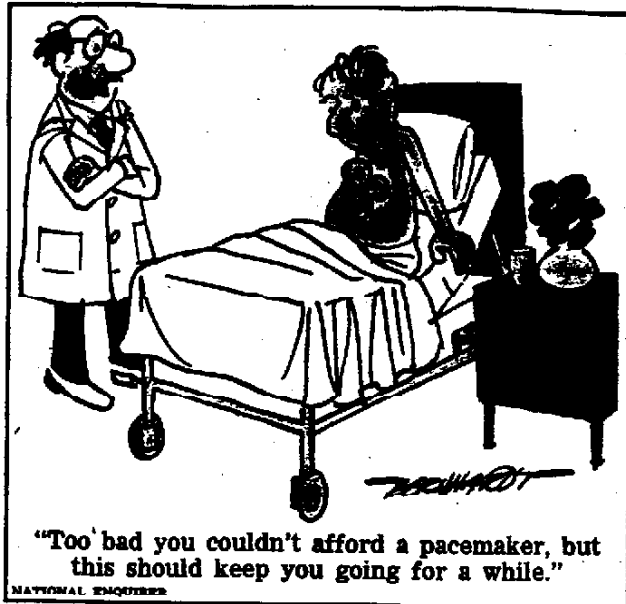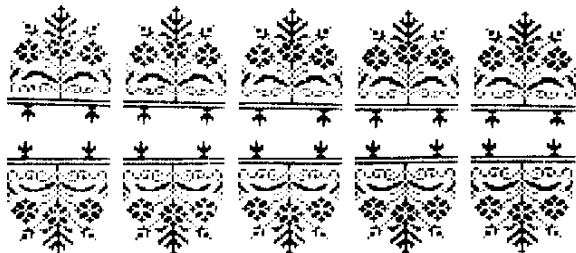
"Too bad you couldn't afford a pacemaker, but this should keep you going for a while."
NATIONAL ENQUIRER

Jungle hunt fooled

It is not so dificult to swing from lianas, or to swim between crocodiles.   But it is pretty hard to jump over boulders and cannibals.

That is why I thought it was about time to make Jungle Hunt do my bidding. After some searching with   DISkASSEMBLER   and   some puzzling with FORTH, I found that Jungle Hunt Saves the number of hunters left at adress >E0C6.

At the beginning of the game this should have a value of >04. After that it is an easy task to change this byte to anything you like (preferably >FF, for 255 lives   in stead of 4!).   The easiest way to do this is with a diskmanager and a sector editor. Copy the second file of the game (mine is called JUNGLE2) onto an empty disk. The first sector of the file will (I hope) end up at sector >22 (34 decimal). The ">b2-end byte" in this sector must be changed.

To make sure: In this sector you will find at adress >B0: FF E0 04 05 06 07 etc. So just change 04 into e.g. FF and rewrite the sector to disk. Now copy JUNGLE1 onto the same disk, and the game is ready for (long) use.

Tonny Brouwer

AND SO FORTH #37
By Earl Raguse

I went to the Real Time Programming Conference at the Grand Hotel in Anaheim, on November 18 and 19th. The conference was sponsored by The Forth Interest Group, so as you have probably already guessed, the conference was mostly about Forth. Pascal and C were also evident of course, since they are used in real time programming, but not to the extent that Forth is used.

Since real time programming generally requires speed of execution, speed and multiple parallel processors were a major topic. These people talk of data transfers only in hundreds of Megabaud. Computing speed is discussed in MIPS (Millions of Instruction executions Per Second). I found it all a bit mind boggling. In particular a paper on programming "Massively Parallel Processors" by a NASA programmer. He was discussing the problems of programming 16/67 computers in parallel. This was more or less still at the paper level, they haven't actually built a system yet, but they do have working system with 128 parallel processors, and I forget how many megabytes of memory. They talk of speeds like 140 - 150 MIPS!

One of the unique features of the conference was the Real Time Programming Contest to find the worlds fastest programmer. The problem, revealed only at the last moment, was to write a program to control an external device, made up of a 10-inch hacksaw blade anchored,2 one end, to a block of wood while the other end supported a module of 8 or 9 LED's in a vertical line much like the wires on a dot matrix printer. The blade could be caused to oscillate, by a solenoid fastened at about the midpoint of the blade with a paper clip. The solenoid was powered with a couple of dry cells, and the whole thing was connected to the computer via the Centronics parallel printer port.

Now the problem was to cause the hacksaw blade to oscillate at its natural frequency, with pulses to the solenoid, while energizing the LED's in synchronism with the blade, in the right sequence and frequency to display the words, "The Rain In Spain Falls Mostly On The Plain". A working demo was provided to show that it could actually be done. The author did not discuss how long it took him to do it. The arc of the blade (ie lateral movement of the LED's) was such that only about 2 words could be visible at a time so the message had to crawl like a message crawling across a CRT.

This did not seem to be too a serious problem, I think I could have solved it in a couple of months. I am not sure I would want hundreds of people roaming around looking over my shoulder while I was trying think my way out of trouble though. It did not seem to bother the winner too much though, he did it in 1 hour 20 minutes. Amazing! You guessed it, he was using Forth, as were most of the contestants. It seemed like every kind of portable or luggable computer I have ever seen was used. There were no TI 99/4A's however. The winner used an Amiga. This was such a success they plan to do it again next year.

While I was there, I finally got hold of a Forth 83 Standard. I have been unable to find a book store with one. TI used what was called FIG Forth. That probably was also compatible with the Forth 79 Standard, which I believe was the first, or possibly second, try at standardizing Forth to make it portable to all computers. Forth 83 was written in 1983 by a standardization committee, four persons I believe. I don't know how they were elected, but the result has not been unanimously applauded. Forth 83 adds some new REQUIRED words to the standard and changes the way some old ones work. I'm very doubtful whether that does much for portability.

Without taking up a lot of space in describing the differences with TI Forth, I am going to use a few statistics to give you the idea. Even though TI hadn't completely finished, they did, in my opinion, a very good job, and we got a real bargain.

Forth 83 has 123 so called REQUIRED words, which I suspect is what TI calls the Kernal. TI has 155 words Resident in their Kernal. These are what are often termed primitives, and are necessary in order to write more high level words. In addition to the required words, Forth 83 specifies 22 double length extension words, 4 assemby extension words, 8 system extension words, 23 Controlled Reference words, and 58 Uncontrolled Reference words. A firm can state that their system is Forth 83 Standard only if it contains all the required words, and does not violate any of the requirements of the other specified words, if used. That is not their exact text, but it is what I think it says.

Now lets look at TI Forth, it has 155 Resident words, like ." , @= , <BUILDS , BASE , KEY, etc. 68 Utility words, like SCOPY, 45 graphics words, like LINE, 16 of the Controlled Reference words, like INTERPRET, and 13 of the Uncontrolled

Reference words, like NUMBER. In addition TI Forth has 52 Floating Point words which are not even discussed by Forth 83. Most of the Forth 83 Assembly, and System extension words are TI Forth kernal Resident words.

The standards do not consider the Forth Editors, but the TI Editor is head and shoulders better than any other I've seen, even before we added a few fixes to make it clearly the best. Get it from our library.

The only place that TI Forth seems to be lacking is in the double length, or two number, words like 2DUP , 2OVER etc. I have rectified this for my purposes by adding my UFW's which I have published several times. If you reread the TIFM, Appendix C gives the definitions for many of the words not included in TI Forth.

I have never found these missing words to be a to be a handicap. In Forth if you need a word to do something, you just write it to suit yourself. Clearly, what TI did was to provide all the necessary FIG Standard words, then add the words necessary to access all the machine capabilities of the 99/4A many of which other computers, of that time, did not have. Why they left out SOUND, I do not know, they clearly had such words, because of their demo disk. Just a little oversight, I guess.

Here are the definitions of some of the double length operators that TI did not include. 2CONSTANT requires a double length number on the stack. 2VARIABLE does not take a number from the stack and is initialized to zero. Hopefully the name and the stack notations are sufficient to tell you what they do and how to use these words. If not call me or ask at meetings.

CU next time, may the FORTH be with U.

```
: 2DUP ( n1 n2 -- n1 n2 n1 n2)
      OVER OVER ;
: 2DROP ( n1 n2 -- ) DROP DROP ;
: 2SWAP ( n1 n2 n3 n4 -- n3 n4 n1 n2 )
      ROT >R ROT R> ;
: 2OVER ( n1 n2 n3 -- n1 n2 n3 n1 n2 )
      >R 2DUP R> ROT ROT ;
: 2ROVER ( n1 n2 n3 n4 -- n3 n4 n1 n2 n3
n4 )
      2DUP >R >R 2SWAP R> R> ;
: 2! ( n1 n2 addr -- ) >R R ! R> 2+ ! ;
: 2@ ( addr -- n1 n2 ) >R R 2+ @ R> @ ;
: 2VARIABLE ( name ) <BUILDS 0. , ,
DOES> ;
: 2CONSTANT ( name ) <BUILDS , , DOES>
2@ ;
: D- ( d1 d2 -- d3 ) DMINUS D+ ;
: D= ( d1 d2 -- f ) D- 0= SWAP 0= AND ;
: D0= ( n1 -- f) 0. D= ;
```

```
: D< ( n1 n2 -- f ) D- SWAP 0< ;
: DMAX ( n1 n2 -- n3 ) 2OVER 2OVER D-
      SWAP DROP 0< IF 2SWAP THEN 2DROP
;
: DMIN ( n1 n2 -- n3 ) 2OVER 2OVER
      2SWAP D- SWAP DROP 0< IF 2SWAP
      THEN 2DROP ;
```

===

UGOC
BULLETIN
BOARD
300/1200/2400 BAUD
(714) 751-4332
===

LOTTO SELECTOR
by Siles Bazerman

```
1 !SAVE DSK1 LOTTO
100 DISPLAY AT(8,8):"LOTTO SE
LECTOR"
110 DISPLAY AT(22,1):"HOW MANY PLAYS
YS (1-9, 0=QUIT)?"
120 ACCEPT AT(22,28)SIZE(-1)BEEP
VALIDATE("1234567890"):N
130 IF N=0 THEN END
140 CALL CLEAR
150 FOR ZZ=1 TO N
160 RANDOMIZE
170 OPEN #1:"PIO"
180 DIM Y(12)
190 FOR I=1 TO 6
200 Y(I)=INT(RND*100)
210 IF Y(I)>49 OR Y(I)<1 THEN 190
220 FOR F=0 TO I-1
230 IF Y(I)=Y(F)THEN 420
240 NEXT F
250 PRINT I;Y(I)
260 PRINT #1:I;Y(I)
270 NEXT I
280 PRINT :: PRINT :: PRINT
290 PRINT #1:" "
300 CLOSE #1
310 NEXT ZZ
320 GOTO 110
```

SEASONS GREETINGS
AND BEST WISHES
FROM UGOC BOARD
AND THE ROM STAFF

HOW TO GET THE MOST OUT OF PRINT WIZARD
By Deanna Sheridan - Northcoast 99ers - Cleveland, Ohio

Print Wizard was introduced by Trio+ Software last year at the Chicago Faire. It has gotten some nice reviews lately in the various newsletters on our exchange list.

If you have ever seen or used Print Master for the MSDOS machines, you will recognized that Print Wizard is patterned very closely after this package (within the limits of the TI's memory space). As with most long XBASIC programs, it takes a long time to load and get ready to run. In scanning the code, I cannot determine if it has utilized any Pre-Scan operations and it seems to take forever to start running.

As with Print Master, Print Wizard offers you a choice of greeting cards, signs, or letterhead. The manual is one of the best I have come across in a long time and guides you through each step. You are allowed a border, text and graphic at the same time. The card does print in all the right places to fold for a standard greeting card.

You have a choice of 3 sizes for your graphic and depending on that choice, a variety of ways to place that graphic on your screen. There is a small box on the screen which shows you how many of your graphics can go on a side and where you can choose to place them. If you also want text, it sometimes becomes tricky not to intermingle them.

You get all of the above with Print Master also, except that with the additional memory available, you can actually see what the finished product will look like before it is printed. There are now many libraries of graphics available for Print Master, but I have yet to see any new fonts or borders. This is where our slow-poke Print Wizard has the advantage. You can convert your TI-Artist fonts and graphics (in fact all the graphics and fonts on Print Wizard come from a companion disk for TI-Artist produced by Trio+ Software) and convert them to Print Wizard format. Although I have not tried it, there are instructions so that you can create your own borders.
This makes Print Wizard a very versatile program.

But, if it wasn't so slow, you say. It takes up to 45 minutes to create and print just one card. There is no way to save your cards, or is there? There is an advertisement currently running for a discount department store where the woman chants with a one-purpose thought, "paper towels, paper towels". Computer users should always be thinking, "print to disk, print to disk". This will make Print Wizard a completely new program for you.

At the menu screen, where you are asked to configure your printer, use DSK1.FILENAME (whatever you want to call it) and when it comes time to print the card, it will print it to disk. The time will be the same as when printing to the printer, but if you want multiple copies, they are printed in a fraction of the original printing time.

The idea for this came from Tom Wynne of the Tacoma 99ers last fall. He said most of the graphic programs could be printed to disk and then run through an XBASIC program for multiple copies and speed (since the printer commands are already converted). In the case of Print Wizard, it saves in a D/V128 format. I use a little program similar to:

```
100 OPEN #1:DSK1.FILENAME.INPUT,VARIABLE 128
110 OPEN #2:"PIO.CR",OUTPUT
120 IF EOF(1) THEN 140
130 LINPUT #1:A$ :: PRINT #2:A$ :: GOTO 120
140 END
```

With this in mind, I have geared up to use Print Wizard in the following manner. I have printed out all of the borders and given them the same names as in the manual. I am planning to take my favorite graphics for special occasions such as Christmas, Easter, Valentine, Birthday, etc. and make up a disk. Then as I run onto some favorite sayings or poems, I will create a disk with the various fonts provided or convert some others. THEN, when I need a card for that special occasion, I can print it out in about 5 minutes or less. If you return your paper to the starting position after printing, the border, or graphic, or text, it will be perfectly placed on the paper just as though it had been printed all at once. Also, using this method, I can mix and match border, graphics, etc. and can also print in a variety of colors and can even use more than one graphic on a page. It has made using Print Wizard a pleasure instead of frustrating. The little program above could be enclosed in an array so that multiple copies could be made without resetting. A person with a set of templates and the above little program would not even need Print Wizard to create cards.

I have spent most of my time on Print Wizard doing cards as it seems to have more potential than others we have for doing that. The sign program is also nice, but there are much better programs available for Letterheads, and I don't plan to use that feature at all. For $19.95 and the above suggestions, you could do some very creative Christmas cards this year!

HANDY REFERENCE CHART

PATTERN IDENTIFIER CONVERSION TABLE

PATTERN	HEX CODE	BINARY CODE
	0	0000
	1	0001
	2	0010
	3	0011
	4	0100
	5	0101
	6	0110
	7	0111
	8	1000
	9	1001
	A	1010
	B	1011
	C	1100
	D	1101
	E	1110
	F	1111

COLOR CODES

COLOR	CODE
TRANSPARENT	1
BLACK	2
MEDIUM GREEN	3
LIGHT GREEN	4
DARK BLUE	5
LIGHT BLUE	6
DARK RED	7
CYAN	8
MEDIUM RED	9
LIGHT RED	10
DARK YELLOW	11
LIGHT YELLOW	12
DARK GREEN	13
MAGENTA	14
GRAY	15
WHITE	16

PATTERN IDENTIFIER

LEFT   RIGHT

ROW 1.
ROW 2.
ROW 3.
ROW 4.
ROW 5.
ROW 6.
ROW 7.
ROW 8.

BY GENE BOHOT

SPRITE MAGNIFICATION

1   2

3   4

JOYSTICK RETURN

```
          0.4
-4,4  .        .  4,4
           .  |  .
-4.0 ---------+--------- 4.0
           .  |  .
-4,-4  .       .  4,-4
          0,-4
```
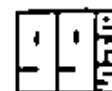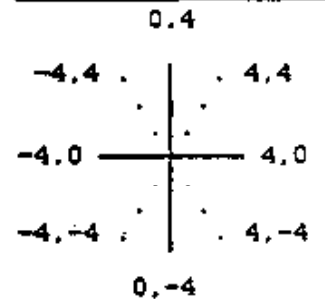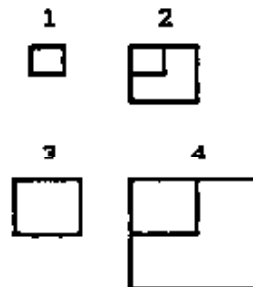
POMONA VALLEY
COMPUTER GROUP