PITTSBURGH P.U.G. USERS GROUP

PERIPHERAL

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NEXT MEETING

The next regular meeting of the Pittsburgh Users Group will be Sunday, Feb. 19th at the Community College, South Campus.

Classes in Basic and Assembly Language will start at 4:00.Stanley Grove will have the Extended Basic group from 5 until 6:00.

We will have two new classes starting at 6:30 to 7:00 for those who are interested in Pascal and TI Writer.

There will be a free door prize given away at this meeting thanks to John Dow.It will be his new ASSEMBLY LANGUAGE PRIMER BOOK.There will also be tickets to purchase for the new ATARISOFT DIG DUG cartridge at $1.00 each.

NEW OFFICERS

WE will be asking for nominations from the floor for new officers at this meeting.The positions that are open for nominations are PRESIDENT VICE PRESIDENT, TREASURER, SECRETARY and CORRESPONDING SECRETARY. The candidates will be printed in the next news letter on a ballot that each member should bring or send to the MARCH meeting.

LIBRARY CHANGES

The library has been undergoing a lot of changes thanks to the help of the library committee.One of the new features will be a disk of the month for $5.00.It will have a selection of new programs that the club acquires each month.You can purchase this disk at the meeting or you can call Roy Carlson and he will reserve one for you. Call Roy at 481-5927
For the members who want to copy programs using the clubs system at the Computer Bug store it is now $2.00 a hour. This money will go toward the cost of the equipment and its rent. There will be a time at this meeting to debate the plans of the library.

1984 PACC COMPUTER SHOW

Once again the Pittsburgh Area Computer Club has been invited to stage a computer show at Century Three Mall in West Mifflin. This years show Feb 18th and 19th 1984.
Meeting.

We need volunteers to help out at this show for our TI table on SAT. FEB.18th from 10:00 to 9:00 and SUNDAY FEB.19th from 12:00 to 5:00 If you can come for a hour or two on either or both days please call Chuck at 882-3374.

FORTH

With some versions of FORTH available for the 99/4, one of which I have had a chance to play with, I think some members might like a short synopsis of what FORTH is.

FORTH is a programming language.

FORTH is somewhat like ASSEMBLY.
FORTH is completely different than ASSEMBLY.

FORTH is something like Pascal.
FORTH is completely different from Pascal.

FORTH is somewat like LISP.
FORTH is completely different from LISP.

FORTH is something like LOGO.
FORTH is completely different from LOGO.

FORTH is....different....

If I have managed to get across the point that FORTH is controversial, enigmatic, and a language unto itself, that's as intended. It has even been called a religion. (Its devotees are quite evangelistic.) Why all this?

Like some other exciting languages, it is largely the creation of one individual--in this case Charles Moore. But he created it over a long period of time, not having set out to create a language, much less to promulgate it--it just happened. As well, it's an "anti-establishment" language. The high-powered university professors aren't much interested, and no big-bucks software houses champion it--of course, Mr. Moore already has the credit, and the language is in the public domain. (Check the prices of some language implementations for "business" computers to appreciate the last point--UCSD Pascal for the Victor 9000 is $900.00. FORTH is free.)

Though an utter novice, I'll try to put forth the features which make FORTH what it is: FORTH is called a "low-level" language, just above ASSEMBLY, as its commands instruct the microporcessor more or less directly, the commands are cryptic, and the syntax is absolutely un-forgiving.

(Be advised that the 9900 ASSEMBLY language is, for ASSEMBLY, very "high-level", in that one instruction will cause a lot to happen--which would take many lines of code on the common 8-bit microprocessors.) HOWEVER, FORTH also has the features of the highest level languages, as it supports recursion, complex conditional looping, extension (one defines his own commands as needed), is not "typed", requires structured programming, and is interactive. "Interactive?"--how can that be? It seems to me that a look at this aspect most clearly captures the spirit of FORTH. The FORTH Kernel consists largely of a dictionary of commands ("words") with their machine code implementation, together with a series of small compilers. When a command is called, the machine code is fetched and executed. When a new command is defined, one of the compilers fetches the collection of pre-defined commands used, and assembles the machine code, linked to the new command in the dictionary. Thus, when a program line is entered, (in the immediate mode) the machine code for each word is fetched and executed in turn, whether previously defined in the Kernel, or newly defined by the programmer. You could call FORTH a very high-level ASSEMBLY language which is interactive. (I also note that there appears to be a one-to-one correlation between many FORTH words and 9900 instructions.)

Of course, FORTH is fast. A time-test in the FORTH issue of BYTE took 40 seconds in Apple Integer BASIC (a fast BASIC) and 4 seconds in FORTH. (It takes 2 seconds in FORTH on the 99/4--more complex constructs would show an even greater differential.)

I find it fun. To me, it feels more like LOGO than anything else, in that one is at the command of a very powerful genie, yet very close to the machine.

While FORTH is "known" as a hobbyist's language, it was born of pure utility, and boasts some very practical applications --from controlling Kit Peak Observatory, to the Craig pocket language translator.

See BYTE, August 1980, Popular Electronics, December 1981, the various publications of the Forth Interest Group for more information.

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The Adventure Realm

Adventure #10: The Savage Island Series Part I

This month we will be talking about *The Savage Island Series: Part I*, which is adventure #10. This adventure is one of the most difficult adventures in *The Scott Adams Adventure Series*.

You begin *Savage Island Part I* on a small island facing an impenatrable jungle. Your job in this adventure is to find the mystery of the island. If you play in the sand on the beaches, you might dig up some buried treasure like a bottle of rum. Doesn't this remind you of *Pirate Adventure*? Also on the island is a great big rock. This rock is in the shape of your own head! Now the adventure starts getting weird. Venturing around the island, you might stumble upon an extinct volcano. In it you will find one sick little bear. Sick as he may be, he's no cinnamon bear! He'll take one lick of you and you can say goodbye to your game! Also in the volcano is a lake. My adventurer, *The Grand Wizard*, was not a very good swimmer because every time he went in the lake and was carrying something, he would drown. Eventually I found a way to keep afloat.

Somewhere around this time, the island will be hit by a tropical hurricane called Hurricane Alexis. For you who didn't know, Alexis is Scott Adams' wife. Scott is the one who created this and all the other adventures in the *The Adventure Series*. He really must have been mad at her when he named a hurricane after her. After the hurricane is over, you have only a few moves before the sun sets. By this time you had better have figured a way off of the island because you can't do any more until you "shed some light on the subject."

On the other part of the island is an ancient cave with a moveable stalactite. This may seem "nutty" but it serves as a very important part in the adventure. Once you have conquered the stalactite, the rest of the game will be most evident-well...maybe.

In my opinion *Savage Island Part I* is a very good adventure. But for the experienced adventurer only!!! A word to the wise, There is more than one code word for part two. The program gives you the right one only if you are carrying the right objects. If you do not get the right code word, you can never solve part two!

Next month the conclusion to *The Savage Island Series*.

ADVENTURE NEWS FLASH: There is a new adventure out. It's #14 and it's called *Return to Pirate's Isle*. It's no ordinary adventure! It's a graphic adventure! I think it's worth looking into.

Having trouble with an adventure? Call me, Keith, at (412) 469-1713 or write to:

The Adventure Realm
c/o P.U.G.
P.O. Box 18124
Pittsburgh, PA 15236

NEW BOOK!

ASSEMBLY LANGUAGE PRIMER

The Primer teaches TI assembly language in step by step fashion to Basic programmers. Assembly language is very difficult at first, so the Primer starts at the very beginning. Thus, in its more than 100 pages, it gives each keystroke needed to get started with a very simple program, then uses many examples to move gradually up to more advanced programs. This book has been tested by novice and professional alike. After you read it and experiment with the example program on your own computer, you should be able to understand the TI Editor/Assembler manual as well as other more advanced books. (Written to be used with either the TI Editor/Assembler or the Dow Editor/Assembler.) $20

EDITOR/ASSEMBLER

The Dow E/A turns your TI into an assembly language machine. For use with TI's Mini Memory Module. Fast and convenient. Allows use of entire RAM. Manual includes sample program with detailed explanations. See review in Aug 83 Home Computer Magazine. Cassette. $25.

(Dow E/A and PRIMER $40)

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Learn to fly with the Dow-4 Gazelle, a realistic IFR simulation of a typical 4-place private plane. It is not a game. A manual with 30 pages of text plus 7 figures helps the novice learn to fly. Experienced pilots will enjoy flying the ILS approach. Response time under 1 sec average. Display shows full panel (10 dials and 11 lights) and indicates position of runway for landing. Realistic sound effects. See reviews in Jan 83 Home Computer Magazine and Jun 83 AOPA Pilot. Requires joystick. Cassette. $30.

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AGREEMENT WITH MARCH DIRECT MARKETING

ANNOUNCED BY TEXAS INSTRUMENTS

LUBBOCK, Texas (December 20, 1983). . . Texas Instruments today announced a preliminary agreement with March Direct Marketing (MDM), a wholly owned subsidiary of McCann-Erickson, to provide access to TI's list of 99/4A Home Computer owners to third parties interested in marketing to this user base.

Although the details of this plan have not been completely defined, it is expected that two distinct marketing thrusts will be pursued:

1. A quarterly catalog will be mailed to the user base free of charge. The catalog will include hardware and software from TI (while inventories last), as well as hardware and software from third parties. It will also list opportunities to become members in user's groups and to order relevant home computer magazine subscriptions. The content of the catalog will be controlled by MDM relative to suitability and quality.
2. MDM will identify and contract with a mail list manager whose function will be to make available to a variety of interested parties access to over one million known 99/4A owners.

Texas Instruments has made these arrangements as a service to owners of its 99/4A Home Computer. It is anticipated that MDM will provide an extremely cost-effective method of marketing for third-party manufacturers of peripherals and software wishing to reach this large installed customer base.

LAS VEGAS, Nevada (January 9, 1984) . . . Texas Instruments and Imagic today announced that Imagic will assume the marketing responsibilities for five Imagic software programs for the TI-99/4A Home Computer for which Texas Instruments had obtained manufacturing and marketing rights.

"We are pleased that Imagic has agreed to market these five Imagic software games previously announced by TI for the 99/4A," said Dale Osborn, Manager in charge of phaseout of TI's Home Computer operations. "This agreement is yet another step by TI to provide TI-99/4A Home Computer owners with additional sources of software for their computers." TI announced in October that it was withdrawing from the consumer home computer business, but said it planned to take steps to provide continued support for 99/4A Home Computer owners.

The game software to be available for the TI-99/4A under the agreement includes Imagic's Demon Attack, Microsurgeon, Fathom, Wing War, and Moonsweeper. Imagic already markets these games for other computer systems.

Texas Instruments continues to discuss with third parties the manufacture and marketing of additional 99/4A software.

LAS VEGAS, Nevada (January 9, 1984) . . . Texas Instruments, Walt Disney, and Sierra On-Line today announced they have reached agreement in principle for Sierra On-Line to assume the responsibility of manufacturing and marketing five TI-99/4A educational software programs. These five programs, which feature a number of Walt Disney characters, were developed by Disney for TI under an earlier manufacturing and marketing agreement. Under the new agreement, Sierra On-Line will take over the manufacturing and marketing orginally to be performed by TI. As in the earlier agreement, Disney will distribute these programs to the school market.

This agreement provides for the use of Disney characters in educational software programs originally conceived by Disney for Texas Instruments and the 99/4A. Among the characters used in the programs are Peter Pan, Pinnochio, Winnie the Pooh, and Professor Ludwig Von Drake. These programs will also be made available by Sierra On-Line for other computer systems including IBM, Apple, Commodore, and Adam.

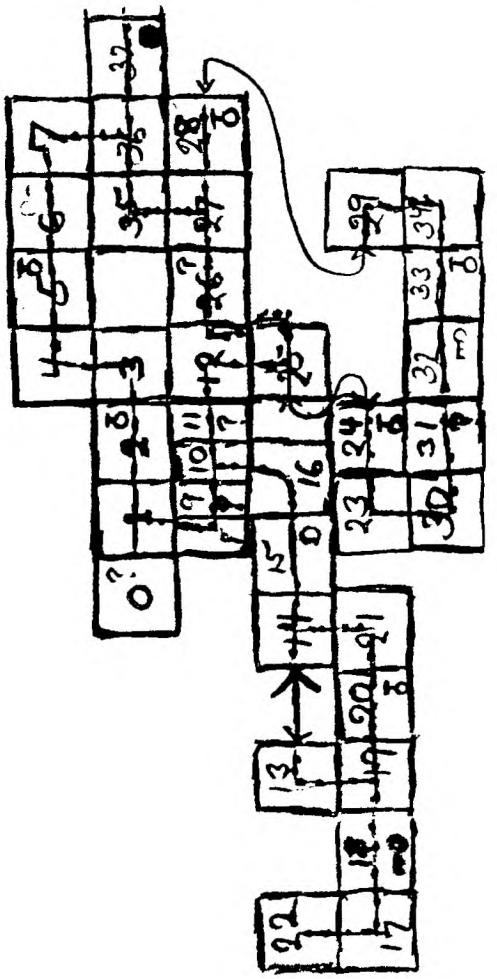
"This agreement is part of our plan to provide alternative sources of quality software for owners of TI-99/4A Home Computers," said Dale Osborn, Manager in charge of phaseout of TI's Home Computer operations. Texas Instruments announced in October that it was withdrawing from the consumer home computer business, but said that it planned to take steps to provide continued support for 99/4A Home Computer owners.

"Walt Disney is pleased that these exciting educational programs will be available from Sierra On-Line for the 99/4A Home Computer and other computers," said Rich Boehning, Vice President of Institutional Media for Disney.

"We look forward to serving the large number of 99/4A Home Computer owners with this new software, and we hope to continue providing this and other software for the 99/4A," said Ken Williams, President of Sierra On-Line.

Texas Instruments continues to discuss with third parties the manufacture and marketing of additional software for the 99/4A.

For those of you who are having trouble solving the ATARISOFT SHAMUS here is a map of the first level thanks to Brian Selia. If you still have a problem give Brian a call 461-2144



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RANDOM ACCESS
by Larry Hughes
QUALITY 99 SOFTWARE

The May issue of the TI Home Computer Newsletter had a program statement on page 5 of:

100 ON X+(Y/5) GOTO ...

That statement can be improved by eliminating the parentheses, because they are unnecessary. The improved statement is:

100 ON X+Y/5 GOTO ...

This is a good example of the "My Dear Aunt Sally" rule, i.e. Multiplication and Division are performed before Addition and Subtraction. See rules for mathematical hierarchy, page II-13 in the User's Reference Guide.

The improved statement will execute 13% faster than the original statement and also saves two bytes.

So you see, it does make a great deal of difference how a program is coded!

The September issue of the TI Home Computer Newsletter had an article on page 5, "Tips for Using Variables". Unfortunately, the article contained a few ambiguities and errors. So, in the interest of accuracy (which, after all, is the name of the game in computer programming), I offer the following clarifications.

"A variable can be up to 15 characters long." --- I think what was meant is, "A variable name can be up to 15 characters long." (It can also be 15 characters long.) Actually, a string variable can be up to (and including) 255 characters long.

"The name cannot contain a space (character 32), or any reserved word." --- Actually, there are 52 other characters that cannot be used in a variable name either. See page II-11. (Note that lower-case letters cannot be used, because TI BASIC changes them back to upper-case letters.) Furthermore, a variable name can contain a reserved word. See page II-16.

The article gave a program statement as, "PRINCIPLE*RATE=INTEREST". Of course, that simply will not work. It should be, "INTEREST=PRINCIPLE*RATE".

TI-99/4A users

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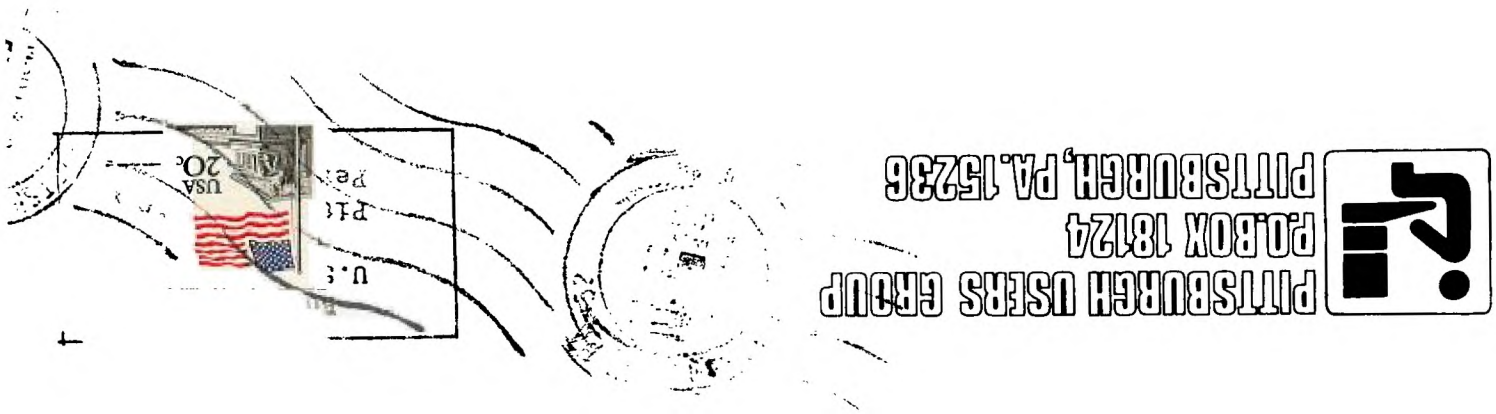
PITT H12

```
100 REM ********************
110 REM *                  *
120 REM *    TELE TUNES    *
130 REM *BY VAUGHN SOFTWARE*
140 REM *                  *
150 REM *     TI BASIC     *
160 REM ********************
170 CALL CLEAR
180 DIM TN$(9)
190 DATA 948.01331.7,699.11215.9,699.11331.7,699.11471.9,766.21215.9,766.21331.7
,766.21471.9
200 DATA 847.41215.9,847.41331.7,847.41471.9
210 FOR A=0 TO 9
220 READ TN$(A)
230 NEXT A
240 INPUT "PHONE NUMBER?:":PH$
250 FOR A=1 TO LEN(PH$)
260 C=VAL(SEG$(PH$,A,1))
270 CALL SOUND(50,VAL(SEG$(TN$(C),1,5)),0,VAL(SEG$(TN$(C),6,6)),0)
280 NEXT A
290 GOTO 240
```

```
100 REM ********************
110 REM *  SNAKE DANCE BY  *
120 REM * VAUGHN  SOFTWARE *
130 REM ********************
140 REM
150 REM
160 REM EXTENDED BASIC REQUIRED
170 REM
180 RANDOMIZE :: CALL CLEAR :: CALL SCREEN(2)
190 B=RND*190 :: CALL MAGNIFY(1):: CALL CHAR(96,"8"):: FOR A=1 TO 28 :: CALL SPR
ITE(#A,96,8,95,10,10,SGN(95-B)*A):: NEXT A
200 D=RND*20 :: FOR A=1 TO 28 :: CALL MOTION(#A,D,A*SGN(10-D)):: NEXT A :: C=C+1
 :: IF C<25 THEN 200
210 FOR A=1 TO 28 :: CALL COLOR(#A,RND*14+2):: NEXT A :: C=0 :: CALL MAGNIFY(2)
220 FOR A=1 TO 28 :: B=RND*14+2 :: CALL PATTERN(#A,96):: CALL POSITION(#A,U,V)::
 CALL MOTION(#A,SGN(96-U)*9,SGN(10-V)*9):: NEXT A
230 FOR A=1 TO 28 :: CALL PATTERN(#A,96):: NEXT A :: CALL DELSPRITE(ALL):: GOTO
190
```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