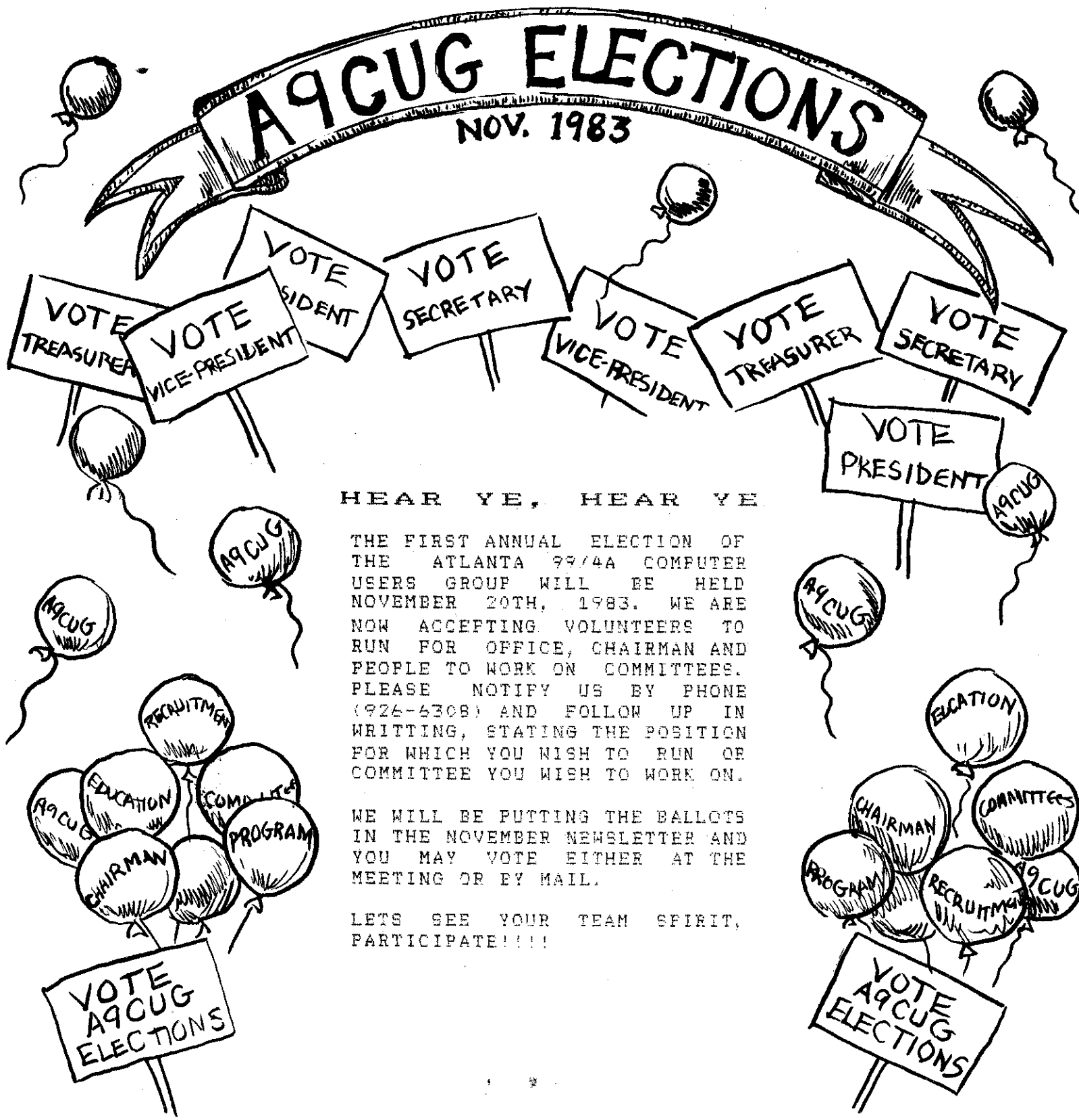
Atlanta 99/4A Computer Users Group

CALL NEWSLETTER

VOLUME I NUMBER 8 SEPTEMBER, 1983 Atlanta, Georgia



HEAR YE, HEAR YE

THE FIRST ANNUAL ELECTION OF THE ATLANTA 99/4A COMPUTER USERS GROUP WILL BE HELD NOVEMBER 20TH, 1983. WE ARE NOW ACCEPTING VOLUNTEERS TO RUN FOR OFFICE, CHAIRMAN AND PEOPLE TO WORK ON COMMITTEES. PLEASE NOTIFY US BY PHONE (926-6308) AND FOLLOW UP IN WRITTING, STATING THE POSITION FOR WHICH YOU WISH TO RUN OR COMMITTEE YOU WISH TO WORK ON.

WE WILL BE PUTTING THE BALLOTS IN THE NOVEMBER NEWSLETTER AND YOU MAY VOTE EITHER AT THE MEETING OR BY MAIL.

LETS SEE YOUR TEAM SPIRIT, PARTICIPATE!!!!

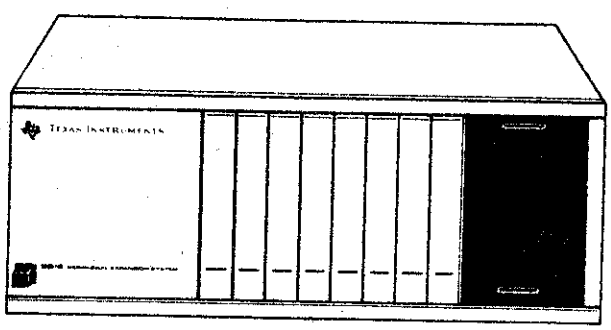
PRICE CUTS

In an effort to stay competitive and to remain in the home computer ball game, TI just announced a number of drastic price reductions on peripherals for the 99/4A. They are as follows:

ITEM	WAS	NOW
RS232 Card	175.	100.
Disk Controller Card	250.	150.
Memory Expansion Card	300.	150.
PE Box Disk Drive	400.	250.
P-Code Card	250.	100.
Telephone Modem	200.	100.
TI Impact Printer	750.	500.

In addition to these price reductions, TI has also announced the introduction of a peripheral package, the PHP 4000. This package consists of the PE Box, Disk Controller Card, PE Box Disk Drive, and the Memory Expansion Card. The price of this package, are you ready for this? is at a suggested retail of $550. At the beginning of this year all these peripherals would have cost a total of $1200. This is certainly a significant drop and one that has long been needed.

For those of you that have been waiting to buy, now is the time. It is doubtfull that you will see the prices drop anymore on the peripherals. For those of us that bought before the price drop and sold our souls to complete the system... such is life.



SOFTWARE REVIEW

COORDINATE GEOMETRY PROGRAM

Frank McGahren Technical Services
4 Brae Burn Drive
Arden, North Carolina 28704

Cassette Tape: $35.00

This is a program which I discovered from an advertisement in a surveying magazine Point of Beginning. Basically a coordinate geometry program solves geometry problems which are encountered in surveying and engineering, such as intersecting lines with lines or lines with circular arcs.

As an engineer, I was looking for a computer program that would speed-up our routine type of calculations. For example, suppose we are designing a new sub-division, some of the streets are naturally straight, and some have curves. These streets have property markers referenced to them. Without getting overly technical, this program will do the calculations necessary to "mathematize" the alignment of the streets, and set property corners.

The program has a twenty (20) item menu which includes items such as "line/line/interception", "arc/arc/interception", and "save/coordinates". The user, with programming knowledge could costomize the menu and sub-routines to satisfy his specialized needs.

The program is well written. There is one sheet of instructions that accompanies the program, which is adequate for someone familiar with coodinate geometry. The program is written in BASIC and runs on the basic console. There is not an option for using a printer, however the user could modify the program for this purpose if desired.

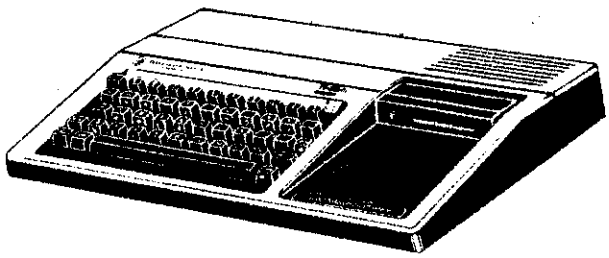
Ron Spencer
Gunter Hirschler

CAVERN QUEST

Moonbeam Software
2 Bridge St.
Northampton, MA 01060

Extended BASIC

$19.95 Cassette or Diskette



TEXAS INSTRUMENTS

Being one who is not easily impressed by arcade type games, it was with skepticism that I loaded Cavern Quest into my TI99/4A. The first thing which I saw was a screen full of colorful graphics shaped in the form of a multi-level cave. The message "press B to begin" in the middle of the screen was more temptation than I could handle, so I pressed B. That's when the action began.

A man appeared at the bottom right of the screen and my mission (if I choose to accept it) was to move this man via the joystick to the left in order to get to the door to the next chamber. Sounds easy right? Wrong! While I was trying to get my man to the chamber door I had to evade all sorts of creatures by jumping over them. Once I had escaped from the creatures and made it through the top (elevation 4) cavern, I reached the door to the treasure vault, or so I thought.

When the next screen appeared I was in a cavern with a bottomless pit. A conveyer (grape vine?) was moving above and my mission was to jump up and grab the conveyer which would transport my man to the other side of the pit. There was only one catch. A killer spider was on the prowl and my man was his next meal. I decided that I had better hurry. As I was being transported to the other side of the pit, the only thing I could think of was what could be lurking for me on the other side?

My curiosity was quickly satisified as a new screen appeared and I was finally in the treasure vault. Aha, grab the treasure and quickly escape collecting the bonus points. You guessed it, not as easy a task as it first appears. Three ghouls were guarding the treasure. I had to kill them with my arrows before I could collect the treasure. Three ghouls killed, the treasure secured. At last success I thought, but my sucess was soon to give way to greater challanges.

Whether one is successful in collecting the treasure or not, the man is placed at the bottom of the caverns and he must traverse the caverns, and cross the bottomless pit in order to get another chance to collect the treasure. Cavern Quest successively gets more difficult with each new cavern (there are twenty different caverns although I have only made it through nine of the caverns) by adding man eating crabs to impede progress through the caverns. The spider in the bottomless pit also moves faster.

Several hours had passed by without notice while I was introducing myself to Cavern Quest. This game is very engrossing and the response to the joystick inputs are excellent. Cavern Quest is a must for serious gamers. In my book this one is a 10!

Bob Willis

COMPUTER EVOLUTION

A look at the evolution of computers can help us understand computers and how they are used. This history is a study of man's attempt to better handle information.

It began in England in the 1800's with Charles Babbage. He tried to develop a machine to work with mathematical equations. While his machines never worked properly, his ideas provided the basis for later developments. About the same time in France, Joseph Jacquard made a device for controlling weaving looms with hole punched cards.

So as early as the 1800's we had the beginnings of the computer. By 1880 the United States census took seven and one half years to complete. A contest was held to find a faster way. Herman Hollerita invented the tabulating machine to do the job. As a result the 1890 census was tabulated in only six weeks. Hollerita went on to found a company that later became IBM.

World War II gave tremendous impetus to the development of computers. Several different efforts were going on at the same time. In England a machine to break the German codes was developed, and at the Ohio State University the first digital computer was built.

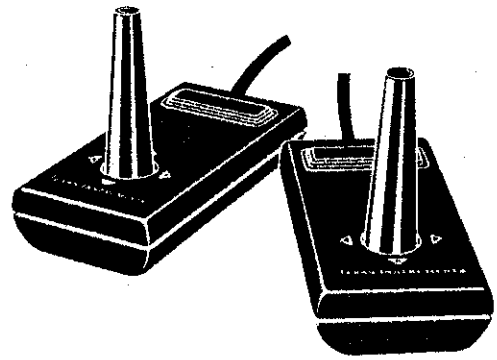
All this led to ENIAC, the first vacuum tube computer. ENIAC stood for Electronic Numerical Integrater And Calculater. It contained 18,000 vacuum tubes and had to able to calculate artillery trajectories in less than fifthteen minutes. The biggest problem with ENAIC was that the programming was hard wired. The only way to change the program was to rewire the machine.

The next step was to make the computer programmable. This was done at the University of Pennsylvania with a machine called EDVAC. This machine marked the beginning of computers as we know them today.

In the next issue we will discuss the rapid development of computers from the 1950's until the present.

Don Stewart

Wired Remote Controllers



JOYSTICK REPLACEMENT PARTS

Any avid video game player knows that in the midst of a heated battle the adrenalin can flow at such a rate as to cause excessive wear if not damage to even the best of joysticks. This can sometimes mean a cracked case, or perhaps a joystick handle severed from its controler and left dangling in the player's hand. For those who have encountered this problem when using the TI joysticks, there is good news.

TI will gladly send you any joystick replacement part you need simply by writing them and stating the part number desired. You will be sent the part along with a bill for that item plus the cost of the postage. The cost may vary depending on the part ordered, however one may be assured the price will be minimal compared to the expense of purchasing new joysticks.

To order replacement parts write:

Texas Instruments Parts Depot
Post Office Box 53
Lubbock, Texas 79408

INTERNATIONAL USERS-GROUP

The International Users Group in Oklahoma has the largest collection of user written and translated TI programs in the country. Those programs have, through channels of public domain such as the "SOURCE", found their way into rival national users groups and local clubs all across the nation. They now make up the bulk of many users groups' librarys.

Lest we forget to give proper credit where it is due, the International Users Group was the first to give us hungry users any chance to find variety and quantity. Their programs have come a long way since those early days of three years ago. Many of their programs are still simple in nature, but their growth has enabled them to weed out those earlier entries at a time when they accepted anything just to increase the library listing.

Since all programs cost only three dollars (or you can donate one and receive three in exchange) the average consumer can afford to buy a number at a time.

INTEREST RECEIVED-PROJECTION is a good example of a basic usable program. It will allow you to enter the amount to be invested, the interest rate for any number of years, and allow you to input how it will be compounded (daily, quarterly, etc.). The amount accumulated will be printed after each compounding period if desired.

This program from the I.U.G. is listed as #5436, and like all their programs is unprotected so you can learn from it and tinker with it.

Membership to the International Users group includes access to their library of user written software, a by-monthly newsletter, and on alternate months a magazine called Enthusiast '99. Annual cost to join is $12. and membership may be obtained by sending such to: International 99/4 Users-Group, P.O. Box 67, Bethany, OK 73008.

Gary Matthews

WEIGHT CONTROL AND NUTRITION

How to Parallel Print

In developing some of the older modules designed for the 99/4 and the stand alone peripherals, TI was apparently somewhat near sighted and failed to allow for the future possibility of the user wanting to use the parallel port on the newer expansion box card with which to print. This author, being the owner of a parallel printer, has found it to be a very frustrating experience to purchase a command module and to discover that it can print only to the deceased TI thermal printer, or via the RS232 port.

In more recent months Texas Instruments has begun placing red stickers on the outside of their software packages indicating that certain cartridges will not permit the use of a parallel printer (buyer beware). One such package is Weight Control and Nutrition. Although Texas claims that this module can not access the parallel port, it can in fact be done.

To parallel print with the Weight Control and Nutrition module, try the following steps. When asked at the beginnig of the program "WILL YOU BE USING A PRINTER? Y/N", answer "N". Later in the program you have on one of the menus the option to print records. Upon making this selection you are asked to enter the device name; this time enter "PIO". After this you will be given the choice of printing either PERSONAL INFORMATION or MENUS. On your entry you should hear your printer start ticking away.

Tom Boisseau

PROGRAMMING TIPS

Many times I enter a line and later realize I keyed in a wrong letter or number. Can I correct this without retyping the entire line?

YES-To edit a line do the following:

1. Type the line number.
2. Press the function key and up arrow or down arrow.
3. The line selected will appear. make corrections.
4. Press enter. It does not make any difference where the cursor is in the line.

Many times I get a line typed and notice I omitted a letter or number. Can I insert it rather than retyping the whole line?

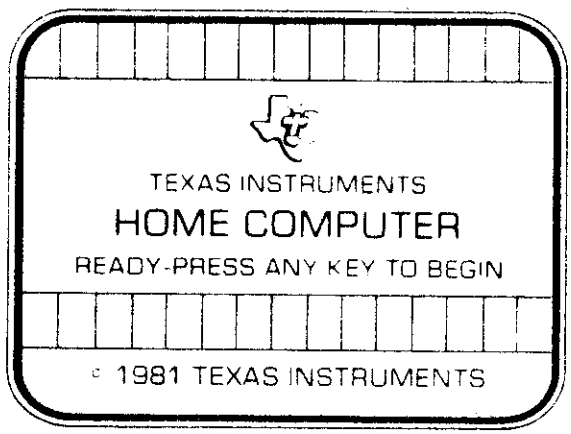
YES-To insert an entry do the following:

1. Move the cursor over the letter or space where you wish to insert something.
2. Press the function Key and the insert key (the #2 key).
3. Type in the desired entry. The existing data will move to make room for the new information as you type it in.
4. Press enter. Position of cursor cursor when you press enter is not important.

If you are a new programmer, here are some things to remember:

1. Number your lines in increments of 10, 20, 30, etc.
2. Make use of subroutines. They decomplicate your program. More importantly they make it run faster.
3. The 99/4A automatically sets up 8 slots for an array. If you are going to need more you must specify in your program.
4. Start out with the backbone of your program. Debug the simplest version and save it, then start adding features.
5. Graphics and sound make a program attractive. Once you have the basic program written, work on dressing it up. It is like icing on the cake. Change it if you come up with something better. Use subroutines for this.
6. Leave the randomize statements out initially. This allows you to debug using the same variables each time. Once you are satisfied then add in the randomize.
7. Test your program as you go. Add a segment, then test it before going on to the next segment. Always be sure the basic program works first. Test under all conditions.
8. Keep a tape of subroutines. You can use them on new programs. Link together and load before starting on your new program. Special graphics, sound effects, and other subroutines you may use over and over in new programs.
9. Build your computer software vocabulary. Try every command and capability of the computer. Experiment to see what you can make your 99/4A do.

From the "TREBOR-Kentuckiana 99/4 Computer Society Newsletter" as reprinted by the "99/4 Tidewater Newsletter", volume II, number 3.



GO WITH THE FLOW

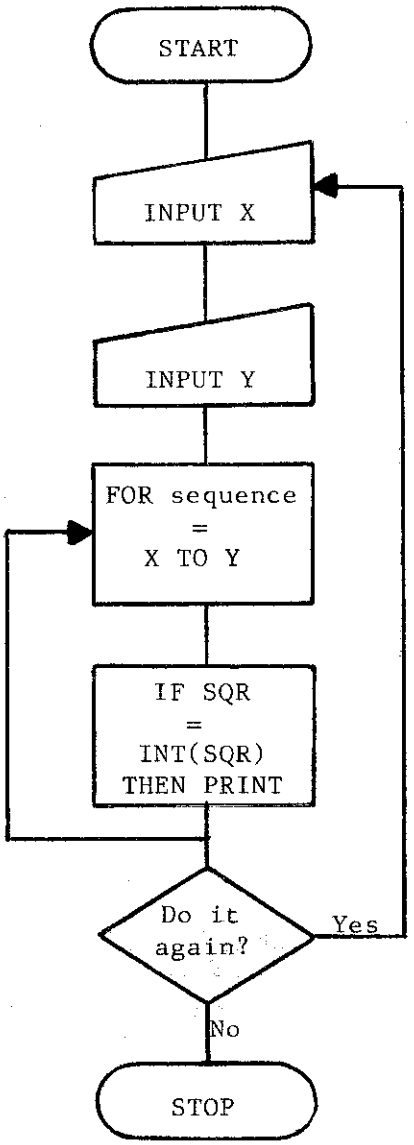
In real life we do not sit down at the keyboard and write a program straight into the computer. Only the foolish or overenthusiastic would attempt such a thing. Instead we outline in some way what the program is supposed to accomplish, and continue on from there.

Flowcharting is one of the accepted and professional methods of outlining the structure of a program. It clarifies the logic that you have in mind as you proceed from the idea of what the program is supposed to do, to the finished product in proper BASIC, or another language. Flowcharting makes program writing easier, more coherent, and therefore more likely to work right after it has been converted into proper code.

Now let us make a flow chart for a program that will print out all the numbers whose square root is a whole number. The program will do this between any two whole numbers that we choose and upon completion ask us if we want to do any others.

You could probably look at that flow chart and write a program in BASIC that would work the first time. In actuality very few people think in terms of flow charts with boxes and lines showing the possible paths. Most people think in terms of sentences or phrases. Using this for program outlining is an acceptable alternative to flow charting. It is called pseudocode.

Remember that earlier paragraph that began with..."Now let us...." I used that paragraph to say what I wanted my program to do. With a little change it can completely replace my flow chart as a means to develop an outline of a projected program. Here is the pseudocode example.



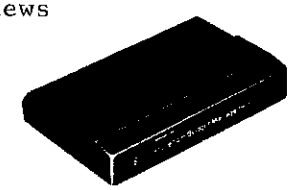
INPUT two whole numbers X and Y
FOR a sequence of numbers starting at X and continuing till Y
Check to see IF the SQR of each number in the sequence is an INTeger; THEN print the number and the SQR of the number.
INPUT whether to start again or not with new numbers. IF the answer is yes go back to where the numbers were first input.
STOP

The form for psuedocode is to use English sentences incorporating the BASIC code as it lends itself to the language flow. This gives you a head start on the actual coding of your program with the logic to be used laid out in front of you.

The point to all of this is the more you have your program logically laid out first from beginning to end, the easier it will be to write it in BASIC with fewer errors and changes before it really runs.

You are in front of your own computer writing programs. No one is looking over your shoulder saying "That's not the proper way to do it." You are going to write your programs the way you want to, whether you outline it first or put it in BASIC straight from your head. I will say from personal experience, the more the program is outlined on paper first, the faster I can get it to to run the way it should.

Gary Matthews



****
****

**** C L U B O F F I C E R S ****

****
****

Marshall Gordon	President
Gary Matthews	Vice-President
Elise Gordon	Secretary/Treasurer
We STILL NEED one!	Program Chairman
Tom Boisseau	Newsletter Chairman
Mike Studwell	Education Chairman
David Brunton	Library Chairman
We need one	Recruitment Chairman

****
****

T.I.B.B.S.

A TI-99/4A Bullitin Board System is now up and running in Atlanta. This BBS is to our knowledge the first system of any complexity the runs totally on the 99/4A, and is devoted to that particular machine.

T.I.B.B.S. while still somewhat in the test stages, is fully operatable and permits such functions as leaving messages, scanning messages, reading messages, and message count. Other features include a listing of other T.I.B.B.S. systems, and a listing of other local BBS systems.

The equipment behind this BBS consists of a TI-99/4A console, PE Box, Memory Expansion Card, RS232 Card, Disk Drive Controller Card, two double sided disk drives, and a Hayes Smartmodem 300. The software behind this system was written by its SYSOP, Ralph Fowler. It is written primarily in Extended BASIC with a few machine language subroutines.

Ralph is to be commended for all his efforts in the development of this software, which has now been nearly ten months in the making! He is still continually improving and polishing the program to facilitate additional features and to run with greater efficiency. We are glad that someone finally succeeded in the writing of such a program, and look forward to the time when it becomes availiable to the public so that other systems of this sort will be running throughout the country.

If you haven't yet done so, give the system a call. It is the ideal place to ask questions, sell software or peripherals, or learn of new developments regarding the 99/4A. The number for T.I.B.B.S. is (404) 425-5254. Give it a try; it will make you proud to be a 99'er.

Tom Boisseau

SYSTEM FLOWCHART SYMBOLS

PROCESSING

A major processing function.

INPUT/ OUTPUT

Any type of medium or data.

KEYBOARD

Manual entry

TRANSMITTAL TAPE

A proof or adding machine tape or similar batch-control information.

DOCUMENT

Paper documents and reports of all varieties.

DISK, DRUM/ RANDOM ACCESS

On line storage.

MAGNETIC TAPE

DISPLAY

Information displayed by plotters or video devices.

OFFLINE STORAGE

Offline storage of either paper, cards, magnetic or perforated tape.

SORTING, COLLATING

An operation on sorting or collating equipment.

MANUAL OR CLERICAL OPERATION

A manual offline operation not requiring mechanical aid.

AUXILIARY OPERATION

A machine operation supplementing the main processing function.

PUNCHED CARD

COMMUNICATION LINK

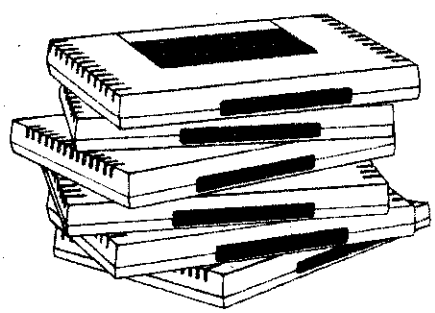
The automatic transmission of information from one location to another via communication lines.

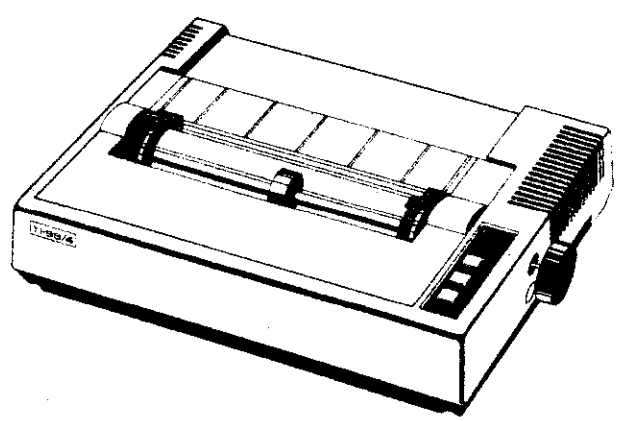
PROGRAM FLOWCHART SYMBOLS

SYMBOL	REPRESENTS
	PROCESSING A group of program instructions which perform a processing function of the program.
	INPUT/OUTPUT Any function of an input/output device (making information available for processing, recording processing information, tape positioning, etc.)
	DECISION The decision function used at document points in the program where a branch to alternate paths is possible based upon variable conditions.
	PREDEFINED PROCESS OR PREPARATION A group of operations not detailed in the particular set of flowcharts.
	TERMINAL The beginning, end, or a point of interruption in a program.
	CONNECTOR An entry from, or an exit to, another part of the program flowchart.
	OFFPAGE CONNECTOR A connector used instead of the connector symbol to designate entry to or exit from a page.
◁ ▷ ▽ △	**FLOW DIRECTION** The direction of processing or data flow.

SUPPLEMENTARY SYMBOL FOR SYSTEM AND PROGRAM FLOWCHARTS

	ANNOTATION The addition of descriptive comments or explanatory notes as clarification.
FLOW ◁ ▷ ▽ △	The direction of processing or data flow.





*** BOOKS *** BOOKS *** BOOKS ***

by Marshall Gordon

At long last books specially written for the TI 99/4A are showing up on the shelves of the bookstores. In the beginning it seemed that there were only four books available. There were more, but TI who wrote most of the early books seemed to take a delight in finding ways to hide them from 99/4A owners (i.e. several are sold by Radio Shack).

The following list is set up by my catalog methods, and includes all of the books I am aware of. If you know of any other books please let me know so that I can include them in the next newsletter. Even if the book is not written specifically for the 99/4A but is easy to translate or is usefull in some way, let others know about it.

Most of the following books are available from local bookstores, a few you can get individual help from, even ask questions. Try Oxford Books on Peachtree Road, or Computer Mart on Buford Highway. Most of the malls have good bookstores, just don't expect individual help. Try B. Dalton; they have the best selection of the mall stores. Another source is by mail; several of the books are only available from their author. Try TENEX of South Bend, Indiana. They have many of the books and they have competitive prices.

FIRST BOOKS

BEGINNER'S BASIC
Inman,Zamora,Albrecht
Pub. Texas Instruments
PHA 2602 $9.95

This book comes with the computer and is your first guide to basic -- very limited but also a very good beginning.

USER'S REFERENCE GUIDE
Pub. Texas Instruments
PHA 2603 $9.95

This book also comes with the computer, and is your friend and guide for life. I recommend that you review this book every month or so. As you learn more about programming this book will become clearer and things that you didn't understand will become clear.

LEARNING BASIC

INTRODUCTION TO TI BASIC
Inman, Zamora, Albrecht
Pub. Hayden #5185-9
$11.95

The first book out on TI basic. The authors of Beginner's Basic published an expanded and much more complete book on the subject. Although somewhat out dated, it was written for the 99/4, it's still one of the better basic primers.

PROGRAMMING BASIC WITH THE TI HOME COMPUTER
Peckham, Herbert D.
Pub. McGraw-Hill
LCB-4190 $9.95

This book, the first third party one, is also a very good business basic text. The copy I have has a few flaws in it, mostly in chapter 8 and related to 'OPTION BASE'. These are easy to overcome and the book explains DIM, taping, and retreiving data, arrays, and DEF.

KIDS AND THE TI 99/4A
Carlson, Edward
Pub. Datamost
$19.95

One of the better basic primers, and as the cover says, NOT JUST FOR KIDS. Going through this book will give a thorough grounding in basic.

USING AND PROGRAMMING THE TI-99/4A
Holtz, Frederick
Pub. Tab Books
Tab 1620 $9.95

A first book about the TI; it covers why to buy the 99/4A and what peripherals are available. It covers some basic and several programs that you can enter and learn from. A basic primer, not an advanced book.

BASIC PROGRAMMING FOR ADULTS
Pub. Texas Instruments
PHA 2617 $6.95

I have not seen this one. Can anyone out there help with a review?

PROGRAMMING DISCOVERY IN BASIC FOR STUDENTS
Pub. Texas Instruments
PHA 2618 $6.95

I have not seen this one. Can anyone out there help with a review?

CREATIVE PROGRAMMING COMPUTER COMPETANCY SERIES
Pub. Creative Programming Inc
$9.95 apiece

A four volume series, Volume I, Volume II, Volume III, and All Star Projects. Very good books, but very expensive since you must buy all four to complete the learning.

LOGO

MINDSTORMS: CHILDREN, COMPUTERS AND POWERFUL IDEAS
Papert, Seymour
Pub. Basic Books, Inc.
$12.95

From the father of LOGO the definitive work on the subject. He explains his philosophy of the child programing the computer, instead of the computer programming the child.

LOGO CURRICULUM GUIDE
Pub. Texas Instruments
PHA 2611 $49.95

Another one I've not seen. How about some help from out there?

PROGRAMMING DISCOVERY IN LOGO
Pub.Texas Instruments
PHA 2615 $6.95

Another one I've not seen. How about some help from out there?

ADVANCED BASIC AND EXTENDED BASIC

PROGRAMMER'S REFERENCE GUIDE TO THE TI-99/4A
Regena, C.
Pub. Compute! Publications
$14.95

One of the best, good programs to enter, and they're completely explained so that you learn while typing. Not a primer, have some basic under your belt when you get into this one. You will need to know the TI commands but you will learn fast from this book.

SMART PROGRAMMING GUIDE FOR SPRITES
Miller, Craig G.
Pub. Millers Graphics
1475 W.Cypress Ave.
San Dimas, Ca. 91773
$5.95

This is the best yet, destined to be a classic. Even if your not ready for it make sure that you have a copy. Although it's primarly written for games, it covers a lot of territory, and will be appreciated by everyone writing programs. Even business programs will be hepled.

BOOKS OF PROGRAMS

PROGRAMS FOR THE TI HOME COMPUTER
Davis, Steve
Pub. Steve Davis
$14.95

Excellent book of programs, from very basic to very advanced. There is something in this book for everyone and enough to make it worth while. The book contains the work of six programmers, so you will see several styles and various methods of problem solving.

HOME ENERGY APPLICATIONS
Pitts, David E.
Pub. Compute! Publications
$14.95

Just what it says it is. Contains programs for the OSI,Atari,Apple,CoCo,Pet,64,CBM,andTI. Good book, limited to a specific problem, but it could help with those electric bills.

TI-99/4A GAME PROGRAMS
Holtz, Frederick
Pub. Tab Books
Tab 1630 $10.95

A learn while entering book. Good learning while doing book.

101 PROGRAMMING TIPS & TRICKS
Turner, Len
Pub. ARCsoft Publishers
$8.95

Short programs, many of which can be used in larger programs you can write. Average size is around 12 lines. Beginners book.

36 TEXAS INSTRUMENTS TI-99/4A PROGRAMS
Turner, Len
Pub. ARCsoft Publishers
$8.95

These programs are longer then the 101 book, but not much better. A few are good, some others are interesting. Beginners book.

ASSEMBLY LANGUAGE SYSTEM BOOKS

EDITOR/ASSEMBLER
Pub. Texas Instruments
$14.95

The one and only, if you want to program in assembly language you must have this book.

TMS 9900 FAMILY SOFTWARE DEVELOPMENT HANDBOOK
Pub. Texas Instruments
MPA 29 $8.30

Covers Power Basic, Pascal, and Assembler on the 9900 chip. Used by TI to help its new programmers learn the languages.

FUNDAMENTALS OF COMPUTER DESIGN LEARN BY DOING
Pub. Texas Instruments
$15.00

Text book used to teach the the concepts of microcomputers. Provides hardware and software study.

MICROPROCESSORS,MICROCOMPUTERS AND SYSTEM DESIGN
Pub. Texas Instruments
$26.95

A complete guide to the TI 9900 family. This book is excellent for application, design, and programming.

The above three books are available through: Texas Instruments, P.O. Box 3640, MS 84M, Dallas, Tx. 75285. Only prepaid orders will be accepted. Add $2.00 for shipping and handling.

UNDERSTANDING MICROPROCESSORS
Cannon, and Luecke
Pub. TI Learning Center
$2.95

Basic explanation of digital systems, and microprocessors. One chapter on the 9900 chip. For the newcomer explains what they are, what they do, and how they work.

16-BIT MICROPROCESSOR HANDBOOK HANDBOOK
Pub. Osbourne

One chapter on the TMS 9900 chip. Nothing on the 99/4A. Technical--Very.

HOW TO BUILD YOUR OWN WORKING 16 BIT MICOCOMPUTER
Tracton, Ken
Pub. Tab Books
Tab 1099 $4.95

One chapter on the TMS 9900 chip. Also very technical.

COMPUTER AWARENESS

COMPUTER AWARNESS-ADULTS
Pub. Texas Instruments
PHA 2613 $6.95

Another one I've not seen.

COMPUTER AWARNESS-CHILDREN
Pub. Texas Instruments
PHA 2614 $6.95

Another one I've not seen.

UNDERSTANDING COMPUTER SCIENCE
Walker, R.S.
Pub. TI Learning Center
$6.95

How people use computers to solve problems. Covers fundamentals of hardware, software, and applications including program design, languages, and data structures. Written for the layman, in easy-to-understand english.

SPECIAL APPLICATIONS

TI-99/4A CONSOLE AND PERIPHERAL EXPANSION SYSTEM TECHNICAL DATA
Pub. Texas Instruments
PHA 2616 $14.95

Exactly what it says it is, includes system schematic diagrams, technical data, and more. It also assumes that you have a working knowledge of electronics and computers.

TERMINAL EMULATOR PROTOCOL MANUAL
Pub. Texas Instruments

How to get more from your modem communication Very good, but somewhat technical. Hints at how to do many communication transfers.

TI-99/4A SOFTWARE DIRECTORY
Pub. Texas Instruments
$5.95

A comprehensive listing of all software currently available for the TI-99/4A home computer. Includes all diskette, cassette, and solid state cartridges from both TI and third party software authors.

HOME COMPUTER DIRECTORY FOR THE TI-99/4A COMPUTER
Guenette, Richard
Pub. Micronova
$5.95

A listing of 99/4A equipment, and software both TI and third party, who to call at TI. Databases, usergroups, etc,etc,etc a lot covered very well, but needs updating periodically.

UNDERSTANDING DIGITAL ELECTRONICS
McWhorter, G.
Pub. TI Learning Center
$6.95

A laymans guide to digital electronics, what it means and where it is. And what it'll mean to you.

TROUBLESHOOTING & REPAIRING PERSONAL COMPUTERS
Margolis, Art
Pub. Tab Books, Inc
Tab 1539 $19.95

A hands on guide to repairing your computer. There's even a chapter on how to get into the darn thing, without damaging it. I'm no technician, but it looks like a good book.

THE POWER OF: MULTIPLAN
Williams, Robert E.
Pub.Spectrum Books
MP001 $14.95

Not written for the 99/4A, but written for Multiplan. It covers all of the functions of Multiplan in a workbook setting allowing you to set up programs as you go. If you have questions about Multiplan you need this book

A9CUG B.B.S.

The Atlanta 99/4A Computer Users Group is in the process of putting together its own bulletin board system. The system will hopefully be up in just a little more than a month from now and will be availiable to all.

The system will initially be only on a part time trail basis, and will run on Marshall and Elise Gordon's personal TI-99/4A computer and peripherals. If response proves favorable, the BBS will be set as a permanent and 24 hour system. In order for this to happen though, a complete TI system will need to be appropriated for such a dedicated use.

We are therefore asking that those who feel they might benefit from such a system, consider making a donation towards this cause. Whether the contribution be in the form of cash or hardware, it does not matter; the fact is that a full blown system will be necessary to run a BBS.

We are in need of a 99/4A console, a Memory Expansion stand alone box or card, a Disk Drive Controller stand alone box or card, at least one stand alone or PE Box Disk Drive, an RS232 stand alone box or card, an Extended BASIC command module and a Hays Smartmodem 300.

The Gordons have already contributed a Peripheral Expansion Box, and we hope others who might plan to use this BBS will follow suit. Although we have not yet received status as a non-profit organization, we expect this to be forthcoming, which would mean that any donations you might make would be tax deductable.

DID YOU EVER WANT TO?????

When writing onto the screen be able to see the letters as small letters instead of little capitals? Well add this program to the end of your program and it'll provide little letters.

```
80 PRINT " abcdefghijklmnopqrstuvwxyz "
90 GOSUB 10100
10010  REM Real Lower Case Letters
10020  REM Character Definition
10030 DATA 00038484834,40407048483,
          000038404038,080838484834,
          0018243C2018,18282038202,
          0038484838083
10040 DATA 202038242424,100030101038,
          1000301010502,404050605048,
          301010101038,00006C545454,
          000078484848
10050 DATA 00003048483,0070584870404,
          00384848380808,00002830202,
          00182038083,101038101018,
          000048484834
10060 DATA 00002424281,000044545428,
          000028102828,0000484830102,
          000038102038
10100 RESTORE 10030
10110 FOR Z=97 TO 122
10120 READ Z$
10130 CALL CHAR(Z,"00"&Z$)
10140 NEXT Z
10150 RETURN
```

If you have something that you would like to see the TI do and you don't know how to do it, write in and lets see if we can get you an answer. If you have solved a problem that others could use, write it up and let us print it for others to use; you'll get the credit for it. Until next month.

Marshall Gordon

COMPUTER SUPPLIES

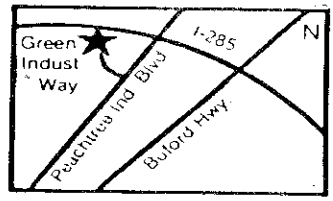
* DISKETTES
* DISC PACKS
* BINDERS
* LABELS
* CRT TABLES
* CASSETTES
* TAPE
* STOCK AND CUSTOM FORMS
* RIBBONS
* CABINETS
* TAPE RACKS

WE FEED YOUR COMPUTER WITH GUARANTEED PRODUCTS AND QUICK SERVICE

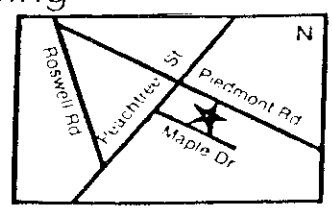
MINI COMPUTER SUPPLIES, INC.

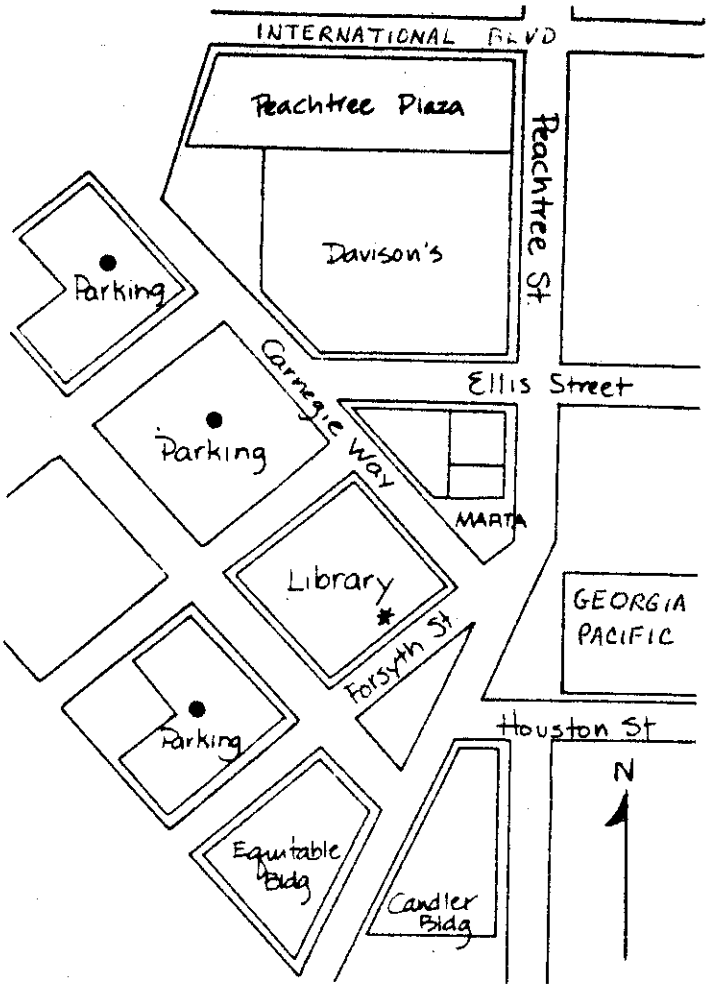
2 Locations with Warehouse direct pricing

Chamblee
3930 Green Ind. Way
452-0383



Buckhead
3201 Maple Drive
237-5677





Atlanta
99/4A
Computer
Users
Group

NEXT MEETING:

SUNDAY, SEP 18 1983

ATLANTA PUBLIC LIBRARY

3:00 P.M.

FOR MORE DETAILS, CALL 926-6308

(A DONATION WILL BE REQUESTED -
MEMBERS - 50¢, NON-MEMBERS - $1.00)

ATLANTA 99/4A COMPUTER USERS GROUP
POST OFFICE BOX 19841
ATLANTA, GEORGIA 30325

Miami Country Area 99/4A H.C. U
163 West Third
Peru, In. 46970