mini'app'les

apple computer user group newsletter

VOLUME V No 3 MARCH 1982

CALENDAR CALENDAR CALENDAR

WHICH	WHEN	WHERE	WHAT
Pascal Note 1	Wed Mar 3 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
Board Meeting Note 5	Wed Mar 10th 7:30 pm	Nokomis Community Ctr Minnehaha Parkway	Nomination of officers & potential Board members
REGULAR MINI'APP'LES Note 2	WEDNESDAY MAR 17th 7:30pm	**UNIVERSITY MINNESOTA ST. PAUL CAMPUS** Near State Fair Room B45 Bldg 412 *Map back cover*	*Mountain Computer,* (Stephen Reinen) to demo Mountain Computer product line.
St. Paul Branch MINI'APP'LES Note 3	Tues Mar 23 7pm-10pm	Minnesota Federal White Bear Lake Shopping Center	General meeting Tentative: Please confirm date and place.
Education Note 6	Wed Mar 24 7:30pm	Sperry Univac Bldg Metro Park Bloomington	*Interfacing Peripherals* with Pascal
Genealogy Note 4	Sat Apr 3	Lexington Library 1080 University St. Paul	Genealogical Computing Special Interest Group Regular meeting.
Pascal Note 1	Wed Apr 7 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
REGULAR MINI'APP'LES Note 2	WEDNESDAY APR 21st 7.00pm	**PENN COMMUNITY CENTER** ***Auditorium!*** 84th & Penn Bloomington. Just S of 494 & W of 35W Free parking on premises. *Map next issue*	*Annual Election* & Demos of the best games by Keith Madonna and Demo DTACK-Grounded 68000 Processor board for Apple II (Tentative)
IAC Annual	May 14th--16th	Boston MA	Annual Meeting & AppleFest
Amateur Fair	Sat Jun 5	Minn State Fair Grnds	Swapfest & Exposition.

Note 1. Contact- *Keith Madonna*
2. *Chuck Thiesfeld*
3. *Pete Halden* 770-6624
4. *Bill Decoursey*
5. *Stephen K.Johnson*
6. *Chase Allen*

MINI'APP'LES

The Minnesota Apple Computer Users' Group, Inc.
P.O. Box 796
Hopkins, MN 55343

MINI'APP'LES OFFICERS

President	Stephen K.Johnson 6053 Wentworth Ave S. Minneapolis, Minnesota, 55419	869-3447
Past President and Newsletter Editor	Daniel B.Buchler 13516 Grand Avenue S. Burnsville, Minnesota, 55337	890-5051
Vice President	Chuck Thiesfeld 8416 Xerxes, Bloomington, Minnesota, 55431	831-0009 830-5020
Treasurer	Marilyn Thomas 2735 Irving, Minneapolis, Minnesota, 55408	872-7669
Secretary	Ron Androff 1725 Crest Ridge Lane, Eagan, Minnesota, 55122	452-5230

MEMBERS OF THE BOARD

Membership Co-ordinator	Ann Bell 8325 39th Avenue N. New Hope, Minnesota, 55427	544-4505
Software Distr. - Mail and Software Sales	Hugh Kurtzman 11622 Live Oak Dr Minnetonka, Mn., 55343	544-7303
Newsletter Editor	Dan Buchler	890-5051
Bibliographer	Chuck Boody	933-5290
Librarian	Terry Pinotti	786-7118
MECC Librarian	Dave Nordvall	724-9174
Program Editor	Ken Slingsby	507/263-3715
Hardware Bulk Purchases Co'tor	Al Peterman	721-3295
Blank Disk Bulk Purchases Co'tor	Peter Gilles	475-3916
Publicity Co'tor	A.Michael Young	884-2841
Education Co'tor	Chase Allen	432-6245
Spcl Interest - Pascal	Keith Madonna	474-3876
Spcl Int. - Geneology	Bill Decoursey	574-9062
Spcl Int. - Nibble	John Schoeppner	455-8613
Spcl Int. - Z80/CPM & Meeting Hdw Support	Rick Gates	735-0373
Technical Advisers	Dave Laden Jim White	489-8321 636-4865
Assistant Librarians:	Bill Decoursey	see above
Assistant Prog Editors:	Tom Edwards Rick Gates	927-6790 see above

INFORMATION

This is the Newsletter of Mini'app'les, the Minnesota Apple Computer Users' Group, Inc., a non-profit club.

Questions

Please direct questions to appropriate board member or any officer. Technical questions should be directed to one of the Technical Advisers listed here.

Membership

Applications for membership should be directed to the Membership Co-ordinator. $12 buys membership for one year. Members receive a subscription to this newsletter and all club benefits.

DOMs

The 3 most recent DOMs (Diskettes of the Month) are available at meetings for $5/disk or any DOM may be ordered by mail for $7.50/disk. Contact Software Sales coord'r.

Dealers

Mini'app'les does not endorse any specific dealers but does promote distribution of information which may help club members to identify the best buys and service. Consequently the club does participate in bulk purchases of media, software, hardware and publications on behalf of its' members.

Newsletter Contributions

Please send contributions directly to the Newsletter Editor. Hard copy binary or text files (ASCII coded) are prefered, but any form will be gratefully accepted. Deadline for publication is the 3rd Wednesday of the month preceding the month in which the item might be included. An article will be printed when space permits if, in the opinion of the Newsletter Editor, it constitutes suitable material for publication.

Advertising rates

Rates are as follows:

Full Page	$40/issue
Half Page	$25/issue

Circulation 1000 (approx)

PRESIDENTIAL BYTES

by Stephen K. Johnson

I have been 'snowed under' during the last couple of months, but, I thought I would try to bring you up to date on a few things.

1. Club Incorporation - On January 6, 1982 we were officially incorporated by the state of Minnesota as THE MINNESOTA APPLE COMPUTER USERS GROUP, INC. I want to thank A. Michael Young running through the 'red tape' that was necessary to get this going. We still have a few more things to get done before this business is cleared up. We must still file our ammended bylaws with the state (with the changes proposed at the January board meeting). This will happen after the lawyer looks them over and the membership approves the changes. We are obtaining a license agreement with THE MINNEAPPLE CO. to allow use of the name MINI'APP'LES which is deceptively similar to their valid trademark.

   I want to thank them for working out an agreement so we can still be known by the name of MINI'APP'LES.

2. Snow Day - As most of you may know now the January meeting was cancelled due to 'severe weather conditions'. An announcement was made of the cancellation on WCCO, KSTP, and KSJN radio stations. I hope that you agree that it wasn't worth the risk of our members lives and property to hold a meeting under such an adverse situation. We will try to use good discretion before canceling any future meetings.

3. Pascal SIG - I attended the February Pascal 'Special Interest Group' meeting to see what goes on. A demo of using two Smart Term modems to communicate between an Apple II and an Apple /// was this month's subject. If you are interested in Pascal come out and try this SIG.

4. March 10th Board Meeting - If you would like to get more involved with your club please come and help us out with the nomination of the 1982-1983 officers and board members. (See calendar on the cover of this issue for time and place.)

5. Newsletter and DOMS - We need more contributions. The same people are doing all the work. Please share your ideas in the newsletter and submit programs you write for our DOMS. We need your help too.

MINI'APP'LES Education

by Chase Allen

On March 24, at 7:30 PM we will have another in the series of seminars for the club membership. The subject of this session will be "Interfacing With Peripheral Devices Via Memory Mapped Interface Cards". Or "All You Ever Wanted To Know About Peripheral Cards, But were Afraid To Ask". The session leader will be our own Chuck Thiesfeldt.

At the last Pascal Interest Group Meeting we discussed some of the aspects involved in interfacing the Hayes Modems. In this upcoming session maybe Chuck can be persuaded to fill in some of the details.

There is still a session on the Data Base Programming Seminar that is pending. I am not able to do the one in BASIC, and need a volunteer to lead that session. The subject matter to be covered is the programming techniques to implement random access records, and a brief section on sequential records, both with respect to the disk system. Anyone who could help with this (I will arrange the meeting facility, and attendance) please get in touch with me.

The Pascal version of the Data Base Programming seminar will be scheduled for the fourth week of April. Watch the April Newsletter for time and place. I will contact those in attendance at the first session, but we should have room for more if anyone is interested.

If you have any suggestions as to seminar subjects, please contact me and let me know of your interest. Also, as always, anyone who has a pet subject they want to expound on, we can usually put together a receptive audience, and have a useful exchange.

INTERFACE REGISTRATION

Date: 24 March 1982
Time: 7:30 PM
Place: Sperry-Univac Building
3001 Metro Drive
Bloomington
Call: Chase Allen
854-1331 x250 (days)
432-6245 (eves)

BOOK REVIEW

by Robert Kelsey

This is a review of the book "Software Tools in Pascal" by Kernighan and Plauger, published by Addison-Wesley Publishing Company, 1981.

I recommend this book very highly to all programmers, not just Pascal programmers. It is a re-write of the book "Software Tools" by the same authors, published in 1976. "Software Tools" was written using RATFOR, which is similar to C and requires a pre-processor and a FORTRAN compiler. Brian W. Kernighan is a member of the technical staff in the Computing Science Research Center at Bell Laboratories in Murray Hill, New Jersey. P. J. Plauger is President of Whitesmiths, Ltd., in New York. The book reads very well and contains a wealth of information about good programming practices.

In addition to teaching one (or re-acquainting, as the case may be) about good programming practices, the book contains several useful tools. Some of these are redundant in the UCSD Pascal environment: the Editor and Filer provide many functions, and the Compiler has a built-in include function. However, it is sometimes handy to have the ability to modify the tools you use, and since the book presents only the source for the tools, it is relatively easy to adapt the tools to specific needs.

The first chapter is titled "Getting Started". It certainly does begin with basic things: copying files. It then progresses to counting characters, counting lines, counting words, and ends with removing tabs. For the most part, it teaches programming practices by example and sets the tone for the remainder of the book. I recommend that for the first time through the reader go through the entire book from beginning to end, because the book is developed in a very logical manner.

The second chapter is titled "Filters". It deals with things like putting tabs back in, dealing with overstrikes, text compression, text expansion, echo, and character transliteration. The text compression and expansion are useful to me, but the remainder are exercises in programming, since the Editor can do most of those things. One technique the book uses is to keep each of the procedures or functions as a separate text file and to use an include processor to put the parts together to make the text file for the compiler. This is covered in the third chapter, titled "Files". This has such things as a file compare program, an include processor, a file concatenation program, a file print program (with headings), a file copy utility, and a file archive facility. The archive program is probably the most useful tool in this chapter. It has several very useful techniques embedded in it.

The fourth chapter deals with sorting, and contains several flavors of sorts. The fifth chapter deals with text patterns, and has some very interesting tools for doing pattern matching. The sixth chapter deals with Editing, and has an editor. I plan to implement the editor using the Micromodem for the input device, to allow calling my Pascal system from work to enter code during noon hours. The seventh chapter deals with Formatting, and it has a complete text formatter, which, combined with the UCSD Pascal editor, makes the Apple Pascal system a very good word processing system, which is also easy to modify and extend, at least for the text formatter. We are using a version of the text formatter at work, and find it very flexible. It is handy to use the same formatter both at work and at home.

The final chapter deals with Macro Processing, and it contains the code for a fairly extensive macro processor. This can be very valuable for developing complex code.

Altogether, there are about 2000 lines of code in the book. I have entered the whole thing and have compiled it and have most of my typographical bugs out. There are some things which could be done to make the tools more useful. The techniques used by the authors are portable within the general world of Pascal, but they do not lend themselves to speedy execution on the Apple. The main thing needed is to use the UCSD string capabilities and to use some of the built-in functions which will make the programs run faster. However, those changes will eliminate some of the portability of the tools.

All of the programs described in the book are available in machine-readable form from Addison-Wesley. If people are interested, I am willing to make copies of what I have entered available to Mini'app'les members. Again, the book is most useful if it is used to learn good programming techniques, and the tools are used as templates for developing ones own tools. I feel that I have a much better appreciation for Pascal after having entered the code than previously. I have found, however, that the book is hard to find in Twin Cities bookstores, so call around to see where it is available.

RECYCLED MUSIC SYSTEMS

MARCH SPECIALS!

EPSON MX-80 with GRAFTRAX & TYMAC interface	$580
BMC EU-12 high resolution (18mhz) monitor	$158
HAYES MicroModem II direct connect modem	$290

These prices are only for Mini'app'les members, and require proof of membership (membership card).

We also handle products from MicroSoft, Amdek, M&R, Mountain Computer, Dan Paymer, Olivetti and others. For information on pricing and delivery call Alan at:

(612)-721-3295

Quality consumer electronics for over 12 years!!

AMATEUR FAIR '82

MINNESOTA'S LARGEST
SWAPFEST & EXPOSITION
FOR COMPUTER ENTHUSIASTS AND AMATEUR RADIO OPERATORS!!!

OUR 6TH YEAR!

When? Saturday, June 5, 1982 ~ 6:00 a.m. to 6:00 p.m.
Commercial Inside Activities Start at 8:00a.m.

Where? The Dairy Products Building at the ...
Minnesota State Fairgrounds

What? Commercial Exhibitors, Giant Flea Market
Club Activities & Demonstrations

Sponsored by:
NARA Inc. – P.O. Box 30054, St. Paul, Mn. 55175

PRINTER TABBING

by Dan Buchler

I seem to be asked questions about how to tab with a printer, any printer, about twice-a-week. Several articles have been published on this subject in the past, footnotes 1 and 2, but the subject continues to confuse people, so if you are having trouble, you are not alone.

The confusion arises because of a historical fact. Applesoft was written before most of the printer interface firmware was written.

Now if you are unfamiliar with HTAB and TAB see footnote 3. I will only refer to HTAB in this article, but everything applies equally to TAB.

An HTAB 51, causes a tab to col 11 on line 2. Applesoft performs a modulus 40 calculation before storing the result of the tab in a memory location called the 'current horizontal cursor position', commonly referenced symbolically as CH. CH is a fixed memory location at $24 = decimal 36. Because of this modulus 40 calculation, your printer will probably not do what you expected it to do.

Example:

```
100 PRINT A;:HTAB 20:
    PRINT B;:HTAB 35:
    PRINT C;:HTAB 50:
    PRINT D
```

The above statement would print A at col 0, B at col 20, C at 35, issue a carriage return, and print D at 10.

The simple fix is to use POKEs into CH as follows:

```
 80  CH = 36
 90  PRINT CHR$(9);"80N"
100  PRINT A;:POKE CH,20:
     PRINT B;:POKE CH,35:
     PRINT C;:POKE CH,50:
     PRINT D
```

Hold your horses! What's the statement 90 for? Well, when you POKE CH,n you must turn off the screen display, if CH is to be allowed to get *larger* than 40. If you don't, your program will 'blow up', beacuse Applesoft does'nt know what to do with cursor positions greater than 40 on the screen! Statement 90 is the familiar LIST 80 columns command; CHR$(9)= Ctl I.

Now if you are writing a program from scratch, it's easy to use the POKE CH,n technique. The next question then is, what if I want to display and print? The easiest way is to, display it to the screen using conventional HTABs or TABs, then turn on printer, PRINT to printer, then turn off printer.

```
 80  CH = 36

100 PRINT A;:HTAB 20:
    PRINT B;:HTAB 35:
    PRINT C;:HTAB 50:
    PRINT D

190 PRINT CHR$(4);"PR#1"
200 PRINT CHR$(9);"80N"
210 PRINT A;:POKE CH,20:
    PRINT B;:POKE CH,35:
    PRINT C;:POKE CH,50:
    PRINT D
220 PRINT CHR$(4);"PR#0"
```

Why the CHR$(4)? Well you forgot! Thats to make sure you don't disconnect DOS.

OK wise guy, I've got a program that George S gave me that's full of TABs and sometimes it seems to TAB correctly (beyond column 40 too), though most of the time it does not?

Well, there's an explanation for everything. The guys who wrote the firmware for the original Apple Serial interface card decided to try and solve the modulus 40 problem in firmware. They incorporated a trick in the code that requires a special interpretation of the TAB value. This 'trick' is used in the firmware in certain other interface cards including the Epson. It is not used in the Apple parallel card!

It works as follows:

```
100 PRINT A;:HTAB(20):
    PRINT B;:HTAB(35):
    PRINT C;:HTAB(15):
    PRINT D
```

The first HTAB(20) works as standard Applesoft tabbing to col 20, and then to col 35. We then print the value of C at col 35. Lets say C has the value 1234, so we print in cols 35,36,37 and 38. Thus the current column is now =39. But we now do an HTAB(15) or CH=15? Well the firmware, first checks if CH > current column. If it is, (note CH is forced less than 40) we then tab to CH. If CH < current column, we check if CH < 18. If it is, then we treat CH as a relative tab from last tab, that is; we set the new column to which to move, as the old column (at which C was printed in example) plus the value of CH (set by the HTAB or TAB). The printer firmware will thus blank fill up to the newly computed col (50 in this example).

GOTO 7

Printer Tabbing CONTinued

Please note, these comments about this scheme:

1. It is not standard Basic. (It is incompatible with the screen BASIC). If you use TABs, they will be ignored on the screen. If you use HTAB, the screen will tab to the absolute value of the HTAB.
2. Only certain interface cards will recognize the meaning of the 'relative tab'. (Apple serial, Epson and a few others)
3. The relative tab must be less than 18.

However, there are quite a few programs around that use this scheme. So, if you have one, you might as well take advantage of it.

There's yet another way to tab which allows one to retain the absolute HTAB or TAB definition. This technique was published by John Crossley (footnote 2), but requires 2 things to be done.

1. All PR#1s must be replaced with a CALL 944.
2. You must BLOAD a small program into the area $3B0 through $3CF.

The program is as follows:

```
03B0- A9 01        LDA #$01
03B2- 20 95 FE     JSR $FE95
03B5- A9 8D        LDA #$8D
03B7- 20 ED FD     JSR $FDED
03BA- A9 C5        LDA #$C5
03BC- 85 36        STA $36
03BE- A9 03        LDA #$03
03C0- 85 37        STA $37
03C2- 4C EA 03     JMP $3EA

03C5- 20 02 C1     JSR $C102
03C8- 48           PHA
0369- AD F9 07     LDA $07F9
03CC- 85 24        STA $24
03CE- 68           PLA
03CF- 60           RTS
```

The way this works is as follows: A CALL 944 gives control to the routine at 3B0 which sets up the Apple output vector locations ($36 & $37) to point to $3C5. It then reconnects DOS by JMP $3EA.

Now, whenever you do a PRINT, the routine at $3C5 is executed. This calls the printer firmware at $C102 (The 1 in the C102 is the slot. Change accordingly for a different printer slot than 1). The firmware now sends a character to the printer. Then, at $369 and $3CC, CH is reset to the column position computed by the firmware (Again the location is slot dependent - see referenced document). Note, that since CH is reset to the absolute column, if you tab past 40, you must turn off the screen as discussed earlier in this article.

So there it all is -

GOOD TABBING

Bibliography:
1 Tabs & Tab-stops by Daniel D.Buchler, Aug 1981 Mini'app'les; discusses internal Epson Tab-stops.
2 Tabbing with Apple Peripherals by John Crossley, Winter 1980 Apple Orchard.
3 Applesoft Manual pages 50 and 51; discusses HTAB and TAB.

UNSUNG HEROES

by Dan Buchler

You all know that your club is run by volunteers. What you may not know is that it sometimes takes a special effort on the part of those volunteers to accomplish a significant deed which benefits all of us. I would like to single out two such accomplishments here.

A. Michael Young, is officially our Publicity Coordinator which is really a job without definition. Well, as mentined in the Minutes, published recently, we are now incorporated as a Non-profit organization. To get there, Micheal put in may hours work on the club's behalf. He met with the lawyer; he held several meeting with a business whose name was similar to Mini'app'les; he obtained federal and state forms; he filed those forms; and he got the job done. On behalf of Mini'app'les, I would like to take this opportunity to thank Mike.

Ann Bell is our Membership coordinator. You have all come in contact with her, either directly at a meeting, or via the US mail. We switched our club database over to DB Master during the 81 - 82 renewal period. Ann painstakingly built an accurate database containing all of your names (800 right now), and that was mostly during the holidays and right before it. Not only that, but for a while she had to maintain both the old and the new databases. She also has created a card filing system which provides instantaneous look-up and verification on an member. This sort of efficiency goes along way to maintaining our good name and helping all of us to have a smooth running club. *Again, on behalf of Mini'app'les, Thank you Ann.*

LOGO LANGUAGE

by Terrapin Inc

The Terrapin Logo language is a powerful, easy-to-use computer language designed to be as friendly as possible to the user. It is an ideal first language. Though easy to understand and simple to work with, it places enough power in the hands of its user so that he or she can begin to use the computer right away. First grade students using the Logo language have learned to program so quickly that soon they were teaching their teachers.

For all its simplicity and friendliness, the Terrapin Logo language for the Apple II is a language that experienced programmers will find a joy to use. It has the list structure, recursiveness, and dynamic variable scoping features of Lisp, floating point arithmetic, and an assembly language interface that includes an assembler written in Logo. The Terrapin Logo language has a fully integrated screen editor and more than 120 primitives including 30 graphics commands.

Logo was the first language ever to use turtle graphics -- an intuitive way of doing computer graphics. Turtle graphics uses the idea of a turtle -- a cybernetic animal that lives on a computer screen and responds to the user's commands to move forward or backward, to turn left or right. The turtle leaves a trail behind it as it moves. Terrapin Logo language users can easily write programs to draw complex figures on the screen in high-resolution color graphics. Although the traditional coordinate graphics is also available, most people prefer turtle graphics.

The Terrapin Logo language is a procedure oriented language. This means that you can program the way you think -- by dividing the problem at hand into smaller problems, and solving them individually by writing small programs (procedures) for each one. Each procedure can take any number of inputs (arguments) of any type, and can output a result. Procedures can be used exactly as if they were part of the language. The names of procedures and variables may be of any length, with essentially no memory penalty for using long names.

List structure allows words and lists to be manipulated easily. For example, the FIRST command will return the first letter in a word or the first word in a list. BUTFIRST will return all the letters or words except the first. A list may include numbers, words, procedure names, and other lists in any order.

Since the Logo language is interpretive, response is immediate. In languages such as C or Pascal, programs have to be written first, before anything will happen. This immediate response combined with turtle graphics makes the Terrapin Logo language a superb way to introduce children, or anyone, to computers. They can begin to draw using commands such as FORWARD, RIGHT, and PENUP. (These can be abbreviated FD, RT, and PU.) The next step is to start writing simple programs.

Printer Tabbing CONTinued

Please note, these comments about this scheme:

1. It is not standard Basic. (It is incompatible with the screen BASIC). If you use TABs, they will be ignored on the screen. If you use HTAB, the screen will tab to the absolute value of the HTAB.
2. Only certain interface cards will recognize the meaning of the 'relative tab'. (Apple serial, Epson and a few others)
3. The relative tab must be less than 18.

However, there are quite a few programs around that use this scheme. So, if you have one, you might as well take advantage of it.

There's yet another way to tab which allows one to retain the absolute HTAB or TAB definition. This technique was published by John Crossley (footnote 2), but requires 2 things to be done.

1. All PR#is must be replaced with a CALL 944.
2. You must BLOAD a small program into the area $3B0 through $3CF.

The program is as follows:

```
03B0- A9 01        LDA #$01
03B2- 20 95 FE     JSR $FE95
03B5- A9 8D        LDA #$8D
03B7- 20 ED FD     JSR $FDED
03BA- A9 C5        LDA #$C5
03BC- 85 36        STA $36
03BE- A9 03        LDA #$03
03C0- 85 37        STA $37
03C2- 4C EA 03     JMP $3EA

03C5- 20 02 C1     JSR $C102
03C8- 48           PHA
0369- AD F9 07     LDA $07F9
03CC- 85 24        STA $24
03CE- 68           PLA
03CF- 60           RTS
```

The way this works is as follows: A CALL 944 gives control to the routine at 3B0 which sets up the Apple output vector locations ($36 & $37) to point to $3C5. It then reconnects DOS by JMP $3EA.

Now, whenever you do a PRINT, the routine at $3C5 is executed. This calls the printer firmware at $C102 (The 1 in the C102 is the slot. Change accordingly for a different printer slot than 1). The firmware now sends a character to the printer. Then, at $369 and $3CC, CH is reset to the column position computed by the firmware (Again the location is slot dependent - see referenced document). Note, that since CH is reset to the absolute column, if you tab past 40, you must turn off the screen as discussed earlier in this article.

So there it all is -

GOOD TABBING

Bibliography:
1 Tabs & Tab-stops by Daniel B.Buchler, Aug 1981 Mini'app'les; discusses internal Epson Tab-stops.
2 Tabbing with Apple Peripherals by John Crossley, Winter 1980 Apple Orchard.
3 Applesoft Manual pages 50 and 51; discusses HTAB and TAB.

UNSUNG HEROES

by Dan Buchler

You all know that your club is run by volunteers. What you may not know is that it sometimes takes a special effort on the part of those volunteers to accomplish a significant deed which benefits all of us. I would like to single out two such accomplishments here.

A. Michael Young, is officially our Publicity Coordinator which is really a job without definition. Well, as mentined in the Minutes, published recently, we are now incorporated as a Non-profit organization. To get there, Micheal put in may hours work on the club's behalf. He met with the lawyer; he held several meeting with a business whose name was similar to Mini'app'les; he obtained federal and state forms; he filed those forms; and he got the job done. On behalf of Mini'app'les, I would like to take this opportunity to thank Mike.

Ann Bell is our Membership coordinator. You have all come in contact with her, either directly at a meeting, or via the US mail. We switched our club database over to DB Master during the 81 - 82 renewal period. Ann painstakingly built an accurate database containing all of your names (800 right now), and that was mostly during the holidays and right before it. Not only that, but for a while she had to maintain both the old and the new databases. She also has created a card filing system which provides instantaneous look-up and verification on an member. This sort of efficiency goes along way to maintaining our good name and helping all of us to have a smooth running club. Again, on behalf of Mini'app'les, Thank you Ann.

LOGO LANGUAGE

by Terrapin Inc

The Terrapin Logo language is a powerful, easy-to-use computer language designed to be as friendly as possible to the user. It is an ideal first language. Though easy to understand and simple to work with, it places enough power in the hands of its user so that he or she can begin to use the computer right away. First grade students using the Logo language have learned to program so quickly that soon they were teaching their teachers.

For all its simplicity and friendliness, the Terrapin Logo language for the Apple II is a language that experienced programmers will find a joy to use. It has the list structure, recursiveness, and dynamic variable scoping features of Lisp, floating point arithmetic, and an assembly language interface that includes an assembler written in Logo. The Terrapin Logo language has a fully integrated screen editor and more than 120 primitives including 30 graphics commands.

Logo was the first language ever to use turtle graphics -- an intuitive way of doing computer graphics. Turtle graphics uses the idea of a turtle -- a cybernetic animal that lives on a computer screen and responds to the user's commands to move forward or backward, to turn left or right. The turtle leaves a trail behind it as it moves. Terrapin Logo language users can easily write programs to draw complex figures on the screen in high-resolution color graphics. Although the traditional coordinate graphics is also available, most people prefer turtle graphics.

The Terrapin Logo language is a procedure oriented language. This means that you can program the way you think -- by dividing the problem at hand into smaller problems, and solving them individually by writing small programs (procedures) for each one. Each procedure can take any number of inputs (arguments) of any type, and can output a result. Procedures can be used exactly as if they were part of the language. The names of procedures and variables may be of any length, with essentially no memory penalty for using long names.

List structure allows words and lists to be manipulated easily. For example, the FIRST command will return the first letter in a word or the first word in a list. BUTFIRST will return all the letters or words except the first. A list may include numbers, words, procedure names, and other lists in any order.

Since the Logo language is interpretive, response is immediate. In languages such as C or Pascal, programs have to be written first, before anything will happen. This immediate response combined with turtle graphics makes the Terrapin Logo language a superb way to introduce children, or anyone, to computers. They can begin to draw using commands such as FORWARD, RIGHT, and PENUP. (These can be abbreviated FD, RT, and PU.) The next step is to start writing simple programs.

Here are a few simple procedures written in the Terrapin Logo language.

```
TO SQUARE
 REPEAT 4 [FORWARD 100 RIGHT 90]
END
```

This procedure will draw a square anywhere or in any orientation you want it to. If not specified, the turtle starts in the middle of the screen facing up. (Fig. 1) But, if the turtle's heading and position are first changed by the commands FORWARD 100 RIGHT 45, then the result of calling SQUARE is Fig. 2.

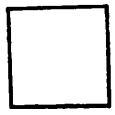
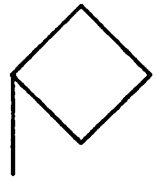
Fig. 1 

Fig 2 

The SQUARE procedure can be modified to receive an argument, so that the size of the square can easily be specified.

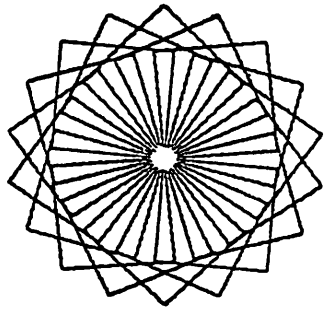
```
TO SQUARE :SIZE
 REPEAT 4 [FORWARD :SIZE RIGHT 90]
END
```

Then SQUARE is called in the same way we call FORWARD and RIGHT, by specifying an argument to it. SQUARE 100 produces exactly what SQUARE produced before we gave it an argument.

SQUARE can be used just as any Logo command would be used. For example, to draw a fan of squares. we could now define a procedure:

```
TO FAN
 REPEAT 18 [SQUARE 50 RIGHT 20]
END
```

Calling FAN produces this shape:



These are very simple examples. but they give you some idea of the power that Logo places in the hands of the beginning user.

EPSON + MAGIC WINDOW = VERSATILITY

by Byron Gilman

This listing shows a sample of the various boldness, sizes and styles which are available on the Epson MX-80 through the Magic Window word processing program. Corresponding on-off switch codes for the available fonts are shown in the table below. Compressed mode with double strike at the begininng of a line will cause variations of the left margin which can be corrected by inseting additional spaces. Double width (N) cancels automatically at the line end. If you have the Graftrax 80 chip set installed you will be able to vary single words in a line. Without Graftrax you must use the same mode throughout an entire line.

	ON	OFF
Compressed mode	O	R
Double width	N	T
Double strike	G	H
Emphasized mode	E	F
Italics style	4	5

The Epson description of each font is followed in parenthesis by the precise keystrokes required to make Magic Window send the proper control characters to the printer.

Editor's note:
'Apple Pie' (Pie Writer) works in an almost identical manner to Magic Window.

Ctl B is replaced by Ctl Sft M
Esc Esc is replaced by Esc

REGULAR

Compressed mode normal strike (ctrl-B O)
Compressed mode double strike (ctrl-B esc esc 8 ctrl-B O)
Normal size normal strike
Normal size double strike (ctrl-B esc esc G)
Normal size emphasized strike (ctrl-B esc esc E)
Normal size double and emphasized strike (ctrl-B esc esc E ctrl-B esc esc G)

Double width normal strike (ctrl-B N)

Double width double strike (ctrl-B N esc esc G)

Double width emphasized strike ctrl-B N ctrl-B esc esc E)

Double width double strike and emphasized strike (ctrl-B N ctrl-B esc esc G ctrl-B esc esc E)

ITALICS

Compressed size normal strike (ctrl-B esc 4 ctrl-b O)
Compressed size double strike (ctrl-B esc 4 ctrl B Octrl-B esc esc 8)
Normal size normal strike (ctrl-B esc 4)
Normal size double strike (ctrl-B esc 4 ctrl-B esc esc 8)
Normal size emphasized strike (ctrl-B esc 4 ctrl-B esc esc E)
Normal size double strike and emphasized strike (ctrl-B esc 4 ctrl-B esc esc 8 ctrl-B esc esc E)

Double width normal strike (ctrl-B esc 4 ctrl-B N)

Double width double strike (ctrl-B esc 4 ctrl-B N ctrl-B esc esc 8)

Double width emphasized strike (ctrl-B esc 4 ctrl-B N ctrl-B esc esc E)

Double width double strike and emphasized strike(ctrl-B esc 4 ctrl-B N ctrl-B esc esc 8 ctrl-B esc esc E)

INTERACTIVE SALES AND SERVICE, INC

For the BEST deals in town!

DISKETTES:

Maxell	10 in a softbox	$30.50
Verbatim	10 in a softbox	$27.50
	10 in a library case	$29.50
BASF	10 in a soft box	$27.50
	10 in a library case	$29.50
	5 in a soft box	$15.00

PAPER:

9-1/2"x11" white pin-feed	15 lb, 3200 sheets/box.	$24.50
	20 lb, 2500 sheets/box.	$21.00

MARCH FEATURE:

Microsoft Softcard + 16k RAM + Videx 80 col card + Osborn CP/M Users' Guide	$650.00

BMC Green monitor (BM12E)	$160.00
Novation Apple-Cat II Modem (touch tone & 1200 baud)	$340.00
Bit 3 80 column card	$317.50
Flip 'N' File diskette storage files	$24.00
Micropro Wordstar (Cadillac of word processors)	$275.00
VisiCalc	$207.00

These are just some of the products we handle. Stop at our table at the Mini'app'les meeting for a complete catalog.

Phone or mail orders accepted. If you have a modem, you may 'communicate' your order to us on PMS (612-929-6699). Merchandize is in stock. Normal delivery is at club meetings. UPS shipping is available; call for rates. Minnesota residents please add 5% sales tax. Mastercard and VISA accepted on orders over $100.

Interactive Sales and Service, Inc.
P.O. Box 16152
Minneapolis
Minnesota 55416
(612) 929-2701

TURNING THE PAGES

with David E. Laden

TURNING THE PAGES is back after a five month absence. It is hoped that this column will once again be a monthly feature of the Mini'App'les Newsletter.

If any of you, the members of Mini'App'les, have comments (good or bad) about this column and its contents, give me a call (my phone number is listed inside the front cover) or catch me at the next meeting. Thank you.

Recreational Computing, which was being published bimonthly by Peoples Computer Company has been taken over by COMPUTE! September-October 1981 was the last issue of Recreational Computing to be published.

COMPUTE! is expanding its coverage and will now include such computers as Apple, Atari, Commodore, OSI, Radio Shack, and TI. This expansion is taking place with the merger of Recreational Computing and COMPUTE!'s sister publication Home and Educational Computing.

SOFTALK, the magazine that Apple owners have been receiving free, has changed its distribution policy. This was announced in the January, 1982 issue. SOFTALK will be sent free to Apple owners only for a period of one year, after which you may choose to continue the subscription at $24 per year.

Call-A.P.P.L.E, which had been published nine times per year, is now going monthly. Beginning in January, 1982, Call-A.P.P.L.E will be published 12 times per year. The magazine is received as a benefit of membership in the Apple PugetSound Program Library Exchange.

BYTE - January 1982

This issue of BYTE focuses on the new IBM Personal Computer.

Accidental Reset Protection for the Apple II by Greg DeWilde. Pages 234 and 238.

Add a Peripheral Interface Adapter to Your Apple II by Kenneth J. Ciszewski. Pages 324-330.

An Apple Talks with the Deaf by Ned W. Rhodes. Pages 366-386.

The GEOSAT Program by Steve Emmett. Pages 420-432. Written in Applesoft.

BYTE - February 1982

Software Review: The Flexibility of VisiPlot by Robert E. Ramsdell. Pages 32-36.

FIT - A Federal Income Tax Program in UCSD Pascal by Edward Heyman. Pages 148-190 and 388-412.

Software Review: Two Tax Aids Aardvark Individual Tax Plan and Howardsoft Tax Planner by Mary Jo Kuam. Pages 204-212.

Hardware Review: Dithertizer II by Joe Thomas. Pages 219-224.

A Guided Tour of Apple Pascal Units and Libraries by Ross M. Tonkens MD. Pages 225-244.

Double-Width Silentype Graphics for your Apple by Charles H. Putney. Pages 413-423.

COMPUTE! - Feb 1982

Plotti g Polar Graphs With The Apple II by Marvin L. DeJong. Pages 62-68.

Disassembling Machine Language Programs Without Leaving BASIC by John R. Vokey and H. Cern Kaner. Page 68.

Named GOSUB with Variable Passing by Mike Smith. Pages 69-75.

CREATIVE COMPUTING - January 1982

To start the new year off, Creative Computing takes a look at video discs and their use with microcomputers.

Software Evaluation: Escape from Castle Wolfenstein by Andrew Brill. Pages 38-39.

Aurora Systems Videodisc Controller by David H. Ahl. Pages 56-57.

Adwar Video Proc Mod by David H. Ahl. Page 58.

Adventures in Videoland Rollercoaster: A Computer/Videodisc Adventure by David Lubar. Pages 60-78. Includes Applesoft program listing.

The Rollercoaster Game Dissected by David H. Ahl. Pages 80-81.

Videodiscs in the Classroom: An Interactive Economics Course by Kent T. Kehrberg and Richard A. Pollack. Pages 98-102

GOTO 14:

Turning the Pages CONT

V is for Videodisc by Charlie Kellner. Pages 104-105. This article describes Apple's SuperPilot language.

DSK Keyboard for the Apple by Patrick Niesink. Pages 122-125. A translating table, machine language and Applesoft program are provided.

KILOBAUD MICROCOMPUTING — February 1982

Pascal Graphics in a Flash by James R. Florini. Pages 70-71. This is a Pascal program to dump the Apple's hi-res screen to a Diablo printer.

Pascal in Space by Robert W. Darr. Pages 72-74.

Name That Type by William L. Robert. Page 80-82. This article discusses the variable types available in Pascal.

A Fully Graphic Apple by Rolf A. Deininger. Pages 104-105. This article describes the Apple with the TEKSIM chip and Hiplot graphics plotter.

Color Code Combo by R. Daniel Bishop. Pages 108-117. This game is written for the Apple and TRS-80 color computer.

POPULAR COMPUTING — MARCH 1982

Disk Operating Systems by William Barden, Jr. Pages 60-68.

Compuserve A Potpourri of Information Services by Stan Miastkowski. Pages 74-78.

Self-Teaching BASIC for the Apple by Robert Schilling. Pages 98-100. This is a software review.

A Beginner's Guide to BASIC Programming Part 2 by Elizabeth Hughes. Pages 110-119.

The Voice by Robert Swirsky. Pages 122-123. This is a review of Muse Software's Digitized Speech Program.

Well, that is TURNING THE PAGES for this month. With any luck, I will be back next month with more pages.

(David, we are very happy to have you back - Ed.)

CLASSIFIED

These ads are provided free to members. Ads will be run for two months. Advertiser is advised to formally request second printing. Also, please notify editor if item is sold.

Sanyo VM-4512 **12" Monitor.** Heavy duty with steel case (no hum interference with disks or drives). Used 40 days. Was $300 new. Will sell for $126
Al Peterman 721-3295

Grappler, by Orange Micro, Hi-Res Graphics interface for Epson Printers. **New**, never used! List $165 - sell for $120.
Bruce Lindell 338-0207

Doublevision **80 Col** card and 80 col **Apple Pie**; $200.
Epson **Friction Feed** Kit; $50
Janelle Norris 920-1430

14" B&W High Resolution Motorola Monitor, with stand; auxiliar power supply, +-12v, +5v; AC distribution. Have documentation. Made to operate with Apple II. $150
Merle Lonnon 633-7740

MAGIC WINDOW Text Editor $75 - Ask for Keith Duescher
Call after 6:30 944-2121

DATA ENTRY: Experienced Secretary will **type** your Apple II Basic Programs (from coding forms, books, etc), mailing/name lists or other TEXT and save on your Apple II diskettes. $7.50/hr; $20 minimum.
Diane 786-3028

Terminal Stand - Metal with walnut grain Formica top. 30" by 60" with 18" by 36" offset return. Only 7 months old. Excellent condition. **MUST SELL.**
Originally $700 asking $400
Carl Savaiano 474-1663

New Parallel **Printer Card** and **Disk Controller** Card with switched 3.2 and 3.3 Proms
also
Amdex Monitor Video 100 Black and White Monitor. Reasonable
Warren Ostlund 926-3122

Mountain Computer **Clock Card** with New Battery - Never used -$175 Firm.
Lou Chapienski
Herbert Olson Elementary School 831-3666

Wanted to Rent: ------ Centronics 737
Printer for 2 or 3 months.
Roy Brandt 572-1326

Wanted to Buy ----- Daisy Wheel Printer
Roy Brandt 572-1326

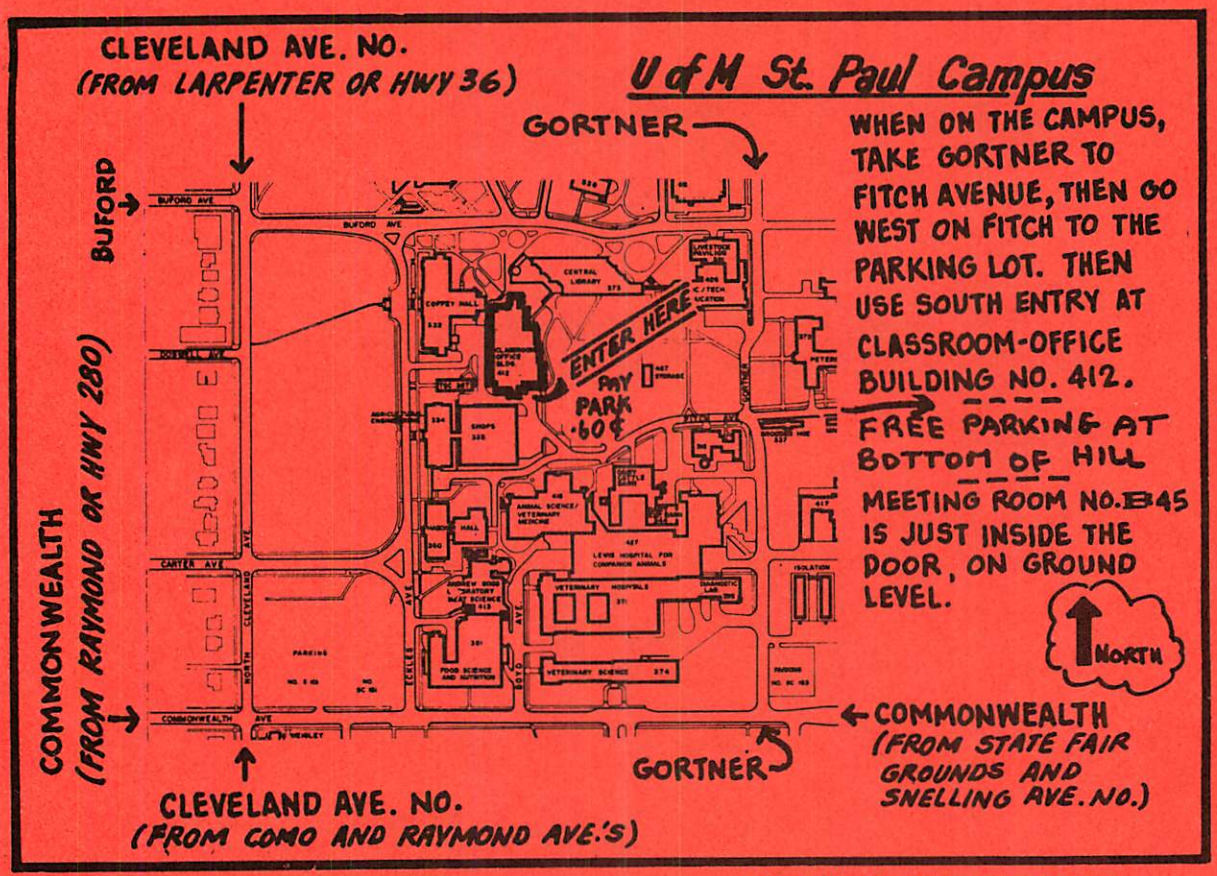
IDS Printer.
Roy Brandt 572-1326

Model III KSR **Teletype** with commercial grade direct connect modem. All manuals. Works with bulletin boards, the Source, Timesharing or interface to a computer. $279
Mike Williams 822-4501

ORDERING DOMs

A reminder that DOMs are available by mail at $7.50 each.

Send your order to: MINI'APP'LES DOM's
Box 796
Hopkins, MN 55343



IN THIS ISSUE

ADVERTISERS

NOTICE
ADVERTISING RATES

Our monthly press run is now 1000 copies and will likely increase again soon. That together with increasing printing costs necessitates a price increase in Advertising rates effective immediately. Ads already ordered are not effected. See page 2 for new rates.

Mini'app'les
Box 796
Hopkins, Mn. 55343

BUCHLER, DAN 160 12-82
13516 GRAND AVE SOUTH
BURNSVILLE MN 55337