



mini'app'les

apple computer user group newsletter

VOLUME IV No 9

SEPTEMBER 1981

CALENDAR

| WHICH | WHEN |
|--|-----------------------------------|
| <i>Pascal</i> Note 1 | Wed Sep 2 7:30pm |
| <i>Nibble</i> "Subscribers" Note 4 | Wed Sep 9 7:30pm |
| REGULAR MINI'APP'LES Note 3 | WEDNESDAY SEP 16th 7:30pm |
| <i>Fort Snelling</i> Note 2 | Mon Sep 21 |
| WORK- SHOP Note 2 | Sat Oct 3 11:00am to 4:00pm |
| <i>Pascal</i> Note 1 | Wed Oct 7 7:30pm |
| <i>Genealogy</i> | Sat Oct 10 |
| <i>Fort Snelling</i> Note 2 | Mon Oct 12 |
| <i>Board Meeting</i> | Wed Oct 14 7:00pm |
| REGULAR MINI'APP'LES Note 3 | WEDNESDAY OCT 21st 7:30pm |

CALENDAR

| WHERE |
|--|
| Minnesota Federal 9th Ave S Hopkins |
| Home of Ron Androff 1725 Crest Ridge Lane Eagan |
| UNIVERSITY MINNESOTA ST. PAUL CAMPUS Near State Fair Room B45 Bldg 412 <i>See map inside</i> |
| Nokomis Community Ctr Minnehaha Parkway |
| Nokomis Community Ctr Minnehahaha Parkway |
| Minnesota Federal 9th Ave S Hopkins |
| Minn. Historical Soc |
| Nokomis Community Ctr Minnehaha Parkway |
| S.K. Johnson's Home 6053 Wentworth |
| WILDER SCHOOL Auditorium 3320 Elliot Ave S Minneapolis <i>Map in next issue</i> |

CALENDAR

| WHAT |
|--|
| Regular <i>Pascal</i> Special Interest Group Meeting. |
| Status and Discussion |
| VOICE SYNTHESIZER Night <i>Scott Zerby</i> on Micro Mint <i>Dale Heltzer</i> on VOTRAX Maybe others!!! Serious and Hobbieist Applications - Be there! |
| Programming SIG <i>Dan Buchler</i> on Text Stuff |
| See <i>Mini'app'les Educat'n</i> elsewhere in this issue Bring your Apple! |
| Regular <i>Pascal</i> Special Interest Group Meeting. |
| Genealogy Conference. |
| Programming Special Interest Group Meeting |
| Yet to be determined |

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

MINI'APP'LES INFORMATION

MINI'APP'LES OFFICERS

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

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.

MEMBERS OF THE BOARD

| | | |
|--|--|-----------------------|
| Membership Co-ordinator | Ann Bell 8325 39th Avenue N. New Hope, Minnesota, 55427 | 544-4505 |
| 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 |
| Software Distr. - Mail and Software Sales | Hugh Kurtzman | 544-7303 |
| Hardware Sales | Al Peterman | 721-3295 |
| Disk Sales | 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 |

DOMs

DOMs (Diskettes of the Month) are available at meetings or contact Software Sales coord'r.

Newsletter
Contributions

Please send contributions to the Newsletter Editor. Hard copy binary or text files (ASCII coded) are preferred, 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 450 (approx)

DOM #6

by Ken Slingsby

The sixth Disk Of the Month contains several programs written by local members and a few programs from other user groups' newsletters which were typed in by our members. Three of the programs created documentation which formed the basis of separate newsletter articles. There is a mix of games, demos, utilities, and general interest programs.

HIRES SCREEN INVERTER

This program takes a picture on hires page 1, inverts it, and draws it on page 2. Just in case your TV monitor gets tipped over, use this to put your HIRES back in shape. The program was written by Steve Johnson.

BASEBALL

For most of the summer it looked as though the only way to see a baseball game was to play it yourself. This game gets the Apple involved. From an article in the Dec. 1980 Softside Magazine. The article contains a list of variables and their function as well as a good description. Entered by Steve Johnson. (Note: Softside Magazine covers the TRS-80, ATARI, and APPLE. Their major emphasis seems to be TRS, however there have been many good articles for the other computers. They are heavy in games. I am not aware of any newsstand selling this magazine. Perhaps it is available only through subscription. -Ken)

CONNECT-A-DOT

A line drawing game entered from a Softside article by Steve Johnson.

MINNESOTA MAP

This program draws a map of the state showing major bodies of water and rivers. By Steve Johnson.

MINNESOTA MAP/RADAR

The same map as the previous program with a radar sweep centered on the Twin Cities. Written by Steve Johnson. *Where are the storm clouds on your radar map?*

PAYMENT CALCULATOR

A program for calculating the payments for a loan at varying interest rates and several periods of time. The resulting chart can be displayed or printed and should be helpful in budget planning. By Alan Peterman.

BANNE**CATALOG MANAGEMENT**

A program for displaying the descriptions of the programs on this disk. It allows running them with a single keystroke. By the NSAUG of Chicago.

HIRES PATTERN PLOT

A HIRES pattern demonstration that probably is a mathematical name. From the River City Apple Corps with an addition by Chuck Boody.

ASSEMBLER

An assembler written in Applesoft. This program was based on a similar program written for a Hewlett Packard computer. More documentation is contained elsewhere in this newsletter. By Mike Gooding.

PRODUCE BINARY

This program takes the output file of the Assembler and produces a binary output file. By Mike Gooding.

PRINT

A program to print a sequential text file on a printer. It was included with the Assembler, but has uses wherever a text file needs to be listed. By Mike Gooding.

DEMO.ASM

A sample file to be assembled by the above Assembler. Examine this file to get an idea of the syntax required. By Mike Gooding.

LITTLE WINDOW

A fancy title page program showing use of the Apple's window commands. The REMs in the program explain the action. By R.M. Thompson (Dallas Apple Core (?)).

MONEY

A program to demonstrate a method of printing dollar amounts (or any two digit decimal amounts) in a justified manner. By Mike Gooding.

DOLLAR USE EXAMPLE**DOLLAR BINARY**

An example of printing dollar amounts justified using a binary routine to speed up the justification. The result always has two digits after the decimal point. By Mike Gooding.

Continued on next page

TEXT WRITER B1

A text processor for creating printed documentation. This program was based on an article in Micro Magazine. Mr. Hamelink went a few steps further by adding many routines to make the operation smoother and much easier. By William Hamelink.

STEVE'S SUPERSHAPER
STEVE'S SUPERSHAPER REV 02

A program to create HIRES shape tables. This one allows the user to create the shapes with the game paddles. The shapes can be edited before or after converting the shape into a shape table. The program REV 02 is identical to the first except most of the REMs have been removed to allow storage of more tables. See newsletter article for further info. By Steve Sullivan.

JUGGLE
BALL

A demonstration of the Supershaper. The file BALL contains the shape table for the program. By Steve Sullivan.

REM LISTER

This program will list (or optionally print) just those lines containing REMarks in an Applesoft program. This may prove helpful in finding certain areas of a program without listing the entire program. To use: RUN the program. This will create a text file OUTLINE. Load the target program. EXEC OUTLINE. RUN 63000. By N. Hurzberg, Call-Apple Nov-Dec 1980.

HEX/DEC CONVERTER

A program to convert numbers from one base to another. By Val Golding, Call-Apple Nov-Dec 1980.

IDS PRINT FONT CHANGE

A routine to demonstrate a method of sending commands to an IDS printer. This is necessary as the IDS uses the control 'D' to delineate printer commands with the resulting confusion if Apple's DOS is active. By Jerry Rivers, Michigan Apple Computer Club.

PROPER EXTENDED STORAGE 3.3

This routine will free an additional nine sectors for file or program storage on a 3.3 formatted disk. The space comes from unused sectors in track three. By Michigan Apple Computer Club.

MEM DISPLAY

BRUN this file to get a display of the contents of RAM memory. The dump starts at \$800 (2048) and continues into the ROM area. To control the listing, use the space bar. Each time the routine is stopped, the current address is displayed.

FANCY FORMATING

A routine to demonstrate methods of obtaining various output formats (integer, floating single precision, and double precision). By Poke-Apple Mar 1980.

NEWSLETTER MEDIA

We encourage everyone to contribute articles for publication in the Mini'app'les newsletter. Even if you are a beginner, your experiences are invaluable to other beginners. So please write down your ideas and thoughts.

Don't be nervous about quality of writing. We'll take care of that!

By the way, your Newsletter Editor has file conversion programs to Apple Pie Binary or Text files from:

SuperText I
 Super Text II
 AppleWriter
 Dan's Edit
 Pascal Editor (currently via
 MODEM only)
 TOUGH (Nibble)

Note: APPLE PIE is utilized to produce the Mini'app'les newsletter.

If you do not have a text or word processor, we will accept hand written manuscripts!

BLIND READERS

by Dan Buchler

I am working on providing disks or tapes with text/binary files which can be sent to a VOTRAX or any other suitable Voice Synthesizer. If there are other IAC user groups reading this, please contact me if you would be interested in participating in a program to provide blind apple users with disks and/or tapes containing newsletter or other articles. This would allow them to be self sufficient!

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EPSON PRINTER NEWS

by Daniel B. Buchler

GRAFTRAX 80 HAS ARRIVED

Despite rumours to the contrary, Epson started shipping the dot graphics option in small quantities this month. About 15 club members have received their set as of this writing. If you want a set, call Al Peterman. Act quickly, because the factory is paying a \$10 rebate to all purchases made before Sept 30th.

Graftrax 80 Features

1. The option consists of 3 2716 integrated circuits which plug into the B1, B2 and B3 slots on the Epson printer mother-board.
2. No special software is included. However, several of us in the club are working on this and screen dumps, special character sets, etc should become available very quickly. If you can't wait, there are several companies advertising such software. Also, the MX-100 comes with graphics software and we may be able to utilize same.
3. The French, English, German and Japanese character sets are not included. Instead an *Italic Character Set* is included and is selectable under software control.
4. Backspacing works and thus allows underlining from most text editors. However it won't work correctly in Double-Strike mode. (See manual)
5. Emphasized and Double Strike can be turned on and off at will within a line.
6. Turn 'on' and 'off' the high order bit under software control. This allows selection of the Block Graphics regardless of interface manufacturer.
7. There are 3 dot graphic modes:
 - 480 dots across page (60 dots/inch).
 - 960 dots across page (120 dots/inch). In this mode, successive dots overlap each other (like in the Emphasized mode)
 - 960 dots across page, high speed mode. Head moves twice as fast as above 960 mode.

In all cases you can use any or all of the print wires on the print head except the bottom one. When in graphics mode, each byte sent to the printer defines which of the top eight wires will be selected. The manual assumes that Apple owners will use the middle 7 wires because of the problem of setting the top (high order bit). I am not so sure that this is a valid assumption. HIRES graphics is mapped vertically in groups of 8 lines, so 8 wires would be convenient.

This is a great option that makes a great printer even better!

Other Epson News

Bad for perspective buyers: The demand is so high that delivery is now projected at 6 to 8 weeks. Apparently Epson have captured 30-35% of the world Printer market, all with the MX-80 and derivatives thereof.

One of our members, on making the rounds of local dealers was told that parts for Epsons were hard to come by. According to the dealers, one has to send the Epson back to California in order to get it serviced. Now this is probably true but for reasons not immediately obvious.

Firstly, of about 80 Epsons, purchased through Twin City Personal computer clubs, only one has had a problem. Therefore, there has been no incentive anywhere to set up a properly stocked service capability. Secondly, Epsons growth has been so rapid that there has'nt been time to set up a good service capability anywhere. Your newsletter editor believes that there are so many Epsons around in the Twin Cities that when the demand arises, we will have a local service capability properly stocked with parts.

An ad in an English magazine lists 4 different MX-80s-

MX 80 FT/1 includes platen and tractor
 MX 80 FT/2 as above plus dot graphics
 MX 82 no platen but with dot graphics.

There's a rumour going around that there is a modification being developed to increase the speed of the MX-80 from 80 to 120cps.

THE INSPECTOR

By John L. Hansen

Two interesting and useful programs available to Mini'App'Les members on IAC and DDM disks are "Disk Access Utility" and "Sector Scan". The former was written by Dan Paymar and the latter by one of our members, Dick Meyer. Disk Access Utility will let you examine the track/sector contents of any copyable disk; you can examine the Volume Table of Contents and see how much disk space you have left, look at the Directory, find the location of track/sector lists, and examine programs to see how they are saved to the disk. Sector Scan lets you do these same things, but also permits you to modify disks and save the revised information by to a disk. "Dan's Disk Utility", also by Dan Paymar, will also let you correct or modify disks.

I have used both of these programs quite a bit (no pun intended) lately to rebuild a directory and to undelete some programs. The problem is that you must load each of these programs before you can work on the disk. "DAU" simultaneously shows both hexadecimal and ASCII representations of the sector contents, but as a result, must show you the sector in two sections. Sector Scan gives you the complete hexadecimal contents of the sector, but you must push "A" and "RETURN" to see the ASCII representation. If you make a change on the disk, run it to see if you've done it correctly, and have not, you have to load the utility program again to do any corrections.

Fortunately, there's a way to have your cake and eat it too (to coin a new cliché). Omega Software Products of Chicago has come out with a new disk-and-memory utility which can do all the things mentioned above and more and be resident in your computer in the currently empty DB socket (if you have an Apple II or an Integer ROM Card -- APPLE II+ owners see below) BY doing a CALL-10240 (you can also get there from Applesoft and the Monitor), you can call up "THE INSPECTOR" and do all of those things mentioned above and many more:

1. Read track/sector combinations a full sector at a time (in hex). If you want to see the ASCII display, hit "A". If you don't like the flashing and inverse ASCII characters, hit "X" and get normal ASCII characters. If you want to change the disk, "E" gives you the EDIT mode, allowing you to change, insert, or delete information from memory in either ASCII or hex mode. When you've made

the desired changes, you can then write them to your disk. Using the ";" (+) key or the "-" key, you can scan forward or backward a sector at a time.

2. Select the buffer location where you want the sector information stored in memory. This permits you to read a disk without overwriting a program that is already in memory.
3. CTRL-I is used to increment both the sector and buffer sequentially, making it possible to read sequential sectors into memory quickly. Using the WRITE command and CTRL-I lets you read these sectors to another disk. If you have blown DOS or a track or sector on a disk, this procedure will let you transfer replacement data to that disk.
4. "M" reads Track \$11, Sector \$00 and prints out a map of used and unused sectors.
5. The NIBBLE READ command gives you first a Hi-Res graphics display that I found to be confusing. But the manual assures me that with practice, I'll be able to get useful information from it. The location of the self-sync (FF) nibbles are shown by horizontal lines. Hitting any key gives you a nibble dump of the selected track. "^" increments to give a nibble dump of the next track. The nibble display, which scrolls can be stopped at any time and can be toggled between fast and slow display speeds.
6. THE INSPECTOR will also display HEX/ASCII information from memory, starting at the buffer location that you select. The FIND routine will search all memory (including ROMs) for a HEX or ASCII string and will list all memory locations where the string is located. An ASCII search will look at both normal and flashing ASCII characters. LOCATE will do the same thing for strings on the disk.
7. CTRL-Z does a jump to \$0300 and permits you to use your own subroutines. Information is given on using this command for a screendump print routine.

Tips to the user tell how to locate RWTS on a disk with a foreign (non-standard) DOS or with a blown DOS, how to use a Screen Print Routine using CTRL-Z to get hard copy, and how to read half tracks.

Continued on next page

The Inspector Continued

Suggested applications include verifying disks, transferring DOS, eliminating control characters from filenames, undeleting programs that you have accidentally or deliberately deleted, and editing basic programs in memory (including entering illegal commands, illegal line numbers, quotes within print statements, etc.).

A small section also discusses nibbles, including address field and data field markers, checksums, volume, track, and sector information.

APPLE II+ owners must have an Integer Card, Language Card, or 16K RAM Card. If you have the Integer Card, the EPROM is installed in socket D8 on the card. If you have the Language Card or 16K expansion board, THE INSPECTOR comes on a disk. After booting with the DOS 3.3 System Master, you insert a backup copy of either the DOS 3.3 BASICS disk or the DOS 3.3 SYSTEM MASTER and "RUN THE INSPECTOR." THE INSPECTOR is loaded each time you boot with modified disk and is accessed the same way as the EPROM.

THE INSPECTOR does everything I wanted it to do. Unfortunately, it also does something I didn't want it to do. On Integer APPLES with the Language Card, APPLESOFT and Pascal will not load into the Language Card when the EPROM is in the computer. Unfortunately, nearly all of my disks have APPLESOFT HELLO programs, making it necessary to boot using a disk with an Integer HELLO program, and, of course, I can't load any APPLESOFT program into memory to work on. Omega was aware of the problem shortly after the first shipments and said that a fix would be ready in a couple days. Unfortunately, that was 14 days ago and I still don't have my modification.

THE INSPECTOR is available from Omega Software Products, Inc. in Chicago. Ads with phone listings and addresses are in Call-A.P.P.L.E., BYTE, and other computer magazines. Price is \$49.95.

TEXT WRITER

by *Milliam Hamelink*

THIS IS A PIECE OF TEXT THAT WAS WRITTEN ON THE TEXT WRITER B1 PROGRAM. THE ORIGINAL PROGRAM (A VERY SMALL ONE WITH AN ATROCITY OF AN EDITOR) WAS IN MICRO COMPUTING, MAY 1981

THIS TEXT WRITER ACCUMULATES THE TEXT INTO BLOCKS WHICH ARE ACTUALLY STRINGS OF A MAX LENGTH OF 230 CHARACTERS. THE NATURE OF THE

PROGRAM (A CARRY OVER FROM THE MICRO VERSION) REQUIRES THAT A CTRL R-LINE FEED OR A CTRL S-LINE FEED AND SKIP OR A CTRL P PARAGRAPH AND LINE FEED WILL START A NEW STRING (BLOCK). THIS SEEMS TO BE NO PROBLEM AS THESE ARE STANDARD COMMANDS OF THE TEXT WRITER. THERE IS A 500 BLOCK LIMIT ON THE TEXT WHICH IS DIMENSIONED IN THE A\$() ARRAY.

ALL OPERATIONS AND SPECIAL KEYS ARE SELF EXPLANATORY ON THE SCREEN. THERE IS ONE LINE (820) THAT HAS SOME SPECIAL CODING FOR AN MPI PRINTER. OTHERWISE THE PROGRAM SHOULD RUN ON ANYTHING. I USE IT WITH A SERIAL RS232 CARD IN THE STANDARD SLOT 1.

THE PRINTOUT CAN BE ADJUSTED TO ANY LINE LENGTH WITHIN THE LIMITS OF YOUR PRINTER. THE LEFT MARGIN CAN ALSO BE SET. THE PROGRAM WILL ALWAYS END A LINE AT THE LAST WORD BEFORE THE LENGTH LIMIT. YOU SHOULD BE CAREFUL NOT TO GET ANY WORDS OR UNSPACED LINES OF CHARACTERS LONGER THAN THE LINE LENGTH.

THE EDIT PROGRAM DOES STRANGE THINGS TO A BLOCK OF TEXT. DON'T WORRY ABOUT IT, JUST COMPACT THE ARRAYS WHEN YOU ARE DONE PLAYING AROUND WITH IT.

THERE IS SOME TROUBLE NORMALLY TRYING TO STORE ARRAYS ON DISKS IF THEY CONTAIN COMMAS, THUS I HAVE USED THE UNDERLINE FOR A COMMA. THE PRINTOUT WILL CONTAIN THE DESIRED COMMA, THOUGH THE WRITE, REVIEW, AND EDIT FUNCTIONS SHOW THE UNDERLINE.

IF YOU EVER CRASH OUT AND HAVE A LOT OF TEXT IN THE MACHINE THAT YOU WANT TO KEEP, GET BACK INTO THE PROGRAM WITH A GOTO 380; THE START OF THE MENU.

TREASURER'S REPORT
by *Marilyn Thomas*

July 15th Balance 1660.89

July 15th - August 18th*Expenditures*

| | |
|---------------------------|--------|
| Labels (System Supply Co) | 19.70 |
| Bulkmail account | 100.00 |
| July Newsletter | 329.90 |
| Disks (Peter Gilles) | 125.00 |

Income

| | |
|---|---------|
| 41 New members (6 @ \$10, 35 @ \$5) | 235.00 |
| 15 New members at July meeting | 75.00 |
| Apple Orchards | 4.00 |
| MECC Disks | 118.50 |
| DOMs | 424.00 |
| Ending Balance August 18th | 1942.79 |

MINI'APP'LES EDUCATIONAL QUESTIONNAIRE

The following Seminar or Instructional series are potential series or sessions that can be presented, dependins only on sufficient interest by the membership. Please indicate your interest accordins to the following codes:

- T - Would lead or assist in presentation of this subject.
 H - Very high interest. Would make extreme effort to adjust my schedule to attend a session in this subject.
 M - Moderate. Would attend if it didn't conflict with my schedule.
 L - low. Some interest. Would attend if combined with another subject.

blank - No interest.

1. Introductory Proqramming:

- Inteser Basic
 Applesoft
 Apple Pascal
 Apple FORTRAN
 6502 Assembly Language

2. Disc Storage Utilization. (Data Base Design)

3. Disc Storage/Access Techniques:

- Basic
 Pascal
 FORTRAN

4. Interfacins with Peripheral Devices5. Systems Design Techniques6. Large Systems in Pascal: Libraries, Segmentatoin and swappings.7. Proqramming Workshop: Bring your system, and problems and let the experts have a crack at helping you.

If your interest is not with the above mentioned subjects, please indicate what subjects you feel would be of interest.

8. 9. 10.

The following information is voluntary. (If you indicated 'T' on any subject, above....need I say more??)

NAME

PHONE:

(Home)

(Work)



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APNOTE

APNOTE INDEX

July 6, 1981

A. HARDWARE MODIFICATIONS

1. Lower Case Apple
2. User Firmware (2716)
3. Apple Communications Card Modification
4. Adding Colors to Hires
5. Auxiliary Keyboard Plug
6. Five Additional characters from the Keyboard
7. Direct Video Modification

B. BASICS

2. Applesoft Hires Routines
3. Applesoft Array Eraser
4. Applesoft Hires Screen Function
5. Generating Tones in Applesoft
6. Literal Input Routine
7. Patches for Dow Jones Evaluator
8. Print Using Simulator
9. Converting Integer Basic Programs to Applesoft
10. Applesoft Random Numbers
11. Applesoft Out of Memory
12. VTAB and HOME Converter for Sup-R-Terminal

C. MACHINE LANGUAGE

1. Floating Point Package
3. Apple II Mini Assembler
5. ROM Monitor Subroutines
8. Adding Features to LISA
9. Putting Programma M/L onto Disk

D. INTERFACING INFORMATION

2. Cassette Interface
4. DEL Character Killer
5. Correction To Sup-R-Terminal Preliminary Manual

E. PRINTER INTERFACING

1. Carriage Return Delay
2. Parallel Printer Handshake
3. Serial Handshake Modification with Tabs
4. Centronics Printer Information
5. Centronics 730 Driver
6. Tabbing with Apple Peripherals

F. DATASHEETS

1. Apple Hobby/Prototyping Board
2. Graphics Tablet
3. Apple Instrument Bus Interface Card
4. The Controller
5. Apple Post
6. Silentype Thermal Printer
7. Verbatim Technical Bulletin
8. Applesoft ROM Card Documentation

G. PASCAL

1. Lower Case Patch
2. Linefeed
3. Take 280
4. Getrem
5. Transfer & Sum 512
6. Disk Directory Structure
7. Foreign & Gettext
8. Trendcom All Interfacing
9. Comm Card Baud Rate Changer
10. Interfacing Foreign Hardware
11. Long Integer Fix
12. Hires
13. Known Pascal Bugs
16. Pascal Units
17. Pascal Peeks & Pokes

H. TEXT AND GRAPHICS INFORMATION

1. Text Screen Mapping and Use

I. LISTS

J. DOS

1. DOS Demo Programs
2. 3.2.1 Append Fix

MINI'APP'LES EDUCATION
by Chase Allen

As your newly appointed Education Coordinator, I am approaching the job with enthusiasm and great expectations. I accept this responsibility in the belief that one of the principal reasons for the existence of our group is to provide a liberal opportunity to share the knowledge of the workings of this wonderful beast - the APPLE - with our fellow members. In so doing we help each other, and learn in the process.

At the last meeting I distributed a survey, designed to give me a feel for the distribution of interests. It is reproduced here again. If you did not complete one at that meeting, it would add to the interest sample if you would complete it and leave it for me at the upcoming meeting at the U of M. (If you wish, you can call the responses in to me) Based on the result from this I will try to find qualified, interested people to provide this opportunity, and to schedule these sessions as best seems appropriate. My goal is to provide one or two such sessions each month, probably on Wednesdays, not conflicting with existing club meetings.

Of particular note is a session that Dave Nordval has arranged for Saturday, 3 OCT, at Nokomis Community Center. It will last from 11:00 AM until 4:00 PM, and is best described as a workshop. The concept is to provide the place and the expertise for you to bring your system, and set up your problem so that Dave and his staff of volunteer experts can help you on the spot. If this is a successful venture you can rest assured it will be repeated, perhaps with more specific application areas.

Each month I will try to submit a newsletter column, and keep you up to date on what is happening on the Education front. If I am permitted the liberty, I will also give a monthly tip. This month's tip:

GIGO Means Garbage In/Garbage Out. Unfortunately, the converse does not apply. If good stuff goes in you can still get Garbage Out. The only solution to this dilemma is to first look at what you want out! Then select what you need to put in. Then comes the real work: developing the relationships between what goes in and what comes out...i.e., how do you get there from here. Each minute spent in design can save you hours in coding, re-coding and re-re-coding (also known as testing), and makes the end result that much more useful.

Above all, I can't do it alone (and won't try to!). If you feel qualified to help, and are interested, I need you!!! I also need to know what your needs are. Give me a call. 432-6245 at home most evenings, and 854-1331, ext250 at work.

NOT DIRECT COMMAND

*Information supplied by Chuck Boody
Article by D. Buchler*

Have you ever been in a situation where your program aborted and returned to BASIC, leaving some important data in memory which you wanted in a TEXT file. Then you tried to reenter the program with a GO TO only to have the system display:

NOT DIRECT COMMAND ! ! ! !

Well there is a way around that:

POKE 51,0:YOUR COMMAND

YOUR COMMAND could be a DISK I/O COMMAND or a GOTO 1000, where 1000 was the entry point into the I/O sequence in your program. The POKE 51,0 must be on the same line as the GOTO or DISK COMMAND.

ASSEMBLER

Programs by *Mike Gooding*
Documentation by *Ken Slingsby*

If you have ever wished for an Assembler but couldn't justify the cash outlay for something you may not use a lot, this is definitely the answer. For occasional use this Assembler may be all you will ever need. The syntax (the form of the commands you give it) is very much like the LISA Assembler or the DOS Toolkit and very straight forward. You may be able to get documentation for either of these. This Assembler is based almost entirely on a chapter in "6502 APPLICATIONS BOOK". Much of this documentation is based on that chapter and Mike's notes.

The Assembler is a two pass operation (really three pass if you count the conversion from a text file to the final binary). That means on the first pass the Assembler reads the input file, checking for syntax errors, and creating an output file containing the source coding and some of the machine language. During the first pass the Assembler cannot complete forward references. Also during the first pass the symbol table is built.

If no errors are detected, the Assembler goes on to the second pass, satisfying the forward references found in the first pass and completing the machine language conversion. The resultant output is stored as a text file.

The assembly is now complete. The program PRINT can be used to view the assembly if you want to insure that the Assembler understood your commands correctly (we never have any trouble here do we??). The program PRODUCE BINARY will read the output file and produce a binary file ready to run.

As you may have guessed by now there are several files that need to be created in the assembly process. They are:

XXXX.ASM - - -Assembly source file
(text)
XXXX.OBJ - - -Assembled output
text file
XXXX.BIN - - -Binary file from the
assembly.
ASM.TEMP - - -Temporary internal
file.

The first file is the only one you have to create. The others are generated by the Assembler process.

The sequence to follow in using the package is:

- 1). Create the XXXX.ASM text file using a text editor. A suggested Editor is the EDIT/CREATE FILES by the Dallas Apple Core which was on our DOM #2. This DOM ran out of space too soon to allow repeating it here. There are several text editors that will also work such as Apple Pie. The resultant text file should be a sequential text file. For assistance in writing the text see a good reference such as PROGRAMMING THE 6502 by Rodney Zaks. There is a sample input file included on this DOM. It will assemble error free.
- 2). After the text is created, RUN ASSEMBLER. It will ask for the file name of the input. You need not supply the .ASM as this is assumed. The assembler will create the file XXXX.OBJ. If errors are detected, the errors will be included in the listing. If no errors are detected, the two passes will complete and the Assembler will return to Basic.
- 3). Run the PRINT program to view the listing and if everything is satisfactory, RUN PRODUCE BINARY to make the XXXX.BIN binary file.

The Assembler uses the standard 6502 opcodes. For those of you who are following along in the "6502 APPLICATIONS BOOK" pages 243-258, the following list is a review.

LABELS

- 6 characters max
- END (as a label!) terminates assembly.
- ';' indicates comment
- LABEL is optional unless you intend to reference it
- DO NOT use A, B, BIT, X, Y

DIRECTIVES

- .BYTE one byte memory assignment
- .DBYT two byte memory assignment
- .WORD two byte memory assmt, low byte first
- .TEXT hex representation of ASCII data
- commas may be used to assign multiple locations (eg .BYTE \$4C,\$00,\$30)

CONSTANTS

- .HEX preceded by \$ LDA #20
- .BINARY preceded by % LDA #%1000
- .DECIMAL preceded by (nothing) LDA #32
- .ASCII preceded by ' LDA #'A

Continued on Page 15

TURNING THE PAGESwith *David E. Laden***BYTE -- JULY 1981**

The July topic is Energy Conservation.

System Review: Mountain Computer's MusicSystem by Robin B. Moore. Pages 60-92.

Energy Measurement with the Apple II by William H. Murray. Pages 294-299. Programs written in Applesoft and machine language.

Computing Inflation With the Consumer Price Index by Joe Haldeman. Pages 300-302. This is an Applesoft program.

Micromodem Support in Apple Pascal by Scott G. Robinson. Pages 308-324.

Hardware Review: Videx Keyboard and Display Enhancer by Mark Pelczarski. Pages 354-356.

Computer-Aided Drafting with Apple Pascal. Pages 388-429.

COMPUTE! -- JULY 1981

Intermediate BASIC Tutorial: How To Make Conversation With Your Computer by John Victor. Pages 68-70.

Animating Integer BASIC Low-Resolution Graphics by Leslie M. Grimm. Pages 97-102.

Oscilloscope by Rob Smythe. Pages 103-104. This Applesoft program demonstrates waveforms using high resolution graphics.

The Apple Hi-Res Shape Writer by Doug Hennig. Pages 106-111.

CREATIVE COMPUTING -- SEPTEMBER 1981

The September issue is Creative Computing's Buyer's Guide.

INTERFACE AGE -- JULY 1981

"Computerized Communications is the topic for July. In addition to the following Apple related articles, there are articles about data communications, bulletin board systems, and networking.

Apple-ications: An Apple for Energy by Tony Dirkson. Pages 40-42.

Hardware Evaluation: High Quality in Printed Output The Epson MX-80 Printer by Roger H. Edelson. Pages 58-62.

INTERFACE AGE -- AUGUST 1981

Apple-ications: The Computer Assisted Doctor by Tony Dirkson. Pages 44-46.

About Sorts by Gene Cotton. Pages 67-69 and 146. This is the first of two parts.

Major Additions To VisiCalc Revealed by Carl Heintz. Pages 70-148-149.

INTERFACE AGE -- SEPTEMBER 1981

This issue of Interface Age concentrates on Medical Applications of computers.

Apple-ications: CAI without Programming by Susan E. Luttner. Pages 48-49.

About Sorts - Part II by Gene Cotton. Pages 82-92.

KILOBAUD MICROCOMPUTING -- JULY 1981

Dial-Up Directory: Novation Unveils New Modem Line by Frank J. Derfler, Jr. Pages 18-19. The Apple-Cat II modem is discussed.

Mix It Up On Your Apple by R. Daniel Bishop. Pages 108-114. This article describes the process of using text with high resolution graphics page 2.

Electronic Orrery by Fred J. Gunther. Pages 150-151. This Applesoft program simulates planetary motion.

Color Your Apple-II by Nat Wadsworth. Page 212. Datasoft's Micro-Painter is reviewed.

MICRO

Note: The format of the MICRO entries will be changing. The result is a condensed listing. This is due to the increased volume of Apple material in MICRO.

MICRO -- JULY 1981

- Function Input Routine for Applesoft
- Vector Calculations with a Microcomputer
- Phone Search
- Double Barrelled Disassembler
- Single-drive Disk Back-ups for Apple
- Enhanced Input Routine
- Binary File Parameter List
- Expressions Revealed, Part 1
- Electronic Typing Program for the Apple
- An Introduction to Bit Pads

MICRO -- AUGUST 1981

- Sorting
- On Buying a Printer

Continued on next page

Turning the Pages *Continued*

- Utilities for the Paper Tiger 460
- Expressions Revealed, Part 2
- Common Array Names in Applesoft II
- The Extended Parser for the Apple II
- Search
- Applesoft Error Messages from Machine Language
- Trick DOS
- Sorting with Applesoft

ON COMPUTING -- SUMMER 1981

Announcement was made with this issue that onComputing will become a monthly publication beginning in November 1981. Also at that time, onComputing will change its name to Popular Computing. This is certainly a welcome change for a fine magazine in the eyes of this columnist.

A Beginner's Guide To Memory by Elizabeth M. Hughes. Pages 18-26.

Super-Text II: One Writer's Appraisal by Voyle A. Glover. Page 40.

Pascal for the BASIC Programmer Part II by Paul Friedman. Pages 48-53.

Micro Accountant by Frederick Graves. Pages 80-86. Applesoft program.

PERSONAL COMPUTING -- JUNE 1981

Financial Modeling Software: Tools for the Overworked Manager by Robert Perry. Pages 22-28, 59-70, and 108.

Assembler Continued from Page 13

NOTES

- Free format (label in col 1, space separators)
- ';' after opcode/operand indicates comment follows
- Statements should be less than 70 characters
- '.' indicates current value of location counter
- Indexed addressing:
 - label,x
 - label,y
- Indirect addressing:
 - (label)
- Indexed indirect:
 - (label),x
 - (label),y

FILE NAMING CONVENTIONS

- Source files are name.ASM The .ASM is assumed to be present.
- Object-files are name.OBJ (The Assembler deletes and creates this one automatically).
- ASM.TEMP is a temporary file with the first pass results in it.

Any of these files may be printed with the text editor or with the PRINT program.

Memories Are Made Of This by Paul Bierman. Pages 41-49. This is an introduction to the different types of computer memory.

THE FIRST SIX DOMs

By Ken Slingsby

The Disk Of the Month (DOM) celebrates its sixth issue this month. The DOM has not been issued monthly for several reasons such as the press of work, vacations, and lack of material to fill a disk. Regarding the lack of material, we would have liked to issue the DOM more frequently, but have resisted, feeling that the users would get more for their money if we always issued full disks.

We hope the users have found the disks useful and enjoyable. There haven't been any major complaints and only a few small problems.

Below is a list of the contents of the past DOMs. If you have missed any of the programs, contact the Sales Coordinator, Hugh Kurtzman at the next meeting or by phone to get your order in for back-disks.

When the DOM was started in November 1980, the rules for contribution were (and still are) simple. The program had to be an original work of the contributor or from the public domain. There is no restriction on category as long as the program would be of value to others.

I believe these requirements have been met with all the DOMs. With assistance from others, (several times by the Newsletter Editor) the programs have been screened for copyright material. All of the disks have been within 10 sectors of being full. Sales have been good on all the DOMs despite the long lines and (initially) our underestimating the demand.

As always if you have problems or questions concerning the DOM, please feel free to contact myself or one of the board members.

The first six DOMs:-----

DOM #1

B ALIVADER
 A MENU
 A NOTES ON PROGRAMS
 I LUNAR-LANDER
 I DEATH STAR
 I HI-RES DRAGON MAZE
 I AIR FORCE BOMBER
 I AIR ATTACK!
 I SUBMARINE
 I SPACE-WAR V
 I CARRYING-BALLOON
 I NEW FLY KILLER
 I COLOR DICE
 A BERTHA
 A CALC PRIME FACTORS
 A CATALOG MANAGEMENT
 A CATALOG MANAGEMENT
 - EDIT
 A APPLE PIE
 B HI-RES CHARACTER
 GENERATOR
 B CHARACTER TABLE
 T PIE

DOM #2

I SYMBOLIC MATH.I (BYTE)
 I SINGLE DRIVE COPY PGM
 A DISK SPACE
 A HIRES SCREEN WRITER
 A MENU
 A CALC+
 A CATALOG MANAGEMENT
 A WIND CHILL
 A SYMBOLIC MATH.A (BYTE)
 A THREE-D CUBE
 A TREAS BILL EVALUATOR
 A BOWLING SCORE
 A TAX.79
 A FILE CABINET.REV4.1
 A PLOT SUB
 A SCALE PLOT III
 A SCALE PLOT IV
 A SHORT RUN PROFITS
 A DEMAND SCHEDULE
 A SCALE PLOT V
 A ELASTICITY CHECK
 A MARGINAL REVENUE
 B READAT
 B FID
 B DEMUFFIN
 B HGR PRINT
 B B.CATALOG

DOM #3

A BARN
 A CHECK BOOK BALANCER
 A COPY HGR PRINT
 A COST SCHEDULE
 A CUBIC COST FUNCTION
 T DOM #3
 A EDIT/CREATE FILES
 A GAMBLER'S RUIN
 I MINI'APP'LES
 B HGR PRINT
 A HONEYCOMBS AND
 HERRINGBONES
 T INSTRUCTIONS
 B LC ADAPTER
 A LINEAR PROGRAMMING
 EXAMPLE

A LISSAJOUX
 A MAKE RATIO
 A MARGINAL REVENUE
 A MENU
 A MONOPOLY PROFITS
 A MULTIPLE LINEAR
 REGRESSION
 A POWER ESTIMATOR
 B RADIO
 A RADIOACTIVE
 B READ FILE
 B SHOOTING ALIEN
 A STRIP VISICALC
 A TRIANGLE ILLUSION

DOM #4

A PULSAR-INTRO
 B BPULSAR1
 B BPULSAR2
 B BPULSAR3
 B BPULSAR4
 B BPULSAR5
 B BPULSAR6
 B BPULSAR7
 B BPULSAR8
 A HIRES-TO-LORES DEMO
 A INPUT DEMO BY TWE
 I INT CATALOG
 I JANE'S EGG TIMER
 A NUMBER FORMATTER DEMO
 A POLAR PLOTS
 A SPIRAL DEMO
 A SURFACE
 A ALPHABETIZE
 B ASTEROYDER
 I LIT'L RED BUG
 A MOONIE
 B REDBUG
 A EQUI-PROBABLE
 I MINI'APP'LES
 T PROG.LIST
 I BASE CONVERTER
 A CATALOG MANAGEMENT
 A DAY FINDER
 I DISK ACCESS UTILITY
 A DISPLAY MEMORY IN HEX
 & ASCII
 T NUMBER FORMATTER
 B NUMERICAL KEYPAD
 A NUMERICAL KEYPAD DOC
 B PAGE 2 UTILITY
 A USE OF PAGE 2 UTILITY

DOM #5

A FOG INDEX
 A DATE SUB-ROUTINE
 B INT SYMREF (LOMEM 2560
 CALL2048
 B INT LINE X-REF
 (CALL2048)
 A GRANDAPPLE
 A HIGHER HIGH-RES
 T PROG.LIST
 A MEMORY INTERPRETER
 I ADDRESS2
 A RAM TEST 48K
 A HIRES TV PATTERN
 GENERATOR
 B TELWORDS
 A GREAT CIRCLE
 A POKES

A ASTRONOMY-EXPOSURES
 A CATALOG MANAGEMENT
 A WORD SEARCH PUZZLE
 MAKER
 A VIDIZZY
 A DAVE'S PEEKS
 A TITLE PAGE PROGRAM
 B SINGING FINGERS
 B CASSETTE LISTNER
 A PUMP DOS PATCHES
 A FP.FREE & CAT
 COMBINED
 I COPYCAPPLE
 A EDIT 3/24/81
 B AMPER
 B SUBLO
 B JUSTB9300SLOT1.EPSON
 A LIST & PRINT MULTI
 FILES
 A FILE NAME EXPANDER
 A LEON'S BELL GET
 A LEON'S BELL INPUT
 B LEON'S
 A COMPARE MODIFIED
 T CAPTURE
 B STRING INPUT
 A CLASSIC BUBBLE SORT
 A SHELL SORT
 A HIBBARD SORT
 A QUICK SORT
 A QUICKER SORT
 A HART SORT
 A SINGLETON SORT
DOM #6
 I HIRES SCREEN INVERTER
 A BASEBALL
 A CONNECT-A-DOT
 A MINNESOTA MAP
 A MINNESOTA MAP/RADAR
 A PAYMENT CALCULATOR
 A BANNER ROUTINE
 A CATALOG MANAGEMENT
 A HIRES PATTERN PLOT
 A ASSEMBLER
 A PRODUCE BINARY
 A PRINT
 T M.ASM
 A MONEY
 I LITTLE WINDOW
 B DOLLAR BINARY
 A DOLLAR USE EXAMPLE
 A TEXT WRITER B1
 A STEVE'S SUPERSHAPER
 A STEVE'S SUPERSHAPER
 REV 02
 A CREATE SUPERSHAPER
 HELP FILE
 A JUGGLE
 B BALL
 A REM LISTER
 A HEX/DEC CONVERTER
 A IDS PRINT FONT CHANGE
 I PROPER EXTENDED
 STORAGE 3.3
 B READ SECTOR.0
 T PROG.LIST
 B MEMDISPLAY.A\$300.L\$75
 A FANCY FORMATING

SUPERSHAPER

by STEVE SULLIVAN
 article by Ken Slingsby

Supershaper is a program which will allow the user to create HIRES pictures made up of one or more shape tables which can be manipulated by another user program. The two menus give several easy to follow choices in the creation/editing of the shape tables. As is stated in the program, the user should be familiar with the documentation in the Applesoft Reference Manual pertaining to shape tables. Otherwise the program will be of little value.

Upon initial program entry the user is allowed (via menu) to load an existing shape table, save a shape table, display it, or edit. The second menu contains strictly editing commands. You may enter the coordinate arrays (the internal storage of the shape before it is converted to a shape table), move the starting location of a shape, move the shape on the screen. You may also convert existing shape tables to coordinate arrays for editing and vice-versa. This sounds complicated but isn't too bad especially if you read the reference.

DOS commands are allowed from within the program. A feature of the program is the HELP command. If you ask for HELP, a text file is displayed on the screen a page at a time. This is a very useful method of displaying lots of text without lengthening the program unduly. It also makes changes or additions to the HELP command easier. In order to use the HELP, you must run CREATE SHPERSHAPER HELP FILE beforehand.

The creation of the shape is interesting. The paddles are manipulated to create a lo-res (!) picture. This eliminates a lot of the jitter problems inherent with the paddles. Another place where joysticks are nice. When you are finished with this portion of the picture, the resulting shape can be displayed in HIRES. The HIRES picture will be correspondingly smaller than full screen. This is where you will need to move the screen coordinates to draw the next shape. The next shape becomes an adjoining portion of the picture. Again this sounds a lot trickier than it is if you try it. Continue in this manner until the HIRES display is finished. To save part or all of the display to disk, you must convert the coordinate arrays to a shape table; this is one of the menu choices. You just supply the table number (1 to 255) and the program does

the fun part. Of course you will have saved several partly finished displays just in case. When you are satisfied or finished you can convert the entire display to a shape table and save the resultant shape. This procedure beats the old method of entering shape vectors as described in the Applesoft Reference Manual.

The generation of a shape is in general much easier than I have described. Most shapes (for instance game pieces) are small and would not require so much manipulation.

There are two versions of the program stored on the DDM. The longer has many remarks detailing program operation but can store fewer (165 vs 300) points. The shorter (Revision 02) has the REMs and error messages removed and can store quite complex shapes. Program operation is the same for both versions. This DDM also contains a sample shape table and a program which can move the shapes around the screen. Study them for further assistance in creating and manipulating shapes.

SUPERSHAPER has a very unique feature. If you have trouble with it the author guarantees the program. The help command gives complete details!

**PROGRAMMING CLASSES
IN BASIC**

As mentioned at several meetings you can easily find classes in BASIC programming. For example:

HENNEPIN TECHNICAL CENTERS:

Basic Language Programming 11.022/3/4
 South Campus, 9200 Flying Cloud Drive
 Eden Prairie
 10 weeks Tues or Weds Starts 9/15
 (Note there are 3 units of
 increasing sophistication)

Computer Programming in Basic 11.030
 North Campus, 9000 77th Ave North
 Brooklyn Center
 10 weeks Tues Starts 9/15

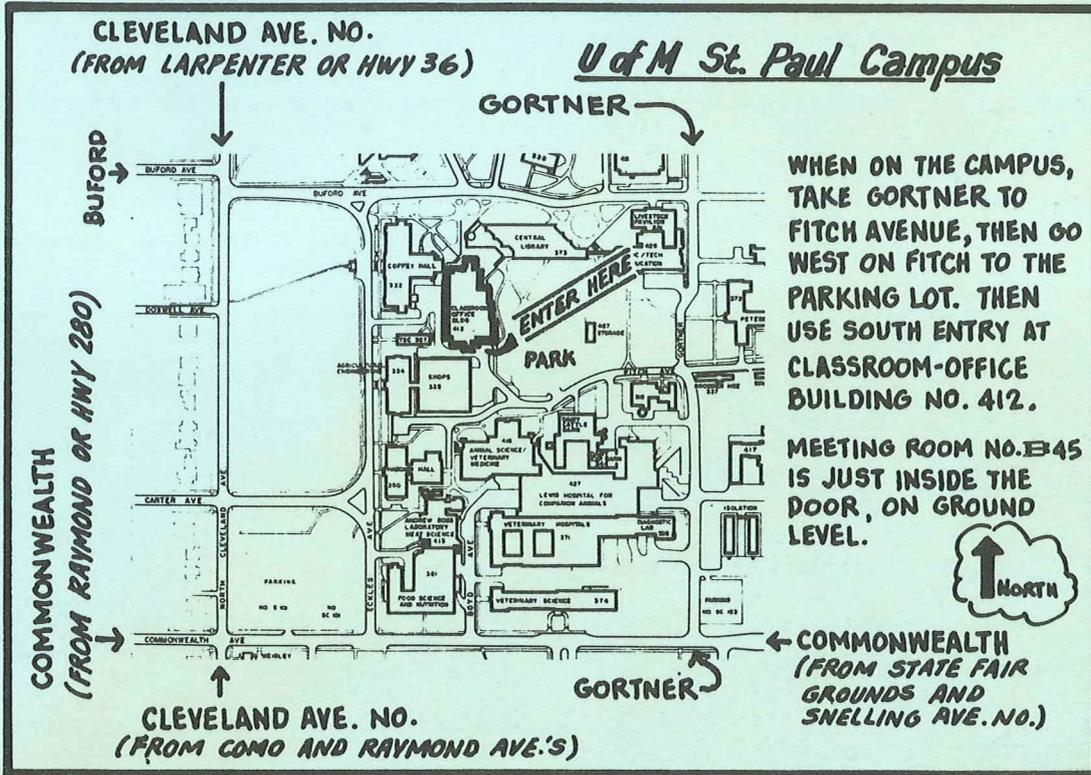
Besides the above 2 examples, most of the Junior colleges and school districts in the Twin Cities area offer similar programs. Many of them use Apples for teaching. So if you are interested, contact your nearest school or review the many catalogs that are sent though the mail!

NEW MEMBERS

We have been asked many times by members for information about other members. From time-to-time we will make available to our membership a copy of the complete Mini'app'les mailing list. We will not

make that list available to non members or to persons wishing to use it for commercial purposes. In addition we plan to publish lists of new members in this newsletter. Members who joined in the last two months are included below.

| | | | |
|-------------------------|---------------------|-------------------------|--------------------|
| MORK, KACEY | 81NLE 376-1100 | KUHN, GEORGE | 810801 III,128 |
| LUNDQUIST, LEON L. | 810601 721-2395 | ROCHLIN, JOEL | 810801 935-3933 |
| LANPHEAR, C.C. | 810601 219/272-3396 | LILIENTHAL, PETER | 810801 926-1055 |
| PATRICH, DAVID | 810601 866-9473 | NIELSEN, TERRY | 810801 941-0917 |
| SMEDMAN, ROGER | 810601 370-4742 | MCINTOSH, J. DAVID | 810801 941-8692 |
| SMITH, LES | 810601 644-8337 | WOODS, RICHARD | 810801 633-7324 |
| MEIROVITZ, ANTHONY L. | 810701 922-6260 | MUENKEL, BRIAN J. | 810801 420-2148 |
| KAMLA, RICHARD R. | 810701 929-6237 | SOLHEIM, DAVE | 810801 445-1331 |
| VELNER, RICHARD E. | 810701 920-8445 | GERMSHEID, PAUL S. | 810801 483-0764 |
| FINN, AVERY | 810601 448-5384 | CARLSON, MIKE | 810101 377-6553 |
| FELLMAN, DAVID | 810701 507/285-0310 | FORD, DOUGLAS M. | 810101 338-5763 |
| KASPER, EUGENE M. | 810701 941-5490 | HEIM, KENNETH F. | 810801 729-4764 |
| HALDEN, P.C. | 810701 770-6624 | BOOHER, CORINNE A. | 810801 822-4826 |
| SHERIDAN, CAROLE J. | 810701 944-6643 | DUDYCHA, DAVID | 810801 866-6157 |
| WASHBURN, DAN | 810701 292-0387 | HEINRICH, MARY A. | 810801 944-1258 |
| WHITE, GARY D. | 810701 822-7956 | GAYNOR, GARY R. | 810801 861-4074 |
| SIMONS, GERALD A. | 810701 881-2936 | CLAUSNITZER, DALE | 810801 425-0165 |
| BUCK, CHRISTOPHER | 810701 934-0611 | WINSOR, JAMES A. | 810801 831-8149 |
| RIGSBEE, PETER A. | 810701 890-7391 | STARK, LOREN | 810801 872-9823 |
| AICHINGER, CLIFF | 810701 777-0707 | WILKES, GARY | 810801 483-6941 |
| LUND, MICHAEL T. | 810701 770-5143 | OZOLS, JURIS/PAULA | 810801 941-8299 |
| GRORUD, HOLLIS | 810701 507/377-1328 | STUBBS, SCOTT R. | 810801 927-9293 |
| PLACK, GREGORY A. | 810701 825-6190 | BERSHOW, BARRY/HARRIET | 810801 445-6691 |
| VILLELLA, RON | 810701 935-1307 | SELL, TOM | 810801 823-3248 |
| ONAN, DAVID W., II | 810601 473-0143 | FRANZMEIER, ROGER | 810801 423-2377 |
| FRYS, R. N. | 810701 935-3050 | STEWART, BONNIE | 810801 484-2077 |
| SALTER, C. E. | 810701 432-4487 | CLAREY, J.WILLIAM, BRO | 810801 647-5390 |
| VAHCIC, FRANK/BONNIE | 810701 447-3692 | FAY, THOMAS E. | 810801 894-5694 |
| EWING, BEVERLY | 810701 827-5140 | KAUFFMAN, JERE | 810801 535-6745 |
| GUZIK, KATHY/ANDY | 810701 483-8849 | KOWALKE, STEVE | 810801 922-9113 |
| SKILLESTAD, THOMAS E. | 810701 507/263-4735 | SUBY, STEPHEN F. | 810801 540-1231 |
| BIRNBAUM, MICHAEL | 810701 546-2166 | WRIGHT, WILLIAM | 810801 |
| MELLEMA, MARK | 810601 631-1983 | KLEIN, BOB | 810801 920-8254 |
| HART, PATRICK V. | 810701 507/388-3009 | MATTESON, GREGG L. | 810801 884-9149 |
| GEORGE, STEVE | 810701 935-5775 | HATFIELD, GENE | 810801 935-3492 |
| LENNON, LARRY | 810701 421-8702 | BARNES, WILLIAM A. | 810801 448-4668 |
| VERPLOEGH, JAMES A. | 810701 770-8175 | GONYEA, DARREL E. | 810801 435-7274 |
| NICHOLS, RICK | 810801 922-2219 | GOTTIER, RICHARD C. | 810801 474-7903 |
| INGVALDSEN, RUSSELL E. | 810801 781-3847 | RYDELL, ROBERT E., MD | 810801 148, D, MM- |
| BUCHHOLZ, CHARLES | 810801 291-7088 | ANDRYS, JOHN | 810801 455-0702 |
| LILLICRAP, JOHN | 810801 941-3943 | REUSSE, THOMAS P. | 810801 435-9735 |
| EMMET, CLAUS | 810801 431-6187 | XEROX COMPUTER STORES | 81NLE |
| EDWARDS, LOIS | 810801 922-3341 | HONEYWELL, INC. | 81NLE |
| FORD, DOUG | 810801 823-7717 | JONES, A.A. | 81NLE |
| VANDERPOOL, BOYD ROBERT | 810801 727-2983 | AUDIO KING | 81NLE |
| BORSHEIM, BRAD | 810801 636-4651 | DIGITAL DEN | 81NLE |
| ELWOOD, BILL | 810801 823-0813 | PERSONAL BUSINESS SYST. | 81NLE |
| ATKINS, PATRICK | 810801 432-1251 | XEROX COMPUTER STORES | 81NLE |
| PETERSON, SUSAN | 810801 920-5688 | KARL, THOMAS | 810801 488-7291 |
| LARSON, LARRY S. | 810801 788-0728 | HEDBERG, BOB | 810801 926-5356 |
| ANDERSON, LLOYD L. | 810801 770-8573 | GROSSMAN, GREG | 810801 831-0130 |
| UPPALURI, RAVI | 810801 560-9645 | ALICH, ROBERT | 810801 872-9622 |
| DENLES, RON | 810801 421-5835 | CANNING, LEE | 810801 935-4527 |
| AANERUD, TIM | 810801 427-5158 | BAILEY, THOMAS F. | 810801 854-6321 |
| SEDCO, LOU/MILON | 810801 831-4630 | PITCHER, J.R. | 810801 931-6304 |
| WILLIAMS, C.CLARK | 810801 644-7611 | | |



DOS 3.3.1?

APNOTES

Apple has a DOS 3.3.1 Diskette. The main feature is a software switch that toggles between 13 sector and 16 sector DOS. Just run the update program and the ampersand toggles to 13 or 16 sector format. You must have the 16 sector controller chips though!

In recent months we have received two updates of Apnotes from IAC. The cumulative index, dated July 6th 1981, is included elsewhere in this newsletter.

MEMBERSHIP APPLICATION FORM

Fill in and return to Membership Co'rd

Name: _____

Address: _____

Zip: _____

Home Telephone: _____

Office Telephone: _____

Apple II configuration: _____

Special interests: _____

Signature.....

In the past, we have made a few copies of these Apnote updates and sold them to members at copy cost. However, our ability to predict demand for the documents has been very poor. Therefore in the future, anyone wanting copies should contact your Bibliographer who will arrange with some volunteers to have the appropriate sheets copied. It is suggested that if you want specific copies, that you mark up an index and mail to the Newsletter editor, who will pass the request on to the Bibliographer.

Unless you provide a stamped self addressed large envelope, copies will be delivered at a subsequent meeting. If the demand is large, the logistics of reproduction will require that we batch the orders about every 2 or 3 months.

For those new to the world of IAC and APNOTES, an APNOTE is a technical discussion, usually 2 or 3 pages in length. The current total package runs to about 300 pages. Cost of reproduction will be between 2 to 3 cents per page.

CLASSIFIED

For sale:

APPLE II, 48K with APPLESOFT FIRMWARE card. Includes One Disk II (3.3) and Paymar Lower case chip. No problems. About 2 years old. Available about Oct 1 when new system arrives.

\$1850

Tom Edwards

827-6790

MAIL

Urban Landreman
Computing Center
College of St. Thomas
2115 Summit Avenue
St Paul, MN, 55105
647-5812

I am interested in sharing software with anyone who has developed CAI material at the higher education level.

APPLE ORCHARDS

We have received the Summer Edition of the Apple Orchard and it will be available for sale at the next meeting. Some features included in this edition are:

IN THIS ISSUE

| | |
|---|-------|
| DOM #6 by Ken Slingsby..... | 3,4 |
| Blind Readers..... | 4 |
| Memory Technology Advertisement..... | 5 |
| Epson Printer News by Daniel B. Buchler..... | 6 |
| The Inspector by John L. Hansen..... | 7,8 |
| Text Writer by William Hazelink..... | 8 |
| Treasurer's Report by Marilyn Thomas... | 8 |
| Educational Questionnaire..... | 9 |
| Apnote Index, July 6th 1981..... | 10,11 |
| Mini'app'les Education by Chase Allen. | 12 |

DISKS & DOMS

The new DOMs will be available for sale at the next meeting or contact Hugh Kurtzman. (See page 1). If you want to purchase disks at club prices, contact Peter Gilles. (also see page 1)

STORK

Those of you who were at the August meeting learned that our good President's wife gave birth on August 7th to a baby girl - *Elizabeth Helen*

*Congratulations
from Mini'app'les
to the
JOHNSONS*

LINE SPACING

Most of this newsletter was printed using 2 'dots' of vertical white-space between lines rather than the usual 3 'dots'. This puts approximately 8% more words on a page without greater reduction in size of letters. Your newsletter editor would appreciate comments on legibility!

| | |
|--|-------|
| Not Direct Command by Chuck Boody..... | 12 |
| Assembler by Mike Gooding..... | 13,15 |
| Turning the Pages with David Laden..... | 14,15 |
| The First Six DOMs by Ken Slingsby. | 15,16 |
| Supershaper by Steve Sullivan..... | 17 |
| Programming Classes (Basic)..... | 17 |
| New Members..... | 18 |
| Map of U.of M..... | 19 |
| DOS 3.3.1 Note..... | 19 |
| Apnotes Note..... | 19 |
| Announcements..... | 20 |

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