CLEVELAND AREA TI-994/A
USER GROUPS NEWSLETTER
OCTOBER, 1989

Mary Phillips said when she wrote her column that she still had not received her September newsletter. Well, here I am putting together the October issue and do not have the September either. This was a combination of the newsletter going to the printers close to the Labor Day Holiday and the fact that some of our regulars who do the mailing were out of town. In an effort to get a head start on the October issue, I am getting it to Frank two days earlier than usual in the hope that we don't have a repeat situation in October.

In talking with John Parken of Chips concerning their out-of-state members and the count we took at the Northcoast meeting, we feel it is safe to say that the two Cleveland clubs have about 20 out-of-state members. We feel it is a tribute to our newsletter that we have been able to accomplish this. This is to tell all of you out there that we appreciate your confidence in us. Also, we know that in many cases you do not have clubs nearby you can attend. Also, some of you were active in clubs that no longer publish newsletters. We would like to invite you, if you have a piece of software you enjoy, a hardware trick, or any other tidbit of information you would like to share with the TI world that you drop us a line and we will publish same in our newsletter. In other words, we encourage you to be as active as possible in our groups even though you cannot physically attend our meetings.

I have notice in several newsletters that clubs have received a mailing from Texaments with a group offer for purchase of their software. I had a call from them about three weeks ago and they assured me we would be on their mailing list. If I don't hear from them soon, I will contact them so that we can have the details by our next meeting. Their software consists of TI-BASE, TI-SORT, TI-ARTIST and several ARTIST companion disks which they are discounting to clubs. TI-ARTIST plus is out and you can get the update by sending in your original disk and a copy of the first page of your manual for $14.95 plus S&H. TI-ARTIST PLUS is $24.95 for the first-time buyer, $19.95

through the group club plan. However, Marty Smoley says that we can probably get a good deal directly from The Fahertys on TI-BASE, TI-SORT and TI-ARTIST. Will tie this down for you by the next meeting.

Also, is there any interest in getting a group subscription to MICROpendium. As you will note, the subscription will be going to $25.00 per year. This may be steep for some of us. I am not sure what the current group rate is, but it is quite a savings. The savings comes for MICROpendium in mailing costs as the group subscription would be send in bulk to one address and then you would pick it up at the meeting. If you missed a meeting, you would also miss your MICROpendium until you showed up the next month. I believe you can get the group rate for as little 7 copies. Let us know if you are interested. It's convenience vs cost and you will have to let us know which is the most important. I mention this because even though Ron Markus has had copies available, he is never sure how many to order and it is more trouble than it is worth for him. He is having to return quite a few unsold.

I have used materials I have had on hand to fill in the past two months. Hope to see some of our old faithful back to writing articles now that fall is here. I am going to school two nights a week and with the homework involved, it might as well be four nights a week. That leaves very little time for the TI so any help is appreciated.

CONTENTS

EXECUTIVE NOTES
TI-CHIPS
MARY PHILLIPS, SECRETARY

At the time of writing this article, I have not yet received my September newsletter. It is several days after the TI-Chips September meeting. This problem was addressed once more at the meeting. Members attending agreed that they would be willing to pay extra to have the monthly newsletter sent by first class mail. There would be a much better chance of receiving the news before each meeting instead of long after it.

Despite a slight decrease in numbers at meetings, the Ti-membership continues to remain constant. More good news is that the module library has grown to 64 cartridges. Members with game-loving children should definitely take advantage of the many cartridges available. We certainly have!

Harry Hoffman mentioned that there are many disks that need cataloging for the disk library. Althought he didn't ask for volunteers, he probably could use some help. If you have time available to try out and catalog some disks, let him know.

Volunteers to help plan a TI Fair in the Cleveland area were again requested by Glenn Bernasek. By "keeping it simple stupid" he assure all that the snow would be easy to put on.

Ron Markus demonstrated several Fairware games which he has available for purchase. Included were games, music, and graphics.

Les Kee presented another tutorial in Extended Basic. Featured in September were the statements "ACCEPT AT" and "VALIDATE." These are useful in many EXBasic programs.

John Parten presented the "hof-of-the-press edition of Graphic Editor. Version 3.0 was finished August 20, 1989. It is especially useful for printing clever mailing lables.

Matt Andel had some new graphic instances to show, this time football helmets. They are MAC pictures which can be converted to TI-Artist and Page Pro.

Glenn is working on a new database program called "Stockdales." He demonstrated his latest progress. He also took some more time to explain the workings of his "Short Sheet III."

We haven't seen Tom and Judy Thalner in some time and we've missed them. Apparently we will all have to visit them in Cincinnati from now on. Mark McCauley has their address. Available at the meeting were many free back issues of Compute, Home Computer Magazine and other computer magazines. These were all from the Thalners, and we thank them for everything.

EXECUTIVE NOTES - NORTHCOAST 99ERS
Deanna Sheridan - Reporting for Marty Smoley

Marty was still at the "brick yard", so Ken Gladyzewski again filled in. Ken looks more and more at home up there!

Attendance seemed to be up again after the summer lull. We had three visitors from the Erie group and, I believe, some joiners from among them. Welcome!

Wes Richardson gave the demo on languages. He showed how the same program ran in about five languages, basic, Xbasic, forth, fortran, pascal, logo, c99, etc. Some of us had never seen even the basics of these languages, how they are written, compiled, etc. Very informative.

Harry Hoffman was to do the October demo on Page Pro 99, but will be on vacation and then off to the Faire in Chicago, so Wes has again offered to help us out with the demo. He will be giving us an overview of some sector editors, namely Disko and the Birdwell utilities. He will give you some tips on recovering data from "blown" disks and some of the unusual features of the disk manager in the Birdwell utilities. Harry will then give the Page Pro demo at the November meeting.

T. I. Writer (Part 3)
Stan Katzman

Up to now we have created a file and have made corrections of any errors produced. The next thing we have to do is save the file to a disk so we can use it in the future if we so desire. (Later when we get into the Text Formatter the document must be on a disk.)

To save a document to a disk do the following: 1)Get T. I. Writer Editor, 2)remove the program disk, 3)insert a formatted disk for your document, 4)compose your document. Now we will save your document and here is how.

At the end of your document go to the command mode (Fctn 9) and now type F <enter> for Files. You will now see a menue of "LoadF, SaveF, PrintF, DeleteF, Purge or ShowDirectory". Now type SF <enter> and you will now see "SAVE FILE, enter filename:" at this point for a one disk drive system type DSK1.filename <enter>. For "filename" type anything you want to call your document. Your document will now be saved to the disk. When the "saving" process is finished you are returned back to the Edit mode in your document. You can now add or change your document and when you go back to the "SAVE FILE, enter filename:" section you will see the last entered filename and all you have to do is press <enter> and your entire file will be saved under that name.

If you want a different filename you can change it, if you so desire.

We can also only save part of a file, if we so desire. This is done the following way: At the "SAVE FILE, enter filename:" enter the starting line number, a space, the stop line number, a space and then DSK1.filename. The starting and stop line numbers are obtained from those numbers you see on the left of the screen. For example you could enter 32 45 DSK1.LETTER and you will only save the material starting at line 32 and ending at line 45 to the disk.

By the way you can "get rid" of the line numbers on the left by pressing Fctn 0 (zero). To get the line numbers back press Ftcn 0 again. This is called "toggling". We can now save documents to disk (very important). More next time.

TI—BASE - From INSCEBOT
UTORIAL 12.1.1 By Martin Smoley
NorthCoast 99'ers — Sept. 5, 1989
Copyright 1989 By Martin A. Smoley

I am reserving the copyright on this material, but I will allow the copying of this material by anyone under the following conditions. (1) It must be copied in its entirety with no changes. (2) If it is retyped, credit must be given to myself and the NorthCoast 99ers, as above. (3) The last major condition is that there may not be any profit directly involved in the copying or transfer of this material. In other words, Clubs can use it in their newsletters and you can give a copy to your friend as long as its free.

At this time, work (the way I make money to support my TI) is taking up most of my time. I will try and write a couple example programs (CFs) to keep you going until I can get back to my TI on a regular basis. I'm sorry if the articles are a little skimpy, but it's the best I can do right now.

In this issue I have 3 CFs that do almost the same thing, but not quite. Their difference is what makes them interesting. All three of the CFs ask you for the time. They then print out the last time and date the CF was run and the current time and date which you just entered. I created it because I was printing out several copies of the same report in one evening and I couldn't tell the updates from the first printout. Having the time at the top of each printout solved my problem. This CF could be used for the last time you balanced your checkbook or paid your bills, etc. Create a very simple database named DT'TM or DT'TM2 depending on the DB you find in the USE statement in the CF you wish to use. The DB contains 2 fields. The first is named DT, type = D, with a width of 8. The second is named TM, type = C, with a width of 12. The CFs will use this DB to store the time and date for retrieval the next time the CF is run. The first CF (DOTM) is the one I use. It will allow you to set the length of the DT'TM Db by appending as many records as you wish. In other words, you could keep the last two times and dates the Db was run or the last ten if you wish. The CF will eliminate the oldest record in the file and append the newest record to the end of the file. The interesting part of this CF is the use of TOP, BOTTOM, DELETE RECORD and PACK to hold the DB at a pre-determined size. MOVE -1 and MOVE are used to locate the records to be printed.

```
*                     DOTM
SET TALK OFF
 CLEAR
SET RECNUM OFF
SET HEADING OFF
LOCAL TEMP C 19
LOCAL TIME C 11
SELECT 5
CLOSE
USE DSK2.DT'TM
   WRITE 12,10,"TURN YOUR PRINTER ON"
   WRITE 20,10,"ENTER THE TIME"
   WRITE 22,4,"TIME EXAMPLE >12:49 P.M.<"
   WRITE 23,4,"                  >         <"
   READSTRING 23,18,TIME
 IF TIME <> "            "
     TOP
   DELETE RECORD
    PACK
   APPEND BLANK
     REPLACE 5.DT WITH .DATE.
     REPLACE 5.TM WITH TIME
  ENDIF
    BOTTOM
    MOVE -1
      SET RECNUM OFF
      SET HEADING OFF
REPLACE TEMP WITH "    SYSTEM LAST RUN "
PRINT (Drft),(E),TEMP,DT,TM
    MOVE
REPLACE TEMP WITH "SYSTEM CURRENT RUN "
PRINT TEMP, DT,TM,(LF)
PRINT (Drft)
      SET TALK ON
      SET HEADING ON
      SET RECNUM ON
CLOSE
SELECT 1
CLEAR
RETURN   Copyright Martin A. Smoley 1989
*
* Save current TIME  DATE to  DT'TM
```

```
*                        DOTM2
       SET TALK OFF
       CLEAR
LOCAL TEMP C 19
LOCAL TIME C 11
       SET RECNUM OFF
       SET HEADING OFF
    SELECT 5
    CLOSE
    USE DSK2.DT'TM2
       BOTTOM
    WRITE 12,10,"TURN YOUR PRINTER ON"
    WRITE 20,10,"ENTER THE TIME"
    WRITE 22,4,"TIME EXAMPLE >12:49 P.M.<"
    WRITE 23,4,"                  >         <"
    READSTRING 23,18,TIME
  IF TIME <> "            "
     APPEND BLANK
       REPLACE 5.DT WITH .DATE.
       REPLACE 5.TM WITH TIME
   ENDIF
     MOVE -1
  REPLACE TEMP WITH "    SYSTEM LAST RUN "
  PRINT (Drft),(E),TEMP,DT,TM
     MOVE
  REPLACE TEMP WITH "SYSTEM CURRENT RUN "
  PRINT TEMP, DT,TM,(LF)
  PRINT (Drft)
       SET TALK ON
       SET HEADING ON
       SET RECNUM ON
CLOSE
CLEAR
    SELECT 1
RETURN
*
* DOTM2  Copyright Martin A. Smoley 1989
*
* Save current TIME  DATE to  DT'TM2
```

TI-BASE - From INSCEBOT
TUTORIAL 12.1.2 By Martin Smoley
NorthCoast 99'ers — Sept. 7, 1989
Copyright 1989 By Martin A. Smoley

Another CF would be needed to print out any extra times and dates in the DB. The CFs in this article will only print out the last record and the current time and date. The next CF (DOTM2), works almost the same as the first axcept for the records kept. DOTM2 works with your last two entries, but it keeps all of the previous entries. This CF would be great if you wanted to keep a complete record of the time and date a certain set of CFs was used, but you must remember that you have a self generating DB in the system. This means that each time you use the system DT'TM2 will get larger and therefore you will have less and less disk space for other types of TI-Base use.

```
*                      DOTM3
      SET TALK OFF
      CLEAR
LOCAL TEMP C 19
LOCAL TIME C 11
LOCAL TMTMP C 12
LOCAL DTTMP D 8
      SET RECNUM OFF
      SET HEADING OFF
SELECT 5
CLOSE
USE DSK2.DT'TM
      BOTTOM
  WRITE 12,10,"TURN YOUR PRINTER ON"
  WRITE 20,10,"ENTER THE TIME"
  WRITE 22,4,"TIME EXAMPLE >12:49 P.M.<"
  WRITE 23,4,"               >          <"
  READSTRING 23,18,TIME
 IF TIME <> "            "
      REPLACE DTTMP WITH 5.DT
      REPLACE TMTMP WITH 5.TM
      TOP
      REPLACE 5.DT WITH DTTMP
      REPLACE 5.TM WITH TMTMP
      BOTTOM
      REPLACE 5.DT WITH .DATE.
      REPLACE 5.TM WITH TIME
 ENDIF
  MOVE -1
 REPLACE TEMP WITH "   SYSTEM LAST RUN "
 PRINT (Drft),(E),TEMP,DT,TM
  MOVE
 REPLACE TEMP WITH "SYSTEM CURRENT RUN "
 PRINT TEMP, DT,TM,(LF)
 PRINT (Drft)
      SET TALK ON
      SET HEADING ON
      SET RECNUM ON
CLOSE
CLEAR
  SELECT 1
RETURN  Copyright Martin A. Smoley 1989
*
* Save current TIME  DATE to  DT'TM
```

DOTM3 is almost identical to DOTM. It only saves two records and reads and prints in the same manner. The real difference is that it holds data in its own variable space while it moves through the DB DT'TM to replace old data with current data. It created this CF to get away from the PACK command. In certain instances this algorithm will be faster. More important it does not place any system messages on your screen. This allows you to hold messages or menu selections in place on the screen without having those annoying system messages that scroll the screen up and throw away the top line on the screen. I'm sure that most of you will find this problem minute, but the idea may help you somewhere else in your programming endeavor. Another idea which you may need from time to time is the selection of a unique number. Neither human selection or the random generation of a computer should be trusted with this task. Unique code numbers are the truest when you have the computer extract pieces of the date, the time and at least two letters of a persons name. Some companies use time,date,zipcode and names. Take a look at some of your junk mail for numbers that might follow this pattern. I mentioned the unique number uses because parts of these time, date CFs could be used to generate a unique number that you could then relate to a person or companies name in a mailing list. This number could then be used to relate two or more DBs together to gather mathimatical data, as I have shown in the past. It could also be used as an access code or for other information. In other words, any of these three CFs could be converted to ask you for the time and your access code. It could then save a record of who used the system, with the time and date. There are many many uses for any one idea. You may need to slightly modify a particular CF for a new job, but its easier than writing a new one.

TI Sort

I must put in a couple of plugs for Inscebot. They have created some great software for the TI and I think that TI Sort will be close behind TI Artist and TI Base. I use it more and more as time passes. It is fast, accurate, and very versitile. If you work with any amount of data, I think you should pick up a copy of TI Sort for your collection of utilities.

TI-Base Ver. 2.03

I previously received version 2.02 for testing. I hadn't had much time to play with it when version 2.03 arrived at my door. Version 2.02 corrected a bunch of minor problems and version 2.03 corrects several more. With the latest versions of TI-Base you also have the ability to load from a hard drive and use a PATH function to find the TI-Base main program files. You may never notice some of the problems that are constantly being corrected, but they are being corrected anyway. I bring this up because I feel that the TI community is getting more support from people like Dennis Faherty than you can comprehend, at a very small cost. Please try to support the efforts of our last major software suppliers.

FOUR-A/TALK
Random ramblings
about things TI.
by Bill Gaskill
September 1989
MILESTONES

-Dr. Guy Steffen-Romano died August 15, 1989. Long time 99ers will remember Dr. Romano as the first librarian for the IUG. Some will remember the many excellent articles he wrote in the National 99er and in Enthusiast 99. But most of all, we will remember him for the Amnion Helpline at 116 Carl St. in San Francisco, California. The source of a seemingly limitless fountain of information and dedication to the TI community, Dr. Romano earned the respect of any 99er who came in contact with him. May his wisdom be carried on and his example of dedication never die.

WHAT'S HOT:

The HARRISON WORD PROCESSOR, TI-SORT, TI-Base V2.02, and HARDMASTER

DISCOVERIES:

-As a follow up to last month's information on TI-SORT; I received another copy from Dennis Faherty along with V2.02 of TI-Base. WOW! I now get to use my hard disk storage to its full potential. These are the kind of tools that I have been waiting for. Thank you Inscebot!!!

TI-SORT both runs from and reads and writes to a hard disk drive using Myarc's HFDC. I am now able to tackle virtually anything I have and put it in either ascending or descending order. While TI-SORT cannot compete with Peter Hoddie's SORT EXPERIMENT fairware program as far as speed, it blows it away in record capacity. You may recall from a previous Four-A/Talk article that I thought TI-SORT would "do" 99999 records. Not so according to author Dennis Faherty. There is a counter in the program that necessarily limits that maximum to 32,767 records. That'll do.

My real love of course is TI-Base. It has been enhanced to support the hard disk environment in V2.02 so all of you HFDC owners with a hard disk will want to upgrade. The speed of all read/write operations from within TI-Base is easily 10 times faster than a floppy drive can offer. Command file interpretation hasn't changed, but look for an improvement in that area too when V3.0 comes out. Dennis says that he is going to "tuck" more of the command file in memory so less is read from disk on the longer files.

Inscebot Inc.
P.O. Box 291610
Port Orange, Fl. 32029

-If you are looking for a really good article explaining relational data base managers versus flat-file data base managers, pick up a copy of the September 1989 PC Resource magazine. The late Kent Porter, former senior technical editor of Dr. Dobb's Journal, has an article published there that is the best that I have seen for the layperson. Understandable and moderately comprehensive in scope, this one article is well worth the $2.95 investment for the magazine. The article is entitled "Step Up to Power

And Convenience", and it is found on pages 58-64.

-Asgard's Chris Bobbitt has announced a sector editor for the Myarc HFDC called HardMaster. The program is written by Colin Christensen and apparently includes the ability to let you edit in hex or ASCII, dump a range of sectors to a printer, edit four sectors at a time and more. It also comes with an extensive manual that provides information about how data is stored on the hard drive, plus a novel hard disk backup utility. Price is $14.95.

Asgard Software
Box 10306
Rockville, Md. 20850
703-255-3085

NEWS:

-Did you notice that the September Computer Shopper did not have the TI FORUM column in it? Word is that there are some shorter publishing deadlines imposed by the new editor and "we" missed them I guess. Walt Howe, one of the TI NET sysops on Delphi suggests that we write to Computer Shopper to express our concern. I agree. Please take a few moments to write to the new editor to let him know how important the TI column in each issue is to us. Write to;

Bob Lindstrom
Editor-In-Chief
Computer Shopper
1 Park Ave.
New York, New York 10016

-Scott Darling, GEnie sysop for the TI-RoundTable for the last 3-4 years, has departed for greener pastures it appears. Thanks for all the time and effort on behalf of the TI Community Scott!

But guess who took his place. None other than the "Professor of Arc", the "Guru of I/O" and the "Master of Mechatronics", Mr. Barry Boone!!!! How's that for loyalty? The guy never stops supporting us. And he hasn't even been a GEnie subscriber all that long, either. GREAT to have you aboard Barry.

-John Johnson has released his Remind Me! appointments calendar program into the public domain. While I purchased mine commercially when it first appeared, you can now get the same program for FREE. It will probably show up on your club's BBS shortly. Remind Me! is a nice program that has served me well. When run from a Horizon Ram Disk it isexcellent because it actually was faster to use than turning to the paper system of yesteryear. Run from a floppy drive, it's still pretty good too.

John explains his reasons for the public domain release and treats a sensitive topic like a gentleman. I was a little miffed at first since I forked over the bucks for it, but his explaination makes sense, and the fact that he took the time to provide it for those who paid for the program says even more.

-Peter Hoddie contacted me the other day to report that the new AV-INDEXER program for cassette and VCR labeling etc. is well on the way to making it's commercial debut. He mentioned that it has "one of the neatest user interfaces" going. Wonder what that means exactly. If it's anything like cSHELL99 then its going to be pretty "neat".

Word also is out from JPH that the next release of

FirstBase is ready to be beta tested. If I got my act together in time, I might get a copy to look at. Hope so. There are some new search routines in it I'm told and WaWa and Co. are looking at ways to simplify the report generation module. No date yet on the commercial release of the upgrade though.

   -In case you haven't heard, TENEX seems to be winding down it's 99/4A business and reducing it's inventory. According to John Kolean, TENEX will not be producing any more TI-99/4A catalogs. Too bad for us all. I guess we just don't spend enough money, or there just aren't enough exciting new products coming out for the 4A? Either way, we all lose.

   -CompuServe's TI FORUM ran a message across my monitor this month about a "tiff" of sorts between a well-known and respected user group personality and the head of a large 99/4A software company. I guess I subscribe to on-line information services to get information, but that kind of stuff is not what I put money out for. Come on guys! There's got to more to write about than that!

HARRISON WORD PROCESSOR:

   -I'm not going to give you a lot of information on HWP since a review of it will appear in MICROpendium some time in the future. I will tell you that the program is 100% assembly language coded, it supports more pages per document than TI-Writer and it uses a menu-driven user interface instead of the command driven interface that TI-Writer users are accustomed to. I will also tell you that author Bruce Harrison has broken down the barrier on support-after-the-sale for 4A software by offering free telephone support for the product until midnight Mondays through Fridays. I will also tell you that it is very obvious to me that Mr. Harrison is a talented assembly language programmer, who also possesses a clear picture of what a professional piece of commercial software should look like. If you are interested in finding out more about the Harrison Word Processor you may contact;

                  Harrison Software
                  5705 40th Place
                  Hyattsville, Md. 20781
                  301-277-3467

THIS MONTH IN TI-99 HISTORY:

<1980>

   Charles LaFara incorporates the International 99/4 Users Group in Bethany, Oklahoma. In its four and half year life the IUG will grow to a claimed membership of over 100,000 people in 54 countries around the world.
   -Chicago TI Users Group is formed by Jerry Strauss.

<1981>

   The Source on-line information service promises TEXNET start-up by month's end but it does not occur.

<1982>

   Peripheral Expansion Box released in UK a month later than promised.

   -ALPINER and OTHELLO to be available in England by October.
   -MINI-MEM, LOGO and E/A modules offered in England.
   -Oak Tree Systems introduces the little known and poorly received CROSSUMS. The program is Chuck Davis' only entry into the educational programs market.
   -TI introduces the Computer Advantage Club.
   -Navarone Industries is headquartered in Sunnyvale, California.
   -TI and Control Data Corporation reach an agreement that will produce over 100 Plato titles for the 99/4A.
   -TI begins a $100 rebate campaign that is slated to end January 31, 1983.
   -USUS (UCSD Pascal Users Society) forms in Dallas, Texas, with Robert Peterson as president.
   -A New York marketing firm survey shows that TI is losing shelf space to VIC-20 in Toys 'R US, K-Mart, Woolco and the Montgomery Ward stores.

<1983>

   Jerry Riley is elected as the first president of the Front Range 99ers with John Pearce as VP, Bonnie Snyder is the secretary and John Williams treasurer.

<1984>

   Richard Mitchell begins publishing the "Super 99 Monthly" from Sulphur, Louisiana.
   -GRAM KRACKER prototype announced by Millers Graphics.
   -The Wycove Forth language is released by Tim McEchearn, a Canadian author of computer programmers.
   -Myarc releases the MPES/50 expansion System with 32K memory, RS232/PIO ports and a SS/DD disk drive and controller. Retail price is $595. An MPES/50-RPM is also offered for cassette only owners. The -RPM model lacks the disk drive and controller.
   Tarik Asani of StarSoft releases three new assembly language programs for the 99/4A; Microkey, for defining keyboard macros, Nibbler, a disk copier program, and Unprotector, a program to unprotect Extended Basic programs while they are in memory.
   -Microcomputers Software 34 Maple Ave. Armonk, Ny. 10504 914-273-6480 releases Tiny Logo on cassette. The program uses only console memory.
   -Cheryl Whitelaw, (Aka REGENA) profile appears in the National 99er newsletter out of Bakersfield, Ca.
   -"XB Home Applications" book by Christopher Flynn is released by Compute! Books.

<1985>

   Thomas Weithofer releases PILOT 99.
   -John Taylor releases CHECKBOOK/BUDGET MANAGER program.
   -Barry Traver joins CompuServe as Sysop on the TI Forum.

<1986>

   Last REGENA or any other article that will appear in Compute! magazine. The end of Compute! support for the 99/4A has come quietly and uncerimoniously.

<1987>

Jack Riley joins Myarc as a partner.

-Alpha Scientific Box 626 Chesterfield, Missouri 63006 314-878-7117, advertises a 3.5 inch Toshiba disk drive kit for the 99/4A in Computer Shopper.

-Harry Brashear a New York 99er, writes a critical letter to all 99ers who are moving away from the 99/4A. The letter is posted on the major TI-SIGS for all to read. It draws scathing criticism in return for its fanaticism and insults to Craig Miller and other former 99/4A supporters.

-Marty Kroll releases CATLIB V1.5.

-Geneve column debuts in MICROpendium.

<1988>

Myarc GENE windows manager appears in MICROpendium with photos and a write-up done by John Kolean.

-New Myarc question and answer column debuts in MICROpendium.

-Asgard releases Batch-It program from Charles Earl and Tom Bentley.

-Asgard releases Oliver's Twist, a game by Mickey Schmitt and Lynn Gardner.

Genial Computerware releases MacFlix and FirstBase.

TRIVIA:

Did you know that;

-Bill Warren, Gene Bohot, Wayne Stith, John Johnson, Steve Mehr and Rodger Merritt all had a hand in the making of Comprodine's FormShop program? Bill Warren started the sequence of events that would give birth to FormShop by coming up with the idea to use TI-Writer's CHARA1 file control codes for all the screen borders that you can have when designing a file in PR Base. Gene Bohot came up with the idea to use the same modified file back in TI-Writer to provide borders and boxes etcetera in a text file. Gene then went about trying to get into the CHARA1 file with Wayne Stith's Quik Font program, but the codes needed to be accessed were out of the scope of what Quik Font was designed to handle. So Gene contacted Wayne to see if Quik Font could be modified to include access to the necessary ASCII codes. Wayne tackled the challenge and came up with the necessary tools to get the job done. The end product of Wayne's efforts is the CHARA1FIX program that he released to public domain a few month's ago. Gene then showed what he had to Steve Mehr, ever the mover and shaker of "things TI". Steve convinced partner Rodger Merritt of the commercial value of the idea and Rodger, with a little help from John Johnson's WORD program, put his wizard's touch on the whole concept and turned out FormShop. How's that for trivia?

-TI's arrogance and lack of marketing skill was at it's height when they held the new MunchMan cartridge hostage and demanded that users who wanted a copy first buy any four of the existing modules or one of the module libraries to get it? The "MunchMan Plan" began in February 1982 but was abandoned in May of the same year. I'm sure glad that I wasn't a 99/4A owner back then. I might have trashed the whole system and gone to a Commodore. The more research I do into the history of the 99/4 and 4A, the more I am amazed that the computer got off the ground at all, or that anyone bought one. Texas Instruments seems to have done just about everything wrong (from a marketing perspective) that they could have done in selling the computer.

-Even back in 1981 and 1982 there were little or no ads, articles or much of anything else written about or for the 99/4? If it were not for Charles LaFara's International 99/4 Users Group, a little known entity called the International Home Computer Users Association out of San Diego and the emergence of 99er Magazine, there wouldn't be much of anything in print. Creative Computing's David Ahl apparently recognized the potential of the machine and provided some coverage in the early days, but magazines like Byte took one look at the 99/4 in 1979 and dismissed the machine as a worthless toy. Compute! didn't begin publishing articles and programs for or about the computer until January of 1983, and even then most of the stuff was geared towards the console-only owner, who it was assumed only had the built in Basic and a cassette recorder.

Indications are that TI's secretiveness about their machine was so pervasive that besides not opening up the architecture of the computer to third party hardware and software developers, they wouldn't even release information on how many units had been sold. Software developers were necessarily reluctant to make the investment into products for a computer with an unknown installation base. Authors of magazine articles had little to write about since few products were being released for the computer compared to what was available for other machines and so little information was available about the "guts" of the TI machine that there wasn't much left to consider. No wonder there are so few articles and such, huh?

-LOGO for the 99/4 was the first implementation of the LOGO language for any computer under $10,000? TI introduced their original LOGO in April 1981 as a disk and module based application, but sold it only to "qualified" school districts. Individiuals could not purchase a commercial version of it until some months later

-Charles Ehninger, owner of the Futura Software company that produced a host of software for the 99/4 and 4A, was the first winner of TI's Author Incentive Program? He picked up $3,000 first place money back in April 1981 for his Household Inventory program. Not an ordinary effort, Household Inventory, which may still be available from Tenex, computed the fair market value of your belongings based upon a host of data from the Bureau of Statistics.

-Bill Bies, author of the assembly games, ARCTURUS, ARTHROPOD, and AsTIroids for the 99/4A, marketed them under the name North Hills Software? Mr. Bies was 14 years old at the time he undertook the business venture. That would make him about 20 years old today!

-Walter J. Dollard, who MICROpendium subscribers will remember as one of the major software developers for the 99/4A that was interviewed in an early 1984 article John or Laura did, was 18 years old at the time. That would make him about 23 years old today. Wish we still had them in the community today.

12-O'CLOCK PUZZLE

by WESLEY R. RICHARDSON
NORTHCOAST 99ERS, CLEVELAND, OH

12-O'CLOCK is an Extended BASIC program for puzzle lovers. The objective of 12-O'CLOCK is to orient all 18 clocks to the same 12 O'CLOCK vertical position using the rotate buttons 1+5, 2+6, 3+7, 4+8 and the A+E, B+F, C+G, D+H gears. Rotation is clockwise for the clock adjacent to the number. Gears are engaged, 'X' for the gear nearest the letter, and dis-engaged '0'. Pressing the gear letter will change it to '0'. Number pairs and letter pairs given above work in opposite directions.

Moves are counted for each rotation button used, but not incremented for sequential use of the same button. Although at first, it will seem impossible to solve this puzzle, it is possible to solve.

A green/red indicator is used when the program will/will not accept key presses. You may hold a key down for repeated operation.

The program uses all 28 possible SPRITES and all available characters from 32 to 143. The clock positions are maintained in the C(18) array, and the gear positions in the D(4) array. Two functions are defined, E(Z) and F(Z), since these modular 12 routines are used repeatedly in the calculations.

The program size of 50 sectors causes Extended BASIC to save it in INT/FIX 254 format rather than PROGRAM image. This means that 12-O'CLOCK cannot be run from an autoloading menu, but must be loaded using "OLD DSK1.12-O'CLOCK" and then the command RUN.

If you would like this program on disk, please send me either a copy of your TI club's newsletter or a disk with a program or two on it.

WESLEY R. RICHARDSON
18140 ROLLING BROOK
BAINBRIDGE, OH 44022-4860

```
100 REM 12-O'CLOCK
110 REM WESLEY R. RICHARDSON SEPTEMBER
    , 1989
120 REM NORTHCOAST 99ERS, CLEVELAND, O
    H
130 REM TI-99/4A EXTENDED BASIC
140 REM VARIABLES A$,B$,C(18),D(4),E(Z
    ),F(Z),I,K,M,N,P,Q,R,S,W,X(18),Y(1
    8),Z
150 CALL CLEAR :: CALL MAGNIFY(3)
160 DIM C(18),D(4),X(18),Y(18)
170 DEF E(Z)=-(Z+1)*(Z<>11)
180 DEF F(Z)=-(Z-1)*(Z<>0)-11*(Z=0)
190 GOTO 230 :: CALL CHAR :: CALL CHAR
    PAT :: CALL CHARSET :: CALL COLOR
    :: CALL DELSPRITE :: CALL HCHAR
200 CALL KEY :: CALL LOCATE :: CALL PA
    TTERN :: CALL POSITION :: CALL SCR
    EEN :: CALL SPRITE
210 A$,B$,I,K,M,N,P,Q,R,S,W,Z
220 !@P-
230 CALL CLEAR :: DISPLAY AT(4,9):"12-
    O'CLOCK" :: DISPLAY AT(6,2):"by WE
    SLEY R. RICHARDSON"
240 DISPLAY AT(8,1):"THE OBJECTIVE IS
    TO ORIENT" :: DISPLAY AT(9,1):"ALL
     18 CLOCKS TO THE SAME "
250 DISPLAY AT(10,1):"12 O'CLOCK VERTI
    CAL POSITION" :: DISPLAY AT(11,1):
    "USING THE ROTATE BUTTONS"
260 DISPLAY AT(12,1):"1+5, 2+6, 3+7, 4
    +8 AND THE" :: DISPLAY AT(13,1):"A
    +E, B+F, C+G, D+H GEARS."
270 DISPLAY AT(15,1):"ROTATION IS CLOC
    KWISE FOR" :: DISPLAY AT(16,1):"TH
    E CLOCK ADJACENT TO THE"
280 DISPLAY AT(17,1):"NUMBER.  GEARS A
    RE ENGAGED," :: DISPLAY AT(18,1):"
    'X' FOR THE GEAR NEAREST THE"
290 DISPLAY AT(19,1):"LETTER.  NUMBER
    PAIRS AND" :: DISPLAY AT(20,1):"LE
    TTER PAIRS GIVEN ABOVE"
300 DISPLAY AT(21,1):"WORK IN OPPOSITE
     DIRECTIONS" :: DISPLAY AT(23,7):"
    PRESS ANY KEY"
310 CALL KEY(0,K,S):: IF S=0 THEN 310
    :: CALL CLEAR :: DISPLAY AT(12,4):
    "LOAD:"
320 RANDOMIZE :: FOR I=1 TO 18 :: C(I)
    =INT(12*RND):: NEXT I :: CALL HCHA
    R(12,11,58)
330 C(10)=12*(1+(C(1)=0))-C(1):: C(12)
    =12*(1+(C(3)=0))-C(3)
340 C(16)=12*(1+(C(7)=0))-C(7):: C(18)
    =12*(1+(C(9)=0))-C(9):: CALL HCHAR
    (12,12,58)
350 FOR I=1 TO 4 :: D(I)=1 :: NEXT I
```

```
360 FOR I=0 TO 5 :: Y(1+3*I),Y(2+3*I),
    Y(3+3*I)=1+32*I :: NEXT I
370 FOR I=0 TO 2 :: X(1+I),X(4+I),X(7+
    I),X(10+I),X(13+I),X(16+I)=57+32*I
    :: NEXT I
380 CALL HCHAR(12,13,58):: N=0 :: P=5
    :: Q=2 :: R=16 :: CALL COLOR(7,16,
    1,8,16,1)
390 CALL CHARPAT(61,A$,81,B$):: CALL C
    HAR(35,A$,59,B$)
400 CALL CHARPAT(76,A$,78,B$):: CALL C
    HAR(33,A$,64,B$)
410 CALL CHARPAT(79,A$,39,B$):: CALL C
    HAR(74,A$,73,B$)
420 CALL HCHAR(12,14,58):: CALL CHAR(8
    0,"00E0FCFFFFFFFFFFFFFFFFFFFFFFFFFF
    F000000000080C0E0F0F8F8FCFCFCFEFEFE"
    )! CIRCLE UR
430 CALL CHAR(84,"FFFFFFFFFFFFFFFFFFFF
    FFFFFFFCE000FEFEFEFCFCFCF8F8F0E0C0
    80000000000")! CIRCLE LR
440 CALL HCHAR(12,15,58):: CALL CHAR(8
    8,"7F7F7F3F3F3F1F1F0F0703010000000
    0FFFFFFFFFFFFFFFFFFFFFFFFFFFF3F0700"
    )! CIRCLE LL
450 CALL CHAR(92,"00000000103070F1F1F
    3F3F3F7F7F7F00073FFFFFFFFFFFFFFFFFF
    FFFFFFFFFF")! CIRCLE UL
460 CALL HCHAR(12,16,58):: CALL CHAR(9
    6,"0080808080808080808080808080808
    0000000000000000000000000000000000"
    )! 12 O'CLOCK
470 CALL CHAR(100,"0000000103020600C081
    810302060C0800000000000000000000000
    00000000000")! 1 O'CLOCK
480 CALL HCHAR(12,17,58):: CALL CHAR(1
    04,"000000000000000000000000030E3860
    C000000000000000001870C080000000000
    ")! 2 O'CLOCK
490 CALL CHAR(108,"FF0000000000000000000
    00000000000FE0000000000000000000000
    00000000000")! 3 O'CLOCK
500 CALL HCHAR(12,18,58):: CALL CHAR(1
    12,"C060380E030000000000000000000000
    0000000080C07018000000000000000000
    ")! 4 O'CLOCK
510 CALL CHAR(116,"80C0602030101808000C0
    6020301000000000000000000000000000000
    000000000000")! 5 O'CLOCK
520 CALL HCHAR(12,19,58):: CALL CHAR(1
    20,"00000000000000000000000000000000
    0001010101010101010101010101010100
    ")! 6 O'CLOCK
530 CALL CHAR(124,"00000000000000000000
    0000000000000010306040C08181030604
    0C080000000")! 7 O'CLOCK
540 CALL HCHAR(12,20,58):: CALL CHAR(1
28,"0000000001030E18000000000000000000
    0003061C70C0000000000000000000000000
    ")! 8 O'CLOCK
550 CALL CHAR(132,"0000000000000000000000
    00000000007F000000000000000000000000
    00000000FF")! 9 O'CLOCK
560 CALL HCHAR(12,21,58):: CALL CHAR(1
    36,"000000000000000000180E0301000000
    000000000000000000000000000C0701C0603
    ")! 10 O'CLOCK
570 CALL CHAR(140,"0000000000000000000000
    000000000000000000080C0406030101800
    80C04060301")! 11 O'CLOCK
580 CALL HCHAR(12,22,58):: CALL CHAR(3
    6,"030408080808040300000000000000000
    0C0201010101020C00000000000000000000"
    )! GEAR O LOW
590 CALL CHAR(40,"0000000000000000000304
    0808080804030000000000000000000C02010
    10101020C0")! GEAR O HIGH
600 CALL HCHAR(12,23,58):: CALL CHAR(4
    4,"00000000000000000080402010102040
    8000000000000000001020408080402010"
    )! GEAR X HIGH
610 CALL CHAR(60,"0804020101020408000
    0000000000010204080804020100000000
    00000000000")! GEAR X LOW
620 FOR I=3 TO 6 :: CALL COLOR(I,Q,1):
    : NEXT I :: CALL CLEAR :: CALL CHA
    R(76,RPT$("F",64))
630 CALL SCREEN(9):: DISPLAY AT(1,3):"
    1\^PR\^PR^PR2     \^PR" :: DISPLAY
    AT(2,4):"]_QS]_QS]_QS     ]_QS"
640 DISPLAY AT(3,4):"XZTVXZTVXZTV
    XZTV" :: DISPLAY AT(4,3):"AY[UWY[U
    WY[UW     Y[UW"
650 DISPLAY AT(5,4):"\^PR\^PR\^PRB 12
    JIC!JCK" :: DISPLAY AT(6,4):"]_QS]
    _QS]_QS"
660 DISPLAY AT(7,4):"XZTVXZTVXZTV    12
    345678" :: DISPLAY AT(8,3):"OY[UWY
    [UWY[UW    ABCDEFGH"
670 DISPLAY AT(9,4):"\^PR\^PR\^PRC" ::
    DISPLAY AT(10,4):"]_QS]_QS]_QS
    ;#E@D"
680 DISPLAY AT(11,4):"XZTVXZTVXZTV" ::
    DISPLAY AT(12,3):"4Y[UWY[UWY[UW3"
690 DISPLAY AT(13,3):"5\^PR\^PR\^PR6"
    :: DISPLAY AT(14,4):"]_QS]_QS]_QS"
700 DISPLAY AT(15,4):"XZTVXZTVXZTV    1
    :5  A:E" :: DISPLAY AT(16,3):"EY[U
    WY[UWY[UW    2:6  B:F"
710 DISPLAY AT(17,4):"\^PR\^PR\^PRF  3
    :7  C:G" :: DISPLAY AT(18,4):"]_QS
    ]_QS]_QS  4:8  D:H"
720 DISPLAY AT(19,4):"XZTVXZTVXZTV" ::
    DISPLAY AT(20,3):"HY[UWY[UWY[UW"
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```
730 DISPLAY AT(21,4):"\^PR\^PR\^PRG" :
    : DISPLAY AT(22,4):"]_QS]_QS]_QS"
740 DISPLAY AT(23,4):"XZTVXZTVXZTV" ::
    DISPLAY AT(24,3):"8Y[UWY[UWY[UW7"
750 FOR I=1 TO 18 :: CALL SPRITE(#I,96
    +4*C(I),P,Y(I)+16*(C(I)>2)*(C(I)<9
    ),X(I)+16*(C(I)>5)):: NEXT I
760 CALL SPRITE(#19,44,R,17,65,#20,60,
    R,33,97,#21,60,R,65,97,#22,44,R,49
    ,65)
770 CALL SPRITE(#23,40,R,113,65,#24,36
    ,R,129,97,#25,36,R,161,97,#26,40,R
    ,145,65)
780 CALL SPRITE(#27,76,9,89,165,#28,96
    ,5,1,193)
790 REM MAIN LOOP
800 W=0 :: FOR I=1 TO 18 :: W=W+C(I)::
     NEXT I :: IF W<>0 THEN 820
810 CALL SCREEN(14):: FOR W=1 TO 400 :
    : NEXT W :: CALL SCREEN(9)
820 CALL COLOR(#27,13)
830 CALL KEY(0,K,S):: IF S=0 THEN 830
    :: CALL COLOR(#27,7):: IF K=81 THE
    N 1950
840 IF (K>64)*(K<73)THEN 860
850 IF (K>48)*(K<57)THEN 910 ELSE 790
860 REM GEAR ABCDEFGH
870 K=K-64 :: IF K<5 THEN D(K)=0
880 IF K>4 THEN D(K-4)=1
890 CALL PATTERN(#19,40+4*D(1),#20,36+
    24*D(2),#21,36+24*D(3),#22,40+4*D(
    4))
900 CALL PATTERN(#23,44-4*D(1),#24,60-
    24*D(2),#25,60-24*D(3),#26,44-4*D(
    4)):: GOTO 790
910 REM ROTATE 12345678
920 K=K-48 :: IF M<>K THEN M=K :: N=N+
    1
930 ON K GOTO 940,1060,1180,1300,1420,
    1540,1660,1780
940 REM ROT 1
950 C(1)=E(C(1)):: C(10)=F(C(10))
960 IF D(1)THEN C(2)=E(C(2)):: C(4)=E(
    C(4)):: C(5)=E(C(5))
970 IF D(1)*D(2)+(D(1)=0)*(D(2)=0)THEN
     C(3)=E(C(3)):: C(12)=F(C(12))
980 IF D(1)*(D(2)+D(3))THEN C(6)=E(C(6
    ))
990 IF D(1)*D(4)+(D(1)=0)*(D(4)=0)THEN
     C(7)=E(C(7)):: C(16)=F(C(16))
1000 IF D(1)*(D(3)+D(4))THEN C(8)=E(C(8
     ))
1010 IF D(1)*D(3)+(D(1)=0)*(D(3)=0)THEN
     C(9)=E(C(9)):: C(18)=F(C(18))
1020 IF D(1)=0 THEN C(11)=F(C(11)):: C(
     13)=F(C(13)):: C(14)=F(C(14))
1030 IF (D(1)=0)*((D(2)=0)+(D(3)=0))THE
```

```
N C(15)=F(C(15))
1040 IF (D(1)=0)*((D(3)=0)+(D(4)=0))THE
     N C(17)=F(C(17))
1050 GOTO 1900
1060 REM ROT 2
1070 C(3)=E(C(3)):: C(12)=F(C(12))
1080 IF D(2)THEN C(2)=E(C(2)):: C(5)=E(
     C(5)):: C(6)=E(C(6))
1090 IF D(1)*D(2)+(D(1)=0)*(D(2)=0)THEN
      C(1)=E(C(1)):: C(10)=F(C(10))
1100 IF D(2)*(D(1)+D(4))THEN C(4)=E(C(4
     ))
1110 IF D(2)*D(3)+(D(2)=0)*(D(3)=0)THEN
      C(9)=E(C(9)):: C(18)=F(C(18))
1120 IF D(2)*(D(3)+D(4))THEN C(8)=E(C(8
     ))
1130 IF D(2)*D(4)+(D(2)=0)*(D(4)=0)THEN
     C(7)=E(C(7)):: C(16)=F(C(16))
1140 IF D(2)=0 THEN C(11)=F(C(11)):: C(
     14)=F(C(14)):: C(15)=F(C(15))
1150 IF (D(2)=0)*((D(1)=0)+(D(4)=0))THE
     N C(13)=F(C(13))
1160 IF (D(2)=0)*((D(3)=0)+(D(4)=0))THE
     N C(17)=F(C(17))
1170 GOTO 1900
1180 REM ROT 3
1190 C(9)=E(C(9)):: C(18)=F(C(18))
1200 IF D(3)THEN C(8)=E(C(8)):: C(5)=E(
     C(5)):: C(6)=E(C(6))
1210 IF D(3)*D(4)+(D(3)=0)*(D(4)=0)THEN
      C(7)=E(C(7)):: C(16)=F(C(16))
1220 IF D(3)*(D(1)+D(4))THEN C(4)=E(C(4
     ))
1230 IF D(2)*D(3)+(D(2)=0)*(D(3)=0)THEN
      C(3)=E(C(3)):: C(12)=F(C(12))
1240 IF D(3)*(D(1)+D(2))THEN C(2)=E(C(2
     ))
1250 IF D(1)*D(3)+(D(1)=0)*(D(3)=0)THEN
      C(1)=E(C(1)):: C(10)=F(C(10))
1260 IF D(3)=0 THEN C(17)=F(C(17)):: C(
     14)=F(C(14)):: C(15)=F(C(15))
1270 IF (D(3)=0)*((D(1)=0)+(D(4)=0))THE
     N C(13)=F(C(13))
1280 IF (D(3)=0)*((D(1)=0)+(D(2)=0))THE
     N C(11)=F(C(11))
1290 GOTO 1900
1300 REM ROT 4
1310 C(7)=E(C(7)):: C(16)=F(C(16))
1320 IF D(4)THEN C(8)=E(C(8)):: C(5)=E(
     C(5)):: C(4)=E(C(4))
1330 IF D(3)*D(4)+(D(3)=0)*(D(4)=0)THEN
      C(9)=E(C(9)):: C(18)=F(C(18))
1340 IF D(4)*(D(2)+D(3))THEN C(6)=E(C(6
     ))
1350 IF D(1)*D(4)+(D(1)=0)*(D(4)=0)THEN
      C(1)=E(C(1)):: C(10)=F(C(10))
1360 IF D(4)*(D(1)+D(2))THEN C(2)=E(C(2
```

```
))
1370 IF D(2)*D(4)+(D(2)=0)*(D(4)=0)THEN
     C(3)=E(C(3)):: C(12)=F(C(12))
1380 IF D(4)=0 THEN C(17)=F(C(17)):: C(
     13)=F(C(13)):: C(14)=F(C(14))
1390 IF (D(4)=0)*((D(2)=0)+(D(3)=0))THE
     N C(15)=F(C(15))
1400 IF (D(4)=0)*((D(1)=0)+(D(2)=0))THE
     N C(11)=F(C(11))
1410 GOTO 1900
1420 REM ROT 5
1430 C(10)=E(C(10)):: C(1)=F(C(1))
1440 IF D(1)=0 THEN C(11)=E(C(11)):: C(
     13)=E(C(13)):: C(14)=E(C(14))
1450 IF D(1)*D(2)+(D(1)=0)*(D(2)=0)THEN
     C(12)=E(C(12)):: C(3)=F(C(3))
1460 IF (D(1)=0)*((D(2)=0)+(D(3)=0))THE
     N C(15)=E(C(15))
1470 IF D(1)*D(4)+(D(1)=0)*(D(4)=0)THEN
     C(16)=E(C(16)):: C(7)=F(C(7))
1480 IF (D(1)=0)*((D(3)=0)+(D(4)=0))THE
     N C(17)=E(C(17))
1490 IF D(1)*D(3)+(D(1)=0)*(D(3)=0)THEN
     C(18)=E(C(18)):: C(9)=F(C(9))
1500 IF D(1)THEN C(2)=F(C(2)):: C(4)=F(
     C(4)):: C(5)=F(C(5))
1510 IF D(1)*(D(2)+D(3))THEN C(6)=F(C(6
     ))
1520 IF D(1)*(D(3)+D(4))THEN C(8)=F(C(8
     ))
1530 GOTO 1900
1540 REM ROT 6
1550 C(12)=E(C(12)):: C(3)=F(C(3))
1560 IF D(2)=0 THEN C(11)=E(C(11)):: C(
     14)=E(C(14)):: C(15)=E(C(15))
1570 IF D(1)*D(2)+(D(1)=0)*(D(2)=0)THEN
     C(10)=E(C(10)):: C(1)=F(C(1))
1580 IF (D(2)=0)*((D(1)=0)+(D(4)=0))THE
     N C(13)=E(C(13))
1590 IF D(2)*D(3)+(D(2)=0)*(D(3)=0)THEN
     C(18)=E(C(18)):: C(9)=F(C(9))
1600 IF (D(2)=0)*((D(3)=0)+(D(4)=0))THE
     N C(17)=E(C(17))
1610 IF D(2)*D(4)+(D(2)=0)*(D(4)=0)THEN
     C(16)=E(C(16)):: C(7)=F(C(7))
1620 IF D(2)THEN C(2)=F(C(2)):: C(5)=F(
     C(5)):: C(6)=F(C(6))
1630 IF D(2)*(D(1)+D(4))THEN C(4)=F(C(4
     ))
1640 IF D(2)*(D(3)+D(4))THEN C(8)=F(C(8
     ))
1650 GOTO 1900
1660 REM ROT 7
1670 C(18)=E(C(18)):: C(9)=F(C(9))
1680 IF D(3)=0 THEN C(17)=E(C(17)):: C(
     14)=E(C(14)):: C(15)=E(C(15))
1690 IF D(3)*D(4)+(D(3)=0)*(D(4)=0)THEN
     C(16)=E(C(16)):: C(7)=F(C(7))
1700 IF (D(3)=0)*((D(1)=0)+(D(4)=0))THE
     N C(13)=E(C(13))
1710 IF D(2)*D(3)+(D(2)=0)*(D(3)=0)THEN
     C(12)=E(C(12)):: C(3)=F(C(3))
1720 IF (D(3)=0)*((D(1)=0)+(D(2)=0))THE
     N C(11)=E(C(11))
1730 IF D(1)*D(3)+(D(1)=0)*(D(3)=0)THEN
     C(10)=E(C(10)):: C(1)=F(C(1))
1740 IF D(3)THEN C(8)=F(C(8)):: C(5)=F(
     C(5)):: C(6)=F(C(6))
1750 IF D(3)*(D(1)+D(4))THEN C(4)=F(C(4
     ))
1760 IF D(3)*(D(1)+D(2))THEN C(2)=F(C(2
     ))
1770 GOTO 1900
1780 REM ROT 8
1790 C(16)=E(C(16)):: C(7)=F(C(7))
1800 IF D(4)=0 THEN C(17)=E(C(17)):: C(
     13)=E(C(13)):: C(14)=E(C(14))
1810 IF D(3)*D(4)+(D(3)=0)*(D(4)=0)THEN
     C(18)=E(C(18)):: C(9)=F(C(9))
1820 IF (D(4)=0)*((D(2)=0)+(D(3)=0))THE
     N C(15)=E(C(15))
1830 IF D(1)*D(4)+(D(1)=0)*(D(4)=0)THEN
     C(10)=E(C(10)):: C(1)=F(C(1))
1840 IF (D(4)=0)*((D(1)=0)+(D(2)=0))THE
     N C(11)=E(C(11))
1850 IF D(2)*D(4)+(D(2)=0)*(D(4)=0)THEN
     C(12)=E(C(12)):: C(3)=F(C(3))
1860 IF D(4)THEN C(8)=F(C(8)):: C(5)=F(
     C(5)):: C(4)=F(C(4))
1870 IF D(4)*(D(2)+D(3))THEN C(6)=F(C(6
     ))
1880 IF D(4)*(D(1)+D(2))THEN C(2)=F(C(2
     ))
1890 GOTO 1900
1900 REM SHOW ROT
1910 FOR I=1 TO 18
1920 CALL LOCATE(#I,Y(I)+16*(C(I)>2)*(C
     (I)<9),X(I)+16*(C(I)>5)):: CALL PA
     TTERN(#I,96+4*C(I))
1930 NEXT I :: DISPLAY AT(12,21):N
1940 GOTO 790
1950 CALL CLEAR :: CALL CHARSET :: CALL
     DELSPRITE(ALL)
1960 DISPLAY AT(4,2):"YOU TOOK";N;"MOVE
     S." :: DISPLAY AT(5,2):"IT CAN BE
     DONE IN 3 MOVES"
1970 DISPLAY AT(7,2):"TRY AGAIN (Y/N)?"
1980 CALL KEY(0,K,S):: IF S=0 THEN 1980
1990 IF (K=89)+(K=121)THEN 230 ELSE CAL
     L CLEAR :: STOP
2000 !@P+
2010 END
```

The 99/4A Gets Down To Business
By Art Byers, CV-99'ers

I was very impressed by the short demonstration that Steve Nickerson, who has a very responsible job with the County Park Commission, gave at the May meeting. It was still another way he is using his TI-99/4A computer at work. This is about the fourth time Steve has shown us his ingenuity is making the TI useful on his job.

Al Trudeau and Nils Soderman have also shown us their original programs that they use for business. I too have been using the TI-99/4A for my varied businesses. To somewhat paraphrase the poet, "Let me Count the ways" the 99/4A is earning money for me:

#1: Along with my modem and terminal software such as FAST-TERM or TELCO, I use it as a dumb terminal, to access the real estate multiple listing service data base. This is a very necessary part of one of my endeavors. I gave a demo of this at a past meeting and will do it again if there are enough members who are interested.

#2: I have a "Customer" for whom I do programming at $25.00 per hour. Believe it or not, this customer uses a full house TI, in his retail store, for a miriade of business purposes from banners and price lists, to calculating markups and printing price labels for items in the store. He uses a 1/2" x 3" or 1" x 3" pin fed label and gets lots of info on it such as count of package contents, retail list, discount retail, percent of saving for the customer, etc. At one time he even did bookkeeping on the TI but switched to a "one write" manual system at the suggestion of his accountant as the store's requirments were simple enough that a computer was not needed.

It is for this customer that I have written several programs designed to manipulate data from DV/80 files prepared on TI-WRITER. Simple versions of these programs have appeared in previous CALL SOUNDS Newsletters. One of the programs that he finds most useful will sort up to 252 full lines of DV/80 text, reprint it in ascending order and allow for calculation of varying price columns according to quantity purchased.

I'd like to mention that he bought his TI used, complete with TI Impact Printer, PE box and all cards and cables for less than $250. At the time he bought it, he had considered an IBM which would have cost him well over $1800. Now, after three years, he has yet to outgrow his TI -but this is a diversion. Let's go on.

#3: I do mailing list maintainance for another local business. The current list is about 4000 names and growing. My 99/4A prints out mailing labels by Zip code, by classification of customer, etc., - what ever my client requires.

#4: I do considerable and varied wordprocessing. This includes not only business letters, price lists, charts, outlines, etc. but also insurance claim forms, standard contracts, leases and so on. All this as part of on-going businesses.

Surprising as it may seem, I actually do "MULTI TASKING" with my 99/4A. Of course it's because I have TWO of them. <<that's a joke, son!>>. One is usually used for word processing while the other is sorting a data base or printing out labels.

My TI-99/4A not only has "paid for itself" many times over, but also it continues to do so, - and that's good business!!!

Popcorn Wagon
16.7 USA 1902
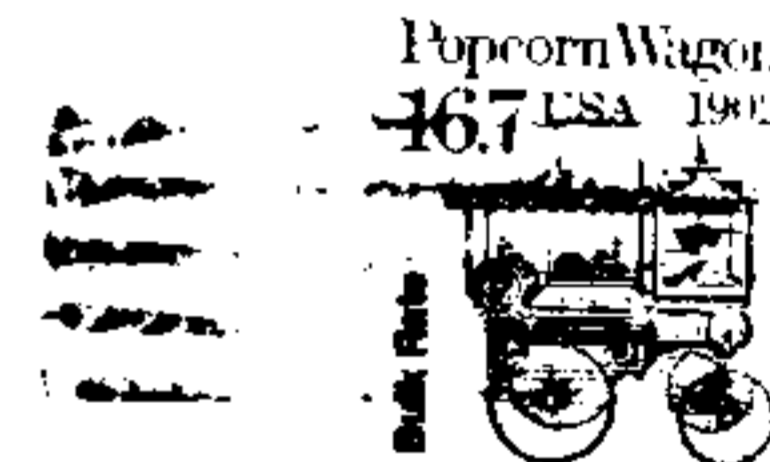
CHECK YOUR EXPIRATION DATE.
THIS MAY BE YOUR LAST ISSUE!

Exp Date: 90/07

!! TIME DATED MATERIAL !!