CALENDAR   CALENDAR   CALENDAR

WHICH	WHEN	WHERE	WHAT
WORK-SHOP Note 2	Sat Oct 3 11:00am to 4:00pm	Nokomis Community Ctr Minnehahaha Parkway	A good opportunity to get help from the experts. Bring *your* Apple!
Pascal Note 1	Wed Oct 7 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
Genealogy	Sat Oct 10	Minn. Historical Soc	Genealogy Conference.
Fort Snelling Note 2	Mon Oct 12	Nokomis Community Ctr Minnehaha Parkway	Programming Special Interest Group Meeting
Board Meeting	Wed Oct 14 7:00pm	S.K.Johnson's Home 6053 Wentworth	
REGULAR MINI'APP'LES Note 3	WEDNESDAY OCT 21st 7:30pm	WILDER SCHOOL Auditorium 3320 Elliot Ave S Minneapolis *See map inside*	Double Header: *Charles Wirth* of CDC on Disks *and* *Su-Shen Bare* of Camp Courage Details below--
Music Demo	Thu Oct 22	Note 5	Those persons *seriously* contemplating purchase of Music Systems may compare different units.
Fort Snelling Note 2	Mon Oct 26	Nokomis Community Ctr Minnehaha Parkway	Programming Special Interest Group Meeting
Pascal Note 1	Wed Nov 4 7:30pm	Minnesota Federal 9th Ave S Hopkins	Regular *Pascal* Special Interest Group Meeting.
Nibble "Subscribers" Note 4	Wed Nov 11 7:30pm	Home of Ron Androff 1725 Crest Ridge Lane Eagan	Status and Discussion
REGULAR MINI'APP'LES Note 3	WEDNESDAY NOV 18th 7:30pm	UNIVERSITY MINNESOTA ST. PAUL CAMPUS Near State Fair Room B45 Bldg 412 *Map in next issue*	*Mike Birnbaum* (Parade of Homes) Home Control Techniques

Note 1. Contact- *Keith Madonna*
   2.   *Dave Nordvall*
   3.   *Chuck Thiesfeld*
   4.   *John Schoeppner*
   5.   *Chuck Boody*

OCT 21st MEETING

Charles Wirth is National Sales Manager for CDC Disk Products. He will make a short presentation about Floppy Disks. This will be followed by Su-Shen Bare of Camp Courage who has a very interesting slide show on how the Handicapped interface with a computer.

MINI'APP'LES INFORMATION

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President   Stephen K.Johnson   869-3447
                      6053 Wentworth Ave S.
                      Minneapolis,
                      Minnesota, 55419

Past President   Daniel B.Buchler   890-5051
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Newsletter   Burnsville,
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Vice President   Chuck Thiesfeld   831-0009
                      8416 Xerxes,   830-5020
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Treasurer   Marilyn Thomas   872-7669
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This is the Newsletter of Mini'app'les, the Apple II Users' group of the Twin Cities of Minneapolis and St. Paul.

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.

Dues are $10/year thru July; $5/year in July/Aug/Sept. After Oct 1st, $10 buys membership for current and next year. Members receive a subscription to this newsletter and all club benefits.

DOMs

DOMs (Diskettes of the Month) are available at meetings for $4/disk or by mail for $6/disk. Contact Software Sales coord'r.

Newsletter Contributions

Please send contributions 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 $30/issue
Half Page $20/issue

Circulation 750 (approx)

APPLE + 68000 =

DTACK GROUNDED
by Dan Buchler

DTACK GROUNDED** is the name of a forthcoming product of Digital Acoustics Inc., Santa Ana, California. Through an excellent and very entertaining newsletter (we have received two editions so far), they are keeping the world advised of their plan to market a '68000' add-on ""board"" for the PET and the Apple II.

For the uninitiated, the 68000 is Motorola's 16 bit microprocessor to end all other microprocessors. It is probably the most powerful device on the market and sells for over $200 per chip.

DTACK GROUNDED's philosophy is that if you are going to add on to the Apple II in order to give it extended capability, why not go with the best! In their newsletter they take great pains to tell you that the cheapest 68000 system you can buy costs $10000, and that even Apple have been rumoured to have an Apple III like system, using a 68000, under consideration. They also tell you the 6809, which is currently used on one Apple add-on board, isn't that much superior to the 6502, the chip that is in your Apple II.

So what will this add-on board do for you and me. Well, without any special 'application' software, in the initial release it will increase throughput by a factor of 14, assuming you use BASIC and a fair number of floating point operations. You may also acheive this same speed-up with the new compilers, for they use the same floating point routines as does the regular Basic interpreter. In other words, your throughput with compiled Basic might be 100 times faster with the 68000 compared to regular Basic and no 68000. This first release will cover the floating point package, trancendental functions (SIN, ATN, etc). A second release will transfer the evaluation of expressions over to the 68000, thus futher increasing throughput. This second release will also include a 61 bit (14 decimal digit) option. Your current Basic only has 9 digit precision. The 14 digit version will be between 3 to 6 times faster than the 9 digit current Applesoft. With respect to Applesoft, this second release will effectively do all the work in the 68000, leaving the 6502 as an I/O processor!

The problem with all of the above is that you have to use the BASIC floating point routines, which are stored in ROM in order to invoke the 68000. More on how that's done later. To really make use of the 68000, you have to have application software that actaully makes direct use of it. DTACK GROUNDED are banking that some software companies will actually release software in the future designed specifically for their hardware. Can you imagine a Sub Logic Flight Simulator that refreshs a 3D picture with 10 times more detail than at present at 30 or more frames per second?

More about the hardware: To make use of floating point, etc., DTACK GROUNDED plan to release listings of changes to your on board APPLESOFT ROM firmware. Because of copyright considerations, they feel that they cannot actually sell a modified Applesoft. Instead, they tell us (user group hardware hackers, etc) how to 'burn' a 6532 EPROM by copying your own ROM into the 6532 together with their changes which invoke the 68000.

The DTACK GROUNDED 68000 system will consist of the following:
- A 6.5 by 15 inch printed circuit board (with or without a 68000). The board mounts OUTSIDE of the Apple.
- A 5 volt power supply with its own power cord.
- A parallel interface board for hooking the above board to the Apple bus.
- A shielded case for the PC board. (Not avaialble with the first release).
- Written instructions on modifying the Applesoft ROM (as described above).
- A 'crude' cross assembler which will allow 68000 code to be assembled on the Apple.

The 68000 PC board has space for 92K of 68000 16 bit memory. However, you need only buy 2K in order to get the thing to work.

** The name DTACK GROUNDED comes from the grounding of the DaTa ACKnowledge signal line on the 68000 bus. This technique converts the system bus from an asynchronous to synchronous, simplifying the supporting logic. Unfortunately, it also eliminates some error processing capability.

LOCAL COMPUTER
BOOK SOURCES

By John L. Hansen

One of my problems in life has been the fact that when I become interested in a subject, I start hunting for all the books I can find that will help me learn about the subject. Obviously then, when I got involved with the Apple, I started hunting for computer books. If you have the same problem I do, this short article summarizes my book-hunting experiences.

My primary source of computer books has been B. Dalton at Southdale. B. Dalton has four standard shelf units of computer books, many more than any computer store, and they add new books much more rapidly than any other source. They have had virtually every book I've found on the Apple before any of the computer stores.

Audio King (Southdale) has expanded the bookshelf and carry some of the newer books (they had "Beneath Apple DOS" before any other store), including four books on Apple and UCSD Pascal.

Computerland (Bloomington) recently has had several new books, including several on Pascal, but some of the older books have been on the shelves for more than a year (one small shelf seems to be a permanent exhibit of several copies of three books). Computerland stores do have the best selection of computer magazines.

Dayton's Computer Center had a large magazine selection (many of them back issues) the last time I was there. Many of the magazines and a lot of the books are leftovers from the Computer Depot when they did not have Apples.

Digital Den stores have the same book problem as Computerland — too few new ones (though a little better than Computerland) and too much deadstock. Titles that haven't moved in a year should be tossed. The magazine selection is minimal (Creative Computing, Interface Age, Compute).

Personal Business Systems has expanded both book and magazine shelves significantly. I found SYBEX's "Pascal Programs for Scientists and Engineers" and the new "Apple Monitors Peeled" there, the latter several weeks before I saw it anywhere else.

The Xerox Store in Edina has added a new book shelf, including a good selection of Apple books. I found "Apple Pascal" and "Pascal Primer" there before any other stores, including B. Dalton.

Zim Computers has a good magazine selection (only place I've been able to find "The Apple Shoppe") and a good book selection. They had the Lewis Pascal book and "Apple Machine Language" by the Inmans before any other computer store.

Of course, computer stores are primarily interested in selling hardware and software, not books. However, if they are going to sell books, some efforts should be made to keep the stock up to date. This is more difficult for them than for B. Dalton since none of them have book buyers who keep up on the book market. However, as you can see from my comments above, some do a much better job than others. If your favorite computer store does not have recent Apple books, your comments and suggestions might persuade them that at little updating could result in some sales.

Apple + 68000 = Continued from page 3

The PET version is supposed to be in production this month and will sell for $725 (including the 68000 and 2k of memory). The Apple version will be available shortly and will likely cost a tiny bit more.

The first release is aimed at the experimenter. However, the second release with the high precision arithmetic is aimed at business.

I, for one, will follow this development with alot of interest. It might just be the one thing that prevents one waking up one day and finding that one owns a piece of museum computer equipment. We will keep Mini'app'les members informed of all of DTACK GROUNDED's development and news.

PASCAL BOOKS
for
APPLE PASCAL USERS

By John L. Hansen

As you have already undoubtedly discovered, the Pascal books included with the Language Card are not Pascal tutorials. My initial searches for information on how to program Apple Pascal were not too successful. While there were many good books available on standard Pascal, none of them dealt with the UCSD or Apple versions. In recent months, however, a number of books useful to Apple Pascal users have appeared. I have not researched them all thoroughly, but offer the following list and comments for those who are interested, but have not had a chance to hunt them up.

APPLE PASCAL
A Hands-On Approach

Arthur Luehrmann & Herbert Peckham
McGraw-Hill Book Company, 1981
($13.95)

In this tutorial guide to Apple Pascal, the authors assume the user is an absolute beginner, not only with Pascal, but also with the Apple. This can be somewhat frustrating when you're as "experienced" as I am, but does let anyone start learning. The book contains 14 sessions and 30-40 hours of hands-on activities designed to give you a solid working knowledge of the vocabulary, grammar rules, and meanings that make up Pascal. It is one of the few books I've found that contains index listings of semicolon usage and it also covers use of long integers. Sample programs are given and then expanded and changed with good explanations of the effects of and reasons for the changes. The book is written for use with one disk drive and Apple Pascal Version 1.1, but everything learned carries over to a two-drive system and instructions are given for use with Version 1.0. Goals, summaries, and quizzes with answers are included with each chapter. For the beginner, I think this is the best book in the list. SOURCE: The Xerox Store (Edina), though I have seen it since at Audio King (Southdale).

PASCAL PROGRAMMING FOR THE APPLE

T. G. Lewis
Reston Publishing Company
Prentice-Hall, 1981
($12.95)

Lewis assumes some knowledge of the Apple and programming. The book is written to help you "upgrade your computer expertise to include Pascal". Financial applications, text processing, sound, and graphics are all used as examples. The use of various Pascal features are clearly explained. John Schoeppner, who has gotten further in the book than I have, called to tell me that some of the examples have been printed on the wrong pages in the copy he has. SOURCE: B. Dalton, but have seen it at Audio King, Computerland, Digital Den, Personal Business Systems, and Zim Computer.

PASCAL PRIMER

David Fox and Howard Waite
Howard W. Sams & Co., 1981
($16.95)

This book is written for any version of UCSD Pascal, but includes special notes for Apple owners. The programs were prepared on an Apple II computer. The book present Pascal as an ideal first language for programmers. The examples are interesting and useful, including long loan and game programs, and a large number of cartoons add some fun to the learning process. A 34-page chapter on strings and long integers and a short section on interfacing assembly language with Pascal is included. A Quick Reference Card for UCSD Pascal is included. SOURCE: B. Dalton, but have seen it at The Xerox Store.

BEGINNER'S GUIDE FOR THE UCSD PASCAL SYSTEM

Kenneth L. Bowles
BYTE/McGraw-Hill, 1980
($11.95)

This book does not contain information on programming, but does a very good job of explaining the UCSD Pascal operating system (as it should since Bowles is the developer).

INTRODUCTION TO PASCAL INCLUDING UCSD PASCAL

Rodney Zaks
SYBEX, Inc., 1980
($14.95)

Zak's book is well-written, with excellent use of syntax diagrams and flowcharts. The examples are given in standard Pascal, but each chapter includes a discussion of applicable features of UCSD Pascal. A chapter covering the more complex aspects of UCSD Pascal is also included. Long integers are not covered. Exercises and answers are included. SOURCE: SYBEX before any local stores got it, but have since seen it at all of the computer stores mentioned above.

THE PASCAL HANDBOOK

Jacques Tiberghien
SYBEX, Inc., 1981
($15.95)

A reference manual resembling David Lien's "The BASIC Handbook" -- an encyclopedia of Pascal. Entries cover reserved words, operators, delimiters, types, functions, procedures, constants, and concepts. Versions of Pascal included are Standard, HP 1000, J&W/CDC, OMSI, PASCAL/Z, and UCSD. SOURCE: Computerland, but have seen it at the other stores mentioned above.

PROGRAMMING FOR POETS
A GENTLE INTRODUCTION USING PASCAL

Richard Conway, James Archer, and
Ralph Conway
Winthrop Publishers, Inc., 1980
($11.95)

"This is a book about programming, for readers who don't expect to do much programming themselves, but who would still like to understand what it is all about." Text-editing programs, a concordance, a statistical system, and a variety of other programs are included. The authors use the string-processing feature of UCSD Pascal because those of standard Pascal are much less convenient. SOURCE: B. Dalton, but have seen it at the other stores since.

NOTE: "Apple" and "Apple Pascal" are trademarks of Apple Computer Inc. "UCSD Pascal" is a trademark of the Regents of the University of California.

Overall, I have found the EXPEDITER][to exceed my expectations, and would certainly recommend it to anyone who has problems with their Applesoft programs running too slowly.
(Editor's note: The September issue of Softalk contains a detailed review of 4 Applesoft compilers:
- Microsoft's TASC
- Hayden's Compiler
- SDS's Speedstar
- On-Line's Expediter][ )

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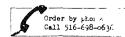## PHONE: 516-698-8636

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Apple II and Apple II+	$ 7.75
Epson MX80	$ 7.75
Filing Panels:	
With document pocket:	
4 pocket (10 to a set)	$12.95
2 pocket (10 to a set)	$11.25
2 pocket(w/o doc.)	$ 5.25

APPLE ACCESSORIES:

Graphtrax (Epson)	$ 90.00
Epson MX70	$396.00
Epson MX80 Complete with Apple Interface & Cable	$570.00
Epson MX80FT Complete with Apple Interface & Cable	$680.00
Tymac Parallel Interface for Epson MX80	$ 90.00
Hi-Res Software for MX80 (must use Tymac Interface)	$ 30.00
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DOM #7

by Ken Slingsby

The Disk of the Month for October contains all the programs from IAC #7, a few programs from other user group newsletters, and some locally written programs.

NOTE: DOM #7, as usual, contains a hello program, "MINI'APP'LES", which is in Integer Basic. If you have an APPLE II+ and do not have the Integer Board, you can still use the DOM if you type "RUN CATALOG MANAGEMENT" after you get the "LANGUAGE NOT AVAILABLE" message upon booting. Of course it is not necessary to boot the DOM if you have DOS 3.2 loaded. This hopefully clears up a continuing misunderstanding. Of course, if you have the APPLE II+ and do not have the Integer Board, you may be able to run the Integer Basic programs using a RAM resident Integer Interperter.

PROG.EXAM

This program will list your Applesoft program giving the RAM address of each of the program lines.
This would facilitate modifying the program to contain illegal statements, (or to hide machine language perhaps?) To use, RUN the program. This will create a text image of itself. LOAD your Applsoft program; EXEC EXAMINE and RUN 63982. Your program must not contain line numbers greater than 63982. Typed in by Ron Androff.

GRAPHIC DUMP (EPSON)

If you have the Epson MX-80 printer with the Graftrax 80 option, this program will dump a hires screen to paper. To use it, POKE 9,x; BRUN GRAPHIC DUMP; where x=75 ($4B) for 4.7 inch wide picture, or x=76 ($4C) for 2.3 inch wide picture. The program as written will work with most eight-bit parallel interfaces for the Epson:
1. The Epson board with the Thiesfeld modification (reference Mini'App'Les newsletter April 1981);
2. The Epson board using the game port for the eighth bit (reference Mini'App'Les newsletter May 1981);
3. The Tymac board and most other parallel boards which pass thruogh the high order bit. Written by Cary Mariash with modifications by Dan Buchler.

(Editor's note: Chuck Thiesfeld is working on another version which will use only 7 wires and thus will work with an unmodified Epson board any any other parallel interface board. He is also adding some additional picture sizing options.)

SKYWRITER
SKYWRITER (INSTRUCTIONS)
SKYWRITER (ONELINER S)
SKYWRITER (SNOOPY)

These programs include another method of creating shape tables (see our DOM #6). The two oneliner programs demonstrate a fancy picture drawing algorithm. The Snoopy program is very cute - it can draw Snoopy upside down or sideways. By Paul Stadfeld of the Northern Illinois Apple Users Group (NIAUG). From the IAC #7.

INSULTS

This program is a spin off from the HAIKU poetry. Insults hurls some of the most gruesome jabs under the sun. Please do not use this program to describe my descriptions of your DOM contribution! By Bruce Christopher of the NIAUG. From IAC #7.

ERROR HANDLER

This is a program debugging tool used to detect errors that happen while the program is running. It will list the line number where the error occured and the reason for the error. By Rob Stewart of the NIAUG. From the IAC #7.

APPLESOFT LINE WRITER

A programming aid which writes lines into a program for commonly used set up routines such as DOS strings. Running this program will set up a text file which you EXEC into your target program. The liberal comments in the program further explain its operation. By Jim Pfeiffer of the NIAUG. From IAC #7.

GENERAL LEDGER
G/L DATA

These three files set up a General Ledger for a small business allowing updating, calculation, and printing of the data. The PRINT routine is called by the main routine. By Fred Amundesen of the NIAUG. From the IAC #7.

DPRING

This program allows the dumping of Visicalc files. By David Sherman of the NIAUG. From the IAC #7.

TIMER ROUTINE

Here is a routine you can add to your program to time the interval required to respond to your prompt. The timing appears to be very close to actual time as the routine is written. Typed by Ron Androff.

LORES GRAPHICS EXAMPLES
HIRES GRAPHICS EXAMPLES
HIRES GRAPHIC DEMO
IMPROVED HIRES CURSOR PROG

These programs will give some insight into the APPLE II graphics capabilities perhaps enough to give you the 'kick' to add graphics to the program you are working on for the next DOM.

DOM HEADER

Someone asked me how the DOM headers are created. This program makes about half the work easy. It creates seven text files whose file names make up the header. The remaining work, (for me as I have not automated it yet) consists of using a disk utility to remove the track and sector list and file storage for each file. Without this step 14 sectors are made useless with unnessary (in this case) data. This program is based on a very good article in CALL-APPLE July/August 1981 by Clifton Howard, M.D. By Ken Slingsby (for what it's worth).

DOCUMENT INTEGER PROGRAMS
SYMBOL TABLE XREF
LINE # XREF

These programs will aid in the good documentation of your Integer Basic programs to help in understanding in the future. To use, LOAD you Integer program, EXEC DOCUMENT INTEGER PROGRAMS. If you want printed output initialize the printer before the EXEC. Submitted by Ken Slingsby

SNOOPY FOOTBALL POSTER

Just in time for the season, this poster will grace the walls of your room (or wherever you put it). Submitted by Ken Slingsby.

HGR PRINT 48K
HGR PRINT 48K INSTRUCTIONS
COPY HGR PRINT 48K

Some time ago there was a program on the DOM which produced pie charts annotated with the APPLE's HGR PRINT. (Originally distributed by Apple as part of one of their 'Contributed Software Volumes'). HGR PRINT was written to be used on 32K or 48K systems therefore quite a bit of space is wasted on the (now) usual 48K machines. Wayne has moved the routine and provided a means to easily copy it from disk to disk. By Wayne Saylo.

MAKE LINE CAPTURE

This program will create an EXEC file of part of your program. This could be used with the COMPARE program which was in a recent DOM. By David Nordvall.

GAME NAME

This routine can be added to your game program to keep track of the highest score for each run of the game. The interesting feature of this routine is that it is self modifing and saves the modified image to disk. David has promised more to follow in this newsletter. By David Norvall.

NOTICE * * * * * *

This will be the last DOM to be issued using DOS 3.2, UNLESS there is strong oposition to switching. At a recent meeting we conducted an informal poll and found less than 12 out of about 200 members present that had DOS 3.2 only. For the first time since we started the DOM, there is a surplus of programs available. Therefore the extra storage on the 3.3 disks should not make for less than full DOMs if you continue supporting the DOM. I am in the process of swithcing to 3.3 and am finding it a good time to clean up the catalogs of unused clutter. The comments I have recieved lately seem to support DOS 3.3 as the way to go.

(Editor's Note: DOM's will be available for sale at the next meeting for $4 a piece. Or, you may order by mail from Hugh Kurtzman, whose address is on page 2, for $6 a piece)

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Apple Slot	$149	$130	_____	_____
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EXPEDITER][
APPLESOFT COMPILER
MINIREVIEW
by Cary Mariash

Those of you who write programs in Applesoft have most likely experienced an occasional program which takes forever to run. There is nothing more frustrating than staring at a monitor which does not change, especially since the computer was purchased because it performed operations extremely rapidly. There is hope for the frustrated programmer, the Applesoft compiler.

Before I review the EXPEDITER][, I must digress with a few background explanations and comments. Applesoft is a Basic language which is executed in the Apple][by a technique called *interpretation*. That is, after you type "RUN", the first line is obtained by another program, called an "interpreter", which translates the statement written in Basic, to a series of machine codes on which the processor can then operate. This process proceeds one line at a time while the program is running--
    the next line number to be
    executed is found, the
    statement at this line number
    is interpreted, and then the
    interpreted code is executed.
The Applesoft compilers perform the interpretation of the entire program at once, and permit you to save the program in its interpreted form, or to run the program in its interpreted form.

The advantage of the compiler is, therefore, obvious. It saves the time during program execution usually spent in interpreting the Applesoft program. Anyone with experience in writing in assembly language, i.e. machine language, knows that an equivalent procedure will execute in about one tenth the time it takes for that procedure to execute in Applesoft.

The EXPEDITER][is an Applesoft compiler distributed by On-Line Systems. It's operation is quite simple. One simply loads the Applesoft program into memory, places the EXPEDITER][diskette in a drive, and "BRUN EXPEDITER". The program is then compiled at a rate of about 30 lines per minute. After the program is compiled, the user can save the program on any diskette in the usual manner, i.e. "SAVE MYPROGRAM". The program is executed by a simple run statement. If you try to list the program, all you see is the single line:

                1 CALL 4352

The compiled program begins at 4352 ($1100 hex). I have used the compiler on a program which took 10 to 15 minutes to run in Applesoft, but only about 1 to 2 minutes to run after it was compiled.

This compiler supports virtually all Applesoft commands, including graphic commands. It uses many of the routines in the Basic ROM chips, and therefore requires Applesoft to be resident in ROM. There are several peculiarities of this compiler of which one must be aware or else severe problems may occur. The compiler allocates specific locations in memory for all variables, including string variables. Therefore, enough space must be reserved for each string variable used at the time the program is compiled. The compiler does this by assuming that no string will be longer than 40 characters. If you anticipate that a string will be longer than 40 characters, you must declare the maximum length of the string at the time the program is compiled. Otherwise, disasterous results will occur at the time you run the program. The advantage of reserving specific space in memory for each string is that there is no need for the FRE(O) command, since there is no collection of previously used strings.

A few other interesting features of this compiler are:
1) the ability to protect any number of different areas in memory for Hi-Res graphics, machine language programs, etc;
2) the ability to declare global variables and thus link several Applesoft programs without loss of the variables;
3) the ability to enable or disable the trace command for debugging;
4) saving programs as modules to be called separately during program execution.

The major disadvantage of the compiler is that the size of the program. This should rarely be a problem. I have also found that a simple FOR-NEXT loop is not substantially sped up when compiled.

Therefore, if FOR-NEXT loops are the major reason your program runs slowly, then you should not expect much improvement after using this compiler.

EPSON PRINTER
NEWS

By Daniel B Buchler

1. Deliveries of the MX-80s have commenced again. There was a period of several weeks when you could'nt get any.

2. This writer has finished his HIGHER PRINT program. A summary of the program appears elsewhere in this newsletter. The program has been extensively used in printing article headers (Higher Print Emphasized mode) in this newsletter and paragraphs 5 and 6 below using a modified Higher Text Old English Font in Condensed mode.

3. A Mini'app'les member from Akron, Ohio, attempted to contact the Epson User Group in Raleigh at the address published previously in this newsletter, and received the letter back marked
    Not Deliverable as addressed.
    I checked my original source, the May 1981 edition of Byte magazine and discovered that the last digit of the ZIP code was in error. This may be the reason for the above problem. The address is repeated below:
    Frank Barden
    Epson Users Group
    c/o 1017 Trollingwood Lane
    Raleigh
    NC   27604
    If anybody has information about Barden, his address, etc., please come forward.

4. Chuck Thiesfeld and I have deduced the following facts about how the Epson buffers input to it when in Graphic mode.

    The buffer holds 234 (approx) bytes or characters. The buffer is emptied, either upon receipt of a Carriage Return, or when it fills. While in 960 Graphic mode (120 dots/inch), the internal Epson logic waits until the buffer is full before the print-head starts moving. Then, it uses the buffer in a re-circulating manner, i.e. it removes one byte in order to print that byte, and allows one byte to be put in. If the Apple gets behind in filling the buffer, even apparently for a few bytes, the printer will complete printing, those bytes already in the buffer and not yet

printed. After that it 'homes' the print-head, and waits for another full buffer, or until the total bytes specified by the Graphic set-up have been satisfied. This means the print head returns to the left margin, then moves back again to continue printing from where it leaft off. The effect of all this is that if you do not provide bytes to the printer at print speed (1 millesecond/byte in 960 mode), you will get one or more 'homes' during the printing of a line of graphics. I am in the process of re-coding some parts of the Higher Print program to prevent 'homing' during printing of long lines. Otherwise, the Printer gets terribly slow.

Ah well, you can't have your cake and eat it all the time. The fantastic thing about the Epson is that even when it 'homes' the print-head, the registration is so perfect, you cannot tell that such a thing has happened. There's more on registration in the HIGHER PRINT discussion.

5. An untested piece of advice picked up this month concerning renewing ribbons in a cartridge.
    Open the cartridge and spray with WD 40. Let it sit over night. The WD 40 will cause the unused ink to migrate to the bare areas of the ribbon making it almost like new?

6. As predicted last month, we have a working screen dump program. Cary Mariash did an excellent job producing a program which either prints in 480 or in 960 mode. It will be available on a DOM to be released by the October meeting. It will work with an Epson card modified either with the wire going to the game port (a la Adornato – May, Mini'app'les); or with an Epson with piggy-back logic per Thiesfeld (April, Mini'app'les); or with an unmodified TYMAC, AIO or other parallel cards passing through the high order bit.

HIGHER PRINT SUMMARY

by Daniel B. Buchler

HIGHER PRINT is a program which provides additional character sets for the Epson MX-80 and MX-100 printers. The character sets themselves are derived from the Synergistic Software/Call Apple package *HIGHER TEXT.*
If you do not already own *HIGHER TEXT* it must be purchased separtely as it is a copyrighted software package.

HIGHER PRINT can be used with Applesoft, Integer Basic and several of the Word Processors, such as Apple Pie (Programma International), which provide for user defined software interfaces.

HARDWARE CONSIDERATIONS

A 48K Apple II or Apple II Plus with Disk is required.

HIGHER PRINT will work with an EPSON MX-80/100 plus Graftrax Dot Graphics option and one of the following parallel interface cards:
- TYMAC (no modifications required)
- EPSON with the high order bit line connected to Game port, annunciator output 0. If you or someone in your local Apple User's group can't do this, contact:
  Computer Corner of New Jersey, 439 Route23, Pompton Plains, NJ, 07444, telephone (201) 835-7080
- EPSON with an integrated circuit added to the board which will output the high order bit if the 'DEVICE SELECT' address is odd.
  (Modification published in April, 1981 edition of the Mini'app'les Newsletter)
- AIO or any other parallel card which passes the high order bit through to the printer.

HIGHER PRINT MODES

3 Operating modes are provided:

Large Characters
Large Emphasized
Condensed

These 3 modes use the Graftrax Dot printing mode and may be used in conjunction with all other Epson print features.

Example:

Preceding LARGE Following Print.
In line   and again

HIGHER PRINT DOT MATRIX

Large letters are printed on the paper in exactly the same way they are displayed on a screen. That is in a 14 wide by 16 high dot matrix. The Epson 480 Dot Graphic mode is used, which prints at 60 dots/inch. Therefore one gets a maximum of 480/14 = 34 characters per line or 4.3 characters/line.

Emphasized large letters are exactly analagous to the regular Epson Emphasized mode in which two dots are printed 1/2 dot apart for each dot in the letter Matrix. The 960 dot mode at 480 speed is used to accomplish this.
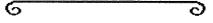
Condensed letters still use the HIGHER TEXT - 14 by 16 matrix, except that the dot spacing is 1/2 dot in both the horizontal and vertical direction. Unfortunately, the dot size on the Epson is a little too large for optimum utilization of all Fonts, so some letters like an 'e' tend to fill in. Using the editor supplied with HIGHER TEXT, it is easy to change fonts so as to make it print to your liking.

The printer makes two passes to print each line, using 8 wires of the print head at a time in order to print the 16 rows of dots. In the case of the condensed characters, every 2nd or odd numbered dot is printed on the first pass, the printer is upspaced one half dot and the even numbered dots are printed. The registration in the vertical direction is as great as it is in the horizontal direction.

SYSGEN

A SYSGEN program is provided, which will allow the user to customize his configuation. The following parameters may be defined:

1. Slot number of interface card

2. The number of dots between lines when printing multiple lines in either Condensed or Large character mode.

3. The number of dots from top of character to next non HIGHER PRINT character when mixing regular and Large HIGHER PRINT characters.

CHEAP COMMUNICATION

by Dan Buchler, et al

This newsletter editor helped ruin Saturday evening for 3 club members: Cary Mariash, Jim White and Daryl Hammond.

You see, Cary wrote the Expediter][review (See elsewhere in this newsletter) using the Pascal Text Editor. This newsletter editor insisted that he get a hard copy. Cary does not have a modem, but Jim, who lives nearby, does own a Hayes. Both Cary and Jim had recently acquired their Pascal systems, so had not had time to get involved much with communications to/from Pascal systems.

The problem was how to send a Pascal file via modem without any Pascal communication software. Well, the two of them got together and came up with a great idea. You don't need any special software. Jim established communication with the receiving computer off line from Pascal. He used Visiterm to do that, but you could do it with the Hayes firmware as follows:

CTL A, CTL H (or F if appropriate),
then CTL A, CTL Q,Telephone number.

If you are sending lower case :

POKE 184+*slot*,0

Then after, communication has been established, and the carrier is on, the trick is to avoid hitting reset, or you will lose your carrier.

Now, put the receiving computer into input mode (whatever happens to be the software package at the receiving will presumably be able to receive data and then save it to disk, though even that too could be done manually on any Apple with a Hayes modem) At the Pascal end, boot up Pascal (just don't hit reset), and then transfer the file which is to be sent to device # which corresponds to your Communication card/modem.

It worked fine!!! To verify the technique, I sent a file to another computer by first of all establishing communication using the Hayes firmware as described above. Then I booted my 'Apple Pie' Word Processor; input a file to memory and then output that file to device #3 (My Hayes is in slot 3). That also worked fine.

TAX DEDUCTION

PUT YOUR APPLE AND NON-WORKING SPOUSE
TO WORK
by Jym Hubbell

Reagan's Economic Recovery Act may have a silver lining for Micro Computer Owners who have NON-WORKING (i.e. Not earning taxable income) spouses. The new individual retirement income account maximum deductions have been increased to $2000. But the 15% of Earned Income limitation has been eliminated. That means you can deduct 100% of your earned income up to $2000.

If you have a NON-WORKING spouse, consider setting him/her up in a small business enterprise which will generate at least $2000 in net earnings. Your spouse could then deduct the $2000 and stash it away in an IRA. Investment yields are at all-time highs, so that $2000 could generate sizable tax-deferred investment income.

Of course, once your spouse is using the Apple to generate income, the computer and other Hardware become depreciable. That's an added bonus! Also, new purchases of hardware may be eligible for the investment credit.

This won't be a good deal for everybody. First of all, can you afford to stash away $2000 (a year)? That money is subject to some pretty stiff penalties if withdrawn before your spouse reaches 59.5 years of age. And, who knows, by that time Tax Rates might be 100%!
(What a pessimist - Editor!)

So, the purpose of this article is only to call your attention to a potential opportunity. I'm not an expert, so if this sounds good to you, do your own investigations. Just keep your eyes open; many newspapers and magazines will have (already have) articles discussing the new IRAs.

Epson Printer News Cont. from page 12

7. Note to new Epson Users. Epson changed the way in which they secure the printers during shipment. The manual says that one should remove the shipping screws from within the printer. Well, on the newer printers, the shipping screws are found *underneath!*

APPLE III NEWS

By Keith Madonna

Apple are trying to put life into the sales of the III with a 'rebirth' of software. There's a new database manager, a new Apple II Emulation disk (more on that later) and a VT-100 Emulator that will interest persons who communicate with DEC mainframes. Apple III Pascal has finally been released. It sells for $250 as do most Apple III software packages.

Fortunately, there is one notable exception to the $250 rule. The Apple dealers have been supplied with a set of 8 programs, the pricing of which is up to the dealer. These are:
- A 'File Cabinet' for Apple III from a user group.
- 'Silentype Printer' drive.
- 'Thunderclock' driver.
- Program to convert 3.3 DOS Text files to SOS Text files.
- The Emulator disk (more on this later).
- 2 Demo Disks.
- RS232 Communications Driver.

There is a preliminary copy of the 'Word Painter' Word Processing package floating around. However official release is not supposed to happen until January.

Mountain Computer (Formally Mountain hardware) are developing a 'Super Serial Interface Card' for the III.

The new Apple II Emulation disk really does'nt do alot new. It works better with communications but still has problems with joysticks. For example if you use the Apple III joysticks with the Emulator, you need two joysticks, with one axis of one controlling emulating PDL 0, and another axis on the other emulating PDL 1 ! To get from Applesoft to Integer Basic or to Pascal, etc, you have to reboot! However it does emulate most Apple II software!

Some details about Apple III memory expansion. The Apple III manual says that you need a hardware modification in order to expand memory. This is what we think is meant by hardware modification:-
When you buy any system what you get are 3 rows of 16 memory sockets. In a 96K system all sockets are populated with 4116 (16,384 bit) Integrated Circuits (ICs) (The same as you get in an Apple II. Those criters sell for around $2

apiece now days.) Now officially you can expand to 128K. To do that one row of 4116s (16 units) are replaced with 32k bit ICs. (32k bit * 16 + 16k bit * 32 = 128k * 8 bits).
Now it turns out that two of the rows of 16 sockets actually have 18 pin sockets, and one has 16 pin sockets. It also happens that the new 64k bit ICs are pin compatible with the 32k bit ICs. Therefore, one can populate two of the rows or 32 sockets with 64k bit ICs, giving one a total of 288k, and supposedly the software will support such a configurartion. Further, because Mostek has an exclusive on manufacturing the 32k ICs, the going rate for the 64k chips of about $37 is only about $3 more than for the 32k chips. However those 32 64k ICs would set you back $1184.

MEETING MINUTES AUGUST

by Ron Androff

Meeting was called to order at 7:45 by our president.
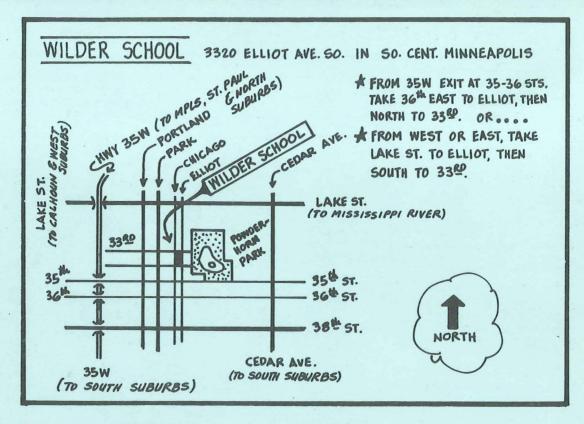
OLD BUSINESS. None.

NEW BUSINESS. None.

Meeting was ajourned at 8:15.

REMINDER Newsletter Deadline
The new deadline for articles for the newsletter will be on meeting night.

MEMBERSHIP APPLICATION FORM

Fill in and return to Membership Co'rd

Name: _____

Address: _____

_____

Zip: __ __ __ __ __

Home Telephone: _____

Office Telephone: _____

Apple II configuration:_____

Special interests:_____

Signature............................

WILDER SCHOOL 3320 ELLIOT AVE. SO. IN SO. CENT. MINNEAPOLIS

HWY 35W (TO MPLS, ST. PAUL & NORTH SUBURBS)

PORTLAND PARK

CHICAGO

ELLIOT

WILDER SCHOOL

CEDAR AVE.

LAKE ST. (TO CALHOUN & WEST SUBURBS)

★ FROM 35W EXIT AT 35-36 STS. TAKE 36ᵗʰ EAST TO ELLIOT, THEN NORTH TO 33ᴿᴰ. OR....

★ FROM WEST OR EAST, TAKE LAKE ST. TO ELLIOT, THEN SOUTH TO 33ᴿᴰ.

LAKE ST. (TO MISSISSIPPI RIVER)

33ᴿᴰ

POWDER-HORN PARK

35ᵗʰ
36ᵗʰ

35ᵗʰ ST.
36ᵗʰ ST.
38ᵗʰ ST.

NORTH

35W (TO SOUTH SUBURBS)

CEDAR AVE. (TO SOUTH SUBURBS)

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MINI'APP'LES
13516 Grand Avenue South
Burnsville
Minnesota, 55337