

THE PUG PERIPHERAL

The Monthly Newsletter Of The
Pittsburgh User's Group
April, 1990

Hello. My name is Don McCalla, and if you don't attend (or stay awake at) the PUG meetings, you don't know me. I'm the new President of the PUG. Gary Taylor has finally decided to retire with his paper and slippers by the fireplace (or the bulletin board screen, alternately), but we couldn't let him get away without staying on as Correspondence Secretary and EBS Sysop. Many thanks for all the hard work and dedication; the club wouldn't be the same without you. We also say goodbye to Mike Sealy and Frank Shoemaker, and say hello to Gene Kelly and Art Gardner, as VP and Treasurer, respectively. If these names aren't familiar to you, then you better get to our meeting and meet them. Thanks again to all new, old, and current officers for the tremendous job you've done. I think I'm giving Audrey this article with at least 8 hours before it has to go to the printer. To everybody I didn't mention, it's not lack of effort, just of room. Enough said; onto some news. Isn't it interesting that a computer that was orphaned half a decade ago made it's debut article in the Vulcan's Computer Buyer's Guide this month? Barry Traver, sysop on Compuserve and GENie II area, did a nice job of "reintroducing" the TI-99/4A and enhancements to the outside world, but the article is mainly for us; the orphans. Also included is an article on the Myarc HFDC. Let's show our support to Barry and the Vulcan's Computer Buyer's Guide by picking it up. Interested User Groups may be able to write for group discounts. They also carry the FOG user group EBS list. Remember, the phone numbers listed are voice numbers for volunteers and sysops, not computers, so don't just add them into your autodialer and call for the first time at 3AM.

At last! Can you believe \$180.00 for the HFDC? That's the purported temporary price at Disk Only Software, PO Box 244, Lorton VA 22079. Voice number 1-800-736-4951. Price is reported to be \$170.00 plus \$10.00

shipping and handling. I called the above number for information and received a recorded message to place an order; no info. was available. I don't like to push ads. but I also hate to see a great deal slip by. If anyone shows any interest, I may even bore you with stories of "Me and my HFDC—the First Year."

Make sure to check out John Johnson's newest BOOT program (10/89). It includes an auto-menu for up to 24 EA5 or XB pgms, including IV254's, from ANY drive, directory or subdirectory (hard drives included). It seems to do an amazing number of things, so give it a try; if you use it, don't forget to send a fairware donation to the Miami User's Group. The address is in the docs. I just received a copy of the latest version in the mail today, and have not yet had a chance to look at it. Because this month's PUG meeting falls on Easter, it will most likely be a small one. Most of the officers will be absent, but Gary has agreed to take the helm one more time and is even planning to assist with configuring Funnelweb. Just bring your disks, questions, and favorite utility programs. Also, since I won't be at the meeting this month, Gary wouldn't tell me what the raffle prize will be, but it promises to be a good one.

Last thought: remember the club's EBS...the message base is very active with new and old friends, and if you don't check in frequently, you may miss a comment or two! If anyone doesn't have a modem and/or RS232 setup, you're welcome to give me a call, come over to my house and I'll give you the grand tour of the local area, including the PUG board. For any of you who are new to the club, we have a stand-alone RS232 and acoustic modem for loan to members who would like to try out telecommunications. If Audrey's on the ball, my number's on the back page.

Until next month...



NEW-AGE/99
By Jack Sughrue
Box 459

East Douglas, Ma. 01516

#3

I often chuckle at doomsayers, but sometimes they irk me.

I don't think anyone questions the facts that the APPLE, AMIGA, IEM, and clones all have more commercial software and hardware support than the 4A. Walk into any bookstore and look at the magazines. Go into a department store and look at the racks of software packages. Or into an electronics store and peruse the computers, cards, drives, other hardware and software items. And the prices.

No question: the stuff's there. And some of us succumb to those temptations. Don't get me wrong. At work and at the homes of friends and relatives I get plenty of opportunities to play and work with these other machines. And enjoy my time on them, for the most part. But, even then and even when I attend the other computer user groups or fairs, I don't have the feeling that I do with similar TI activities.

The emotion - very much in evidence at TI get-togethers - is absent at Apple and IEM gatherings. There are subtle, important other differences, too.

When I look at the new Other software or Other hardware, I wonder if most TIers would pay those humongous prices or whether most TIers would want to trouble to learn these new ways of hi-tech wizardry. For the most part, the TIers don't do that now.

An example: The Apple IIGS is \$1149. (That's without the 5.0 (NOTE THE CONSTANT UPGRADING THAT SEEMS TO BE A COMPLAINT IN SOME CIRCLES!) \$50 Systems disk that's required to operate the machine. Nothing resides in memory.)

Let's say you want a word processor for it, as word processing is the most common use of non-business computers. Appleworks (the most popular WP for all Apples) is another \$250. (No percentage point, folks. It's two-hundred-fifty dollars, plus tax!) Will the WORKS give you 40/80 column for those of us (oldtimers?) who LIKE 40 because the letters are large and clean and easy to read? Nope. Try reading 80 on an Apple monitor.

Can you flip around, as you can with the fairware FUNNELWEB, for example, and load up such utilities as DM-1000, Disk

Utilities, ARCHiver, other languages (Assembly, c, FORTH), other sources (tape, cartridge, etc.)? Nope. There are no tapes and cartridges for those Other machines, anyway, but the WORKS doesn't let you configure any possibilities outside the provided environments. How about modified fonts, underlining, doublestrike? All available with FUNNELWEB, even more so if you use the fairware PLUS! within the FWB environment.

And speed? The IIGS is slow, very slow. But for an additional \$399 you can buy a TRANSWARP GS card that'll speed up WORKS and other GS items to reasonable, runnable speed.

Can you slip into graphics with WORKS? Nope, but FWB's TI text can easily emigrate to PAGEPRO for all kinds of graphic/text manipulations (or PP can stand alone for similar structuring).

You must use PRINT SHOP separately to get some graphics; still, not with the page possibilities. For that you'd need the user-UNfriendly NEWSROOM. Add another \$400. Not counting the graphics. The kind that are Public Domain through TIPS for the TI. Say another \$500, easily. How much is that decidedly inferior word processor now? Still under \$3000? That's not bad as prices go in the computer world out there. Check Other computer prices.

Why would we TIers consider THAT an upgrade? We certainly wouldn't pay those prices for software for our superior machine; FWB donation \$20; PLUS! donation \$10; TIPS and 5,000 graphics are FREE; PAGEPRO is under \$25. Grand total for us TIers, maybe 50 bucks at the most.

Most TIers don't have RAM disks or RAVE keyboards or hard drives or the GENEVE upgrade that includes 640 RAM, truly astounding graphic capabilities, a superb keyboard and all other kinds of great stuff, including TI compatibility (as much as most clones have with IEM). And yet EACH of these things are less than a couple pieces of software for Other computers.

Most TIers don't (in all honesty) even pay for the fairware they use, so I can't see them spending \$50 to \$800 per piece of software after spending a couple thousand for another system, no matter how great the software is. Look at the magnificent under \$25 commercial software items for the TI: TI-BASE, PAGEPRO, TI ARTIST PLUS, for examples. Do most TIers who have disk drives own these three items? Not by a long shot!

Have most of the TIers who use Tony

McGovern's FUNNELWEB, Barry Boone's ARCHIVER, John Birdwell's DISK UTILITIES, or Canada's DM-1000 sent decent (or any) fairware contributions to the authors? Or contributions for the constant updates? Nope.

Do most Tiers subscribe to MICROpendium or ASGARD NEWS, the only two magazines we have devoted entirely to the TI? Nope.

Do most Tiers even belong to user groups? Nope. Not even by mail, though that is the best source of disk, tape, and text materials, not to mention the monthly newsletter connection, that money can buy (also under \$25).

Do most Tiers take advantage of the massive sources available across their phone through inexpensive modems? Nope.

My feeling is why, if Tiers are not even taking advantage of all the things that are available NOW and at a lot smaller cost, would they even want to move (up?) to more expensive machines?

It makes me think about a comment by Keith Jarrett, considered by many music critics to be the greatest pianist of this century. Because he plays jazz and classical and newage and a style of improv that is inimitable, he was asked why he didn't play the electronic keyboard. "I haven't learned everything about the acoustic piano yet," he said. If he hasn't learned everything about the acoustic piano yet, no one in the world has.

But I feel this way about my TI. When people ask me why I don't move up, I first give them my speech about moving to Apples or clones or whatever is not necessarily UP. Then I think of the real reason: I haven't finished learning everything I want to learn and doing everything I want to do with my 4A yet.

Even if everything relating to TI ceased instantly; nothing more being created; all user groups stopped; the complete TI end - even if... most of us would still be using and learning and enjoying our perfectly wonderful computer for a long time to come.

But such a scenario is not heading our way in the near future. There are too many of us who care and WANT to stay with this gem of a machine.

I think we all have a long way to go yet, and I am enjoying the journey.

TRANSFERRING SCOTT ADAMS ADVENTURES FROM CASSETTE TO DISK

BY CARL CHIARENZA
Pittsburgh User Group

When the word "cassette" is mentioned, a lot of moans and groans can be heard, by both cassette users and disk users alike, and many, for good reason.

As most of you know, the Scott Adams Adventure Series is available either on disk or cassette. Unfortunately, for those of you who purchased one of these games on cassette, and have upgraded to a disk system, you may have found out that it was next to impossible for you to transfer your Scott Adams adventures over from cassette to disk.

Fortunately, there is a solution to this problem, even if you don't own the Adventure Editor, which was distributed by Tex-Comp.

Believe it or not, you can accomplish this task in less than 10 minutes using the Tunnels of Doom module.

Just "load" the Scott Adams adventure game that you wish to transfer, like you would any regular TOD game, and as soon as it is finished loading, select the "save" option, and immediately save it out to disk. It's as simple as that!

The only drawback using this method is that any adventure module game which is larger than 52 sectors will not "load" into the TOD module, so you will be out of luck when this occurs. Also, you will notice a few odd characters when you go to play your converted games. Do not be alarmed, as this is normal. Your games will execute properly, without any errors, and having to accept a few strange characters on your screen will seem like a small price to pay in order to have your Scott Adams cassette-based adventures now available to you on disk.

If you have any questions, you may get in touch with me thru the Pittsburgh User Group BBS at 412-341-4820, R.N.1. 3/12/2400 Baud, 24 Hours a day, 7 Days a week. My user ID is #66.

The PUG would like to thank the following members who have recently renewed their memberships...Steve Rethage, Blaine Stone, and Dean King.

F-TIDBIT #10

ARRAYS IN FORTH

In Tidbit #9, I introduced the word 2D-ARRAY to illustrate the use of the <BUILDS..DOES> construct. It seems arrays have have kindled as much interest as the subject I was covering. So here I am, once again at the keyboard to continue what had been left unsaid about arrays.

The word to create a two-dimensional array was given as

```
: 2D-ARRAY ( #rows #columns --- )
  <BUILDS 2DUP (dup the parameters)
  ' (store them)
  * ALLOT (allot the space)
DOES> :
```

and I had indicated that it would create a byte array, i.e., each member of the array could only store values up to 255 (>FF). This limits its usefulness. It would be much better if it could accommodate 16-bit numbers (up to >FFFF).

I also gave another word (CELL) that simplified accessing the array and it was intended for use with byte arrays:

```
: CELL ( row# col# --- addr )
  DUP >R (dup address and save on the return stack)
  @ (fetch number of columns)
  ROT (bring row# to top of stack)
  * + (multiply #col by row# and add to col#)
  R> (retrieve address from return stack)
  4 + (address of first member)
  + : (add offset)
```

Instead of showing you how to change them let us define a new word which not only can create an array, but at the same time provides the convenience offered by CELL and is word (16-bit) oriented:

```
: ARRAY <BUILDS 2DUP (dup the parameters)
  ' (store them)
  * 2 * ALLOT (multiply them and allot space)
DOES> DUP (dup address)
  >R (save copy on return stack)
  @ (fetch number of columns)
  SWAP DUP ROT 1- > (check column parameter)
  IF ." Column out of range!" ABORT THEN
  SWAP R 2+ @ SWAP DUP ROT 1- > (check row)
  IF ." Row out of range!" ABORT THEN
  SWAP R @ (calculate offset)
  * + 2 * ( " " )
  R> (address from return stack)
  4 + + : (add offset)
```

Creating an array remains the same: number of rows, number of columns, ARRAY and a name. If we stick with the example from the previous Tidbit, we would still enter 4 26 ARRAY SCORES.

However, accessing a cell has been simplified. Instead of

```
75 0 2 SCORES CELL ! or 0 2 SCORES CELL @ . ( or ? )
```

to store or retrieve scores now you only need

```
75 0 2 SCORES ! or 0 2 SCORES @ . ( or ? )
```

And as you probably noticed, some error checking has been implemented also. It is rudimentary inasmuch as it only checks that high limits for rows and columns have not been exceeded (assuming it is unlikely that somebody would enter a negative value). But it will keep you from crashing your system if by chance you do make a mistake and send SCORES looking for an invalid address, i.e., beyond the boundaries of the array.

Before we go on, a reminder: ARRAY can create a byte array by removing 2 * just before ALLOT and in the DOES > portion just before R>.

Getting back to errors though, most of them happen when you forget that the first row of an array is row 0. Same applies to columns. We can reduce errors and simultaneously provide easier access to the array if we make full use of what Forth has to offer. Our sample array SCORES was intended to record the scores of four players over a period of 26 weeks, meaning row 0 for player number 1, row 1 for player 2, etc. An easy way to set a row number for each player is to use CONSTANTS:

```
0 CONSTANT TOM      1 CONSTANT DICK
2 CONSTANT HARRY    3 CONSTANT JOE
```

Now the first scores of the season can be recorded with:

```
150 TOM 0 SCORES !      189 DICK 0 SCORES !
 93 HARRY 0 SCORES !   134 JOE 0 SCORES !
```

A step in the right direction. But we still have to remember to use the column parameter at a value of one less than what comes naturally and typing SCORES ! (or SCORES @ or ?) is not very elegant. To take care of this lack of style we define a couple of words:

```
: SAVE      1- SCORES ! : ( n r c --- )
: GET       1- SCORES ? : ( r c --- )
```

Now we can use names and the real number of the week to save scores for any of the players. Tom's score of 299 during the second week of the whatever season (notice how he has improved in just one week's time!) will now be entered with just

```
299 TOM 2 SAVE
```

or could be retrieved with

```
TOM 2 GET          299 ok
```

with the same applying to Dick, Harry and Joe and any week of their 26-week season.

When you create an array you can not be sure that its space is allotted in a part of the memory that is "clean", i.e., all bytes are zeros. Make sure -DUMP has been booted, SCORES has been created and enter ' SCORES 212 DUMP'. In the first memory locations you should find 001A 0006, but after that you won't find many 0000s. In the interactive mode you can zero out the allotted space for SCORES with the FILL (address cnt byte --) command:

```
' SCORES    - put starting address on stack
4 +        - we don't want to wipe out the dimensions
4 26 * 2 * - calculate count (skip 2 * for byte array)
0 FILL     - execute (fill with zeros)
```

Now enter ' SCORES 212 DUMP again and see if everything has indeed been changed to zero except the locations containing the array's dimensions.

Any array - no matter how smart - which is used to store data is of no use if it can not be accessed again and again as is the case with our SCORES which we should be available for at least 26 weeks. The obvious solution is to keep our array on disk. Data from an array can be moved to a Forth screen (and back) with MOVE (or CMOVE if it is a byte array). Again, you can do it interactively:

```
' SCORES    - addr1
n BLOCK     - addr2 (n = screen number where to store)
4 26 *     - calculate n ( or b)
4 +        - add the dimension cells
MOVE       - move 'em (CMOVE if byte array)
UPDATE FLUSH - make it permanent
```

To retrieve the data from the screen and put it back into the array at a future date, you would first create the array (4 26 ARRAY SCORES), then reverse the order of the addresses and leave out UPDATE FLUSH:

```
n BLOCK ' SCORES 4 26 * 4 + MOVE (or CMOVE)
```

As neither the array's dimensions nor the number of the data screen change, words like ZEROSCORES, SAVESCORES, GETSCORES could be defined and do away with the typing required in the interactive mode. They could be placed on a screen along with ARRAY so they would be available whenever ARRAY is booted. It may sound like a good idea but is flawed: these words would be limited for use with only a specific array, i.e., SCORES. We have made ARRAY smart, why not define similar smart words for this purpose?

Let's define a word which can move data from a screen into an array with a minimum of effort on our part. All that will be required on our part is to furnish the appropriate number of the screen and the array's name:

```
: READ-ARRAY ( scr no. --- )
      BLOCK      ( addr1 )
      [COMPILE] ' ( addr2 )
      DUP DUP @  ( fetch number of rows )
```

```

SWAP 2+ @ ( fetch number of columns )
* 2 * 4 + ( calculate count )
MOVE ; ( execute )

```

It is used in the form n READ-ARRAY name. If we had stored our data for SCORES on screen 89, then 89 READ-ARRAY SCORES would read the data into the array. The same can be done for moving data from an array to a screen:

```

: SAVE-ARRAY ( scr no. --- )
  BLOCK ( this will be addr2 )
  [COMPILE] ( addr1 )
  DUP DUP @
  SWAP 2+ @
  * 2 * 4 +
  SWAP ROT ROT
  MOVE UPDATE FLUSH ;

```

As you can see, this word is pattered after READ-ARRAY and usage is the same: 89 SAVE-ARRAY SCORES reads the data from the array and saves it to the screen though we have to juggle the stack a bit with SWAP ROT ROT to get the addresses in the correct order.

Finally, the shortest and easiest one to round out the set:

```

: ZERO-ARRAY [COMPILE] DUP DUP >R
  @ SWAP 2+ @ * 2 *
  R> 4 + SWAP 0 FILL ;

```

Since no screen data is involved, usage is ZERO-ARRAY name (like ZERO-ARRAY SCORES).

This does not exhaust the subject of arrays. I will leave it up to you now to define a word to create arrays with more than two dimensions or to modify the above to save the screen number within the array also. These are just two additional wrinkles that come to mind as I am typing this. You may think of others. Now that you have the basic tools, why not try it?

EOF/LW

RISK VRS ANXIETY

One of the problems with our country is that we don't have the ability to distinguish between risk and anxiety, entirely different things. David Padwell, chairman of Hydrogenetics, stated it very well. He said, for instance, we know the Surgeon General tells us 150,000 people die every year from smoking cigarettes, but we're not afraid of cigarettes; 50,000 people die in automobiles, but we're not afraid of automobiles. What we're afraid of is sharks. And in reality -- he went on to say -- the Medical Statistical Board doesn't even keep a record -- they can tell you how many people die of bee stings every year, but not how many die of shark bites. The Navy guesses somewhere around two a year. But the fact is, if you went out on a beach and shouted -- Shark! Shark! -- everybody would rush out of the water and get in his car and light a cigarette.

SPEEDER READER
by Jim Peterson
Tigercub Software

PROGRAM REVIEW
by Sue Harper

Speeder Reader is a real challenge, folks. The idea is to test how fast you can read, AND still remember something of what you read! The user chooses the speed, from 100 milliseconds to 4000 milliseconds. You can change you speed at any time. The computer will display a nonsense sentence for the chosen amount of time, and then ask a question about the sentence that can be answered in one word. For instance, the question might be : how many elves were there? Answer: Two. Spelling is a problem, close does not count. For one question the answer was adventurer, I typed adventure and was wrong.

The program keeps score right and wrong guesses, and when you are wrong, it redisplay the sentence for verification, and this time it stays until you 'hit any key.'

I was able to do pretty good at 1000 milliseconds, my twelve year old daughter could handle 3000. As I said, spelling is an issue, but I enjoyed the program, and think it would be useful in reading comprehension.



MEETING MINUTES OF PITTSBURGH USERS GROUP

Date: March 18, 1990

Meeting called to order by Pres. Taylor at 6:15 P.M.

Minutes of the last meeting were read by Secretary Reich. Approval of them was moved, seconded passed.

Treasurer Shoemaker gave a Report. Balance on hand at the start of Feb., 1990 was given. After expenses for Feb., balance at end of Feb. was given. The Treas. also announced that PUG has purchased a quantity of high quality write-protect tabs which are available for purchase by our members.

News Editor Bucher gave her Report. She informed us Lynn Gardner got the newsletters into the mail for her. Everyone at the meeting received theirs in timely fashion.

Librarian Harper gave her Report. She informed us that there were 2 new discs in the library—Graphics Formatter Multiplan Information.

Our new Sysop, Gary Taylor reported that there is now a 3rd disc drive in the BB set-up. He is also thinking about recommending a larger ram disc for the BB.

Pres. Taylor gave his Report:

Gary passed several items out including information re Prodigy (a bulletin board similar to Compuserve).

Gary placed an ad for PUG in the Pgh Press newspaper.

The \$1.00 disc was an educational one including ET At Sea and a 2-col. columnizer.

There is a program available named Giffy which will convert GIF pictures to TI. It can be ordered at a group discount by the PUG. Gary took names for an order.

OLD BUSINESS:

Election of Officers was held. Pres. Taylor asked for nominations from the floor. Art Gardner was nominated for Treasurer. Frank Shoemaker declined a previous nomination for Treasurer.

All nominees previously nominated and Art Gardner were elected by acclamation. Officers are as follows:

Pres.—Don McCalla V.Pres.—Gene Kelly
Treas.—Art Gardner Rec. Secy.—Herb Reich
Cor.Secy.—Gary Taylor
Librarian—Susan Harper

There was no new business

The raffle prize, Page Pro, was won by Bill Herman

Gary Taylor demonstrated Missing Link and ET at Sea. Gary took orders for the Missing Link program which will be bought at a group discount.

Audrey Bucher demonstrated Artist Printshop.

Meeting adjourned at 8:20 PM.

Respectfully Submitted, H. Reich Rec Sec.

ATTENTION ALL TI USER GROUPS AND CASSETTE USERS

The popular series, "Getting The Most From Your Cassette System," written by Mickey Schmitt for the TI cassette-based user, is now available directly from the author in an all-new format.

What is this all-new format?

This all-new format is a 52-page, professionally typeset, loose-leaf booklet (without the holes), containing all of the original articles which first appeared in the West Penn 99'ers newsletters (though all have since been updated, corrected, and improved). In addition, new material that surfaced since the release of the original series has been added, making this booklet as complete as possible for the TI cassette-based user.

Why the loose-leaf pages (without the holes)?

This particular format was chosen specifically so that user groups who purchase a copy of this booklet, directly from the author, could use their copy as a "master copy," making additional copies as needed for their own club's membership. Thus, a user group need only purchase one copy of the cassette booklet, the author will benefit by the sale to the user group, and the user group's members will all be able to benefit by their club's purchase.

What more can be said about this new cassette booklet?

This cassette booklet provides an excellent opportunity for all user groups to provide a source of help to those club members who are still using a cassette-based system, as well as providing a source of help to those who are just joining a user group. The future existence of all TI user groups is dependent upon meeting the needs of the membership. This booklet is intended to fulfill one of those such needs.

To order your copy directly from the author, please send \$9.95 plus \$2.50 shipping and handling in the USA, or \$9.95 plus \$4.00 shipping and handling outside the USA (in US Funds) to:

Mickey Schmitt
196 Broadway Avenue
Lower Burrell, Pa 15068

Please Note: This copying agreement is not offered to any commercial company, nor are user groups given permission to distribute copies of this booklet outside their own membership.

THE PUG MEETS
ON THE 3RD SUNDAY OF THE MONTH
AT COMMUNITY COLLEGE OF ALLEGHENY COUNTY
OFF ROUTE 885 NEAR CENTURY III MALL

APR 1990	
S M T W T F S	
1	
8	
15	MEETING
22	
29	

CLASSES BEGIN AT 3 PM
GENERAL MEETING BEGINS PROMPTLY AT 6PM

MAY 1990	
S M T W T F S	
6	
13	
20	MEETING
27	

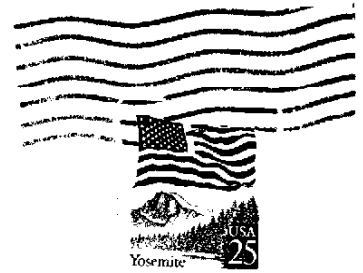
PUG OFFICERS		
Pres:	Don McCalla	412-488-7677
V Pres:	Gene Kelly	412-829-0469
Treas:	Art Gardner	412-835-4304
Rec Sec:	Herb Reich	412-531-9023
Librarian:	Susan Harper	412-464-0525
Mem Chair:		
Cor. Sec.:	Gary Taylor	412-341-6874
NL Editor:	Audrey Bucher	412-881-5244

SCHEDULE	
3-4:30	Questions, Problems and Answers.....Rm. 482
4:30-6	Magic Tricks with Gary.....Rm. 482
6:00-?	General Meeting

DUES \$15/YR



PITTSBURGH USER'S GROUP
P.O. Box 8043
Pittsburgh, PA 15216



President's Page.....	1
New-Age 99 #2 by J. Sughrue....	2
Transferring Scott Adams Adventures from Cassette to Disk.....	3
Forth Tidbit #10.....	4
Risk vs Anxiety.....	7
Speeder Reader..A Review.....	8
Minutes.....	8
Attention TI Users Groups and Cassette Users.....	9

DALLAS TI HC UG

BOX 29863
DALLAS, TX. 75229

DATED MATERIAL
Please Deliver by
APR 12th



PUG BBS
412-341-4820
300/1200/2400 BAUD
24 HOURS