mini'app'les

apple computer user group newsletter

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IN THIS ISSUE

NEXT MEETING

WEDS JUNE 20th 1979 7:30pm

MINNESOTA FEDERAL SAVINGS & LOAN

31 9th Avenue South, HOPKINS MN

TOPIC: WORKSHOP

Members will talk about items of interest to both beginners and advanced users. Talks will be about 10 minutes each. 4 or 5 people have already volunteered. There will be something for everybody, so bring your questions.

APPLE BULLETIN BOARD

According to Brad Smith of the Birmingham, Alabama User's group, several Apple user's groups are establishing bulletin boards. These are Apple systems with auto-answer modems and communication software that are being set up to provide information on a 24 hour basis to other Apple users who have the appropriate communication hardware, software and protocol. The telephone numbers are:

BOSTON	617-963-8310
DALLAS	214-641-8759
ATLANTA	404-455-4886
ATLANTA	404-394-4220

It is beleived that most of the above are using the Hayes Micromodem II (See May Newsletter). Details of the Bulletin Board will be provided as they become available.

WOZPAK

The WOZPAK was distributed during the last meeting. The distributed copies were missing a few pages which have since then been reprinted. These missing pages will be distributed at the next meeting to those of you who picked up copies at the last meeting. 40 copies were printed and sold at $8 each. 33 of the 40 have been distributed, 2 have been paid for but not yet picked up. That leaves 5 currently unclaimed. I have 3 unpaid orders for the WOZPAKS received prior to last meeting and 7 received at the meeting. Those of you who ordered them prior to last meeting must claim them before or during the next meeting or they will be distributed to those next on the list.

DISK USERS- A PLEA

You disk users who are starving for information on DOS 3.2- well don't depend on your president. He does'nt have a disk. So , if you want to see some articles on disk software, submit them to your friendly newsletter editor, so other disk users can hear about your problems and triumphs !

MINUTES -- MAY MEETING MINI'APP'LES

Meeting called to order by Dan Buchler at 7:40 p.m. -- with a Cassette Tape for a gavel!

Motion to dispense with reading of the minutes since they are being published in the newsletter. Motion by Jim White, seconded by Jim Henke. Ammended by White to include suggestion that corrections of the published minutes be asked for. Motion carried unanimously.

Addenda to last months minutes: Jim Henke, Technical Advisor ; New Phone 869-0361

Old Business:

1. Dues need to be paid. Without them you will have no access to newsletter or program bank.
2. Wozpak has arrived - Pick it up if you have paid for it. Dan Buchler has the copies.
3 The newsletter needs contributions for articles. Prefer a cassette format for submission of articles. See VOL II #4 for the Method, or get a copy of Dan Buchler's edit program. This discussion carried into the new business section below

New Business:

1. Distribution of the program bank. Keith Madonna suggested distribution by loan of a copy of the complete user bank for a short period of time. Copies would be obtained from some central distribution point or points. Volumes could be kept in chronological order, so that a user may know where he is. A second suggestion was for the idea of selling cassettes of the programs at a charge just sufficient to defray cost of the cassette. After extended discussion, Shukry Ibrahim moved that the board be empowered to set up a distribution. Dave Larson seconded. Motion carried.
2 There is a need for a program (topic) at each meeting. Contact Dan Buchler with suggestions. Product demos were suggested as one of many possibilities.
3 The above call for help brought discussion of other possible needs of the club members, most of which could be useful for programs or newsletter articles. These were some of the suggestions:
    A. CLASSES and/or Other information on Basic, Machine code, or ??
    B. An extensive list of Peeks & Pokes, or demonstrations of useful ones would be good.
    C What have you discovered that the Apple can do that is not in the general material??

Hopefully all club members will respond !!!

Meeting adjourned at 8.20 and was followed by the evening topic.

Chuck Thiesfeld and Dave Larson presented a discussion of XPLO comparing it to Basic and Pascal. They showed the relative speed of similar programs written in Basic, XPLO and 6502 Machine code.

APPLE ANNOUCEMENTS

Apple finally announced the long rumoured PASCAL subsystem. For $495 you get a 16kRAM +2K ROM Language card and 5 diskettes, manuals and IC Puller. This package provides Pascal, Integer Basic and Applesoft Extended Basic. Delivery is Sept 79. The Pascal is based on the USCD system (P-code) and includes a sophisticated editor which will support 80 character lines and upper/lower case on an external CRT terminal. Also supports HIRES and a whole potful of features. Requires 48k system with 1 disk drive.

Also announced:Apple II Plus which is an apple with Applesoft instead of Integer Basic. Integer Basic is an add on. Available July.

Autoload ROM @$65; A Business system for $625 ; A Desk for $220

PRINTERS FOR APPLES

The Mini'App'Les president is still looking around for a printer, an ideal printer. Criteria for such a printer are:

1. High Quality printing suitable for reproduction in newsletters, correspondance, etc. This does not rule out dot-matrix contrary to some people's opinion.
2. Upper and lower case characters
3. Graphics capability . i.e ability to dump a HI-RES display.
4. If Dot-Matrix, 7x9 resolution with descenders (p,q,,,g - etc)
5. Variable character spacing sometimes called preportional character spacing. The important thing is to be able to use a sophisticated word-processing system which will increase spaces between words in steps less than one standard space width.
6. Tractorfeed (A must for forms)
7. Use regular paper not aluminized or thermal.
8. Variable character size(Bold etc- useful for publications)
9. Cheap
10. Reliable

Availability of item 3 with appropriate software provides by software items, 2,4,5 & 8.

Unfortunately the above printer does'nt exist yet. Some interesting compromises are:

-Heathkit H 14 Printer in Kit form @$600, or competely assembled @$900 offers items 1,2,6,7,8,9 &10. Maybe item 3 (has page eject of 1 dot position)

-Integral Data System BrighterWriter IP225 @1149 offers items 1,2,3,5(with 3),6,7,8,9 &10. Call Apple reviewed this printer on page 9 of April/May issue and recommend it. The June issue of Applegram, Michigan Apple Computer Club, reviews the PaperTiger by Integral Data Systems. This seems to be a new version of printers with some more software controllable features than the IP225 and costs only a little more (but still alot more than the Heathkit- this writer suspects that the Heath and the IDS use the same print head)

-Teletype Model 43 @ $1000±$100 depending on how and where you buy it offers items 1,2,4,6,9,10. In the writers opinion, it is a super quality printer and may be cheaper in the RO versions. Service availability should be superior. Disadvantage is 30cps.

The president loves to bullshit about printers, so give me a call anyone.

SHAPE MAKER/SHAPE BUILDER

It is evident from questions to the board members, that many users are not familiar with the Utility called 'Shape Maker'. Shape Maker is available on the MINI'APP'LES users' bank. The utility allows the user to construct a shape on the screen by use of the U(up), D(down), L(left), R(right) and P(plot) keys on the Apple keyboard. U,D,l,r controls the movement of the dot one position in the appropriate direction. P determins whether the point is being plotted or not (i.e. on or off). After the shape has been constructed, it is redisplayed and the starting address of the shapevectors (selected by the user) and ending address are displayed. The user may then save the shape on tape or load a Basic program to use the shape. Shape Maker does not consruct the pointers used by Applesoft, but is otherwise compatible with Applesoft. Anyone using shapes should have a copy of this program.

The Michigan User's group have a SHAPE BUILDER program written by Dick Spiers which is similar to SHAPE MAKER, but adds the capability to move the point in a diagonal direction using only one keystroke. We will try to get a copy of this program.

Note about MINI'APP'LES bank. CREATES H8192 is similar if not identical to SHAPEMAKER and combines the table and program into one load

COMMERCIALS.

We are thinking of accepting advertisements from local computer stores and individuals. If you are interested, please contact the president. Meanwhile below are some free edited commercials just to see what happens !

COMPUTERLAND -- Used OKIDATA CP110 5x7 Dot Matrix Printers @$500 each. Working order but not guaranteed. Originally sold for $1700. Prints upper case only
-- KSR 35 @350 (one only)
-- Centronics Micro P1 Printer with interface @$550 each. Originally sold for $695. Uses Aluminized paper.
-- Apple Disk II, Controller & DOS 3.2 with documentation @519 (for Mini'App'Les members only and good only till July 1, 79)

DIGITAL DEN -- Now open in Burnsville Center. Owned by Schaak Electronics. Sells Apples

TEAM HENNEPIN -- Box of 10 Maxell Disks @ $35
-- New DOS 3.2 Disks/ Manual Sets expected in within 30 days.

TEAM SOUTHDALE-- Sells Apples and peripherals

ZIM COMPUTER -- Sells Apples and Peripherals
(Brooklyn Ctr)

Rob Wentworth -- Has HIRES SLOT MACHINE program for sale. Reported to be very good.

MINI'APP'LES USERS' BANK

Our user bank has grown to 5 diskettes (one side only). Two diskettes were obtained in a trade with the Apple Pi group of Colorado. The remaining 3 disks consist of a disk of utilty programs and 2 disks of general programs. Below are catalogs of all five disks.

APPLE PI DISK 1 (VOL I, DISK 1)

```
*I 002 APPLE PI SLICE 3 (MISC)
*I 005 CALENDAR
*A 004 ANGULAR DISTANCE
*A 005 GAUSS-JORDAN
*A 002 RANDOM NUMBER GENERATOR
*A 003 SORTS RANDOM NUMBERS
*B 009 PENTOMINOES
*I 012 PENTOMINOES A2048 L1792
*I 008 APPLE PI CALCULATED
*A 008 TIME BETWEEN DATES
*A 010 DAY OF THE WEEK PROGRAM
*I 010 PERPETUAL CALENDAR
*I 012 RANDOM ALF # GENERATOR
*I 006 COLOR.CLOCK
*A 007 BIO-RHYTHM PROGRAM FOR APPLE 2
*I 032 COMPUTER ANALYST
*I 020 PENTAMINO
*A 006 PROGRAM TO FIND MODE
*A 007 KILOBAUD MYSTERY
*I 007 SPLIT CATALOG
*A 007 MENU (V2)
*A 010 BUZZWORD
*A 009 KINEMA
*A 015 CRYPTOGRAMS
*A 003 PYTHAGOREAN TRIPLES
*I 010 MOUSE MAZE
 I 024 AIRCRAFT INSTRUMENT SIMULATOR
 I 002 AIRCRAFT (LOAD/HIMEM 8192/RUN)
 I 013 SUB KILLER
 I 014 STARSHIP ATTACK
 I 056 OREGON TRAIL
 A 011 PLANETS
 A 005 PHONETIC RESPONSE PROCESSOR
 I 019 SMALL WORLD
 I 008 PATRIOTIC DISPLAY
 I 006 BIRTHDAY BY ROD
```

APPLE PI DISK 2(MINI'APP'LES DISK 5)

```
*I 044 APPLE PI SLICE 4 (NEW PROGRAMS
*A 079 APPLE PI LIBRARY INDEX 3/79
 I 022 BUG
 I 009 SPACEWAR
 I 010 CHASE
 I 011 CHASE 2
 A 031 WORLD POWER 6
 A 006 ARTILLERY
 I 007 SUB WAR
 I 018 MIDWAY
 A 022 JOUST
 A 089 ATOM 20
 A 019 WORD SEARCH PUZZLE
 I 037 BATTLESHIP VERS 78.0703
 I 009 ADVANCED DRAGON MAZE
 A 004 RENUMRANGE.EXEC.MAKER
 A 005 RENUM.EXEC.MAKER
 A 003 DECTOHEX
 A 003 HEXTODEC
```

MINI'APP'LES USER BANK DISTRIBUTION

During the last meeting, there was a discussion on distribution of programs from the Users' bnak. It was agreed that the board would work out a distribution technique. By a majority vote the board has decided to try the 'lending library' technique of program distribution. 3 copies of 5 disks will be placed into circulation from distribution points. These distribution points or 'centers' will be strategically located. Tape copies will also be provided. Members may borrow the library sets from the centers, copy them, and return them to the 'center' within a prescribed time. Details will be provided at our next meeting outlining the locations of the centers and the procedures to be followed.

It is requested that those persons who think they might be interested in borrowing a disk or tape set, but who would have difficulty picking up from a central distribution point (assume the local computer stores are distribution points) , please advise Keith Madonna. Keith will consider establishing a procedure to set up a mialing list for such persons who might forward the set to next person on the list.

MINI'APP'LES DISK 1 (DISK I, 2)

```
I 007 BLOCKADE
I 015 STAY AFLOAT
I 009 SAVE THE WORLD
I 011 LOTSA COLOR
I 003 DISK COLOR EATER
B 003 COLOREATER(2F7.3FF)
B 033 COLOR STROBE(4A.1FFF)
B 058 NUDE(800.3FFF)
B 003 LOW-RES DAZZLER(800.8FF)
I 022 UTILITY
I 025 A'STAND
I 025 POET
I 009 DRAGON MAZE #3
I 051 OREGON TRAIL
I 008 RENUM
A 022 CURVE FITTER
I 027 SPACE LASER
I 034 GUNSLINGER
A 011 BALLASTICS
```

MINI'APP'LES DISK 3 (DISK 4, VOL I)

```
A 005 GRAVITY ORBIT
A 036 KINGDOM
I 008 FLY
I 004 DISC SPACE HELLO
I 003 COLOR MAGIC
I 057 SPELL H16384
A 016 LUNAR LANDER
I 016 I DARE YOU
I 007 AIRCRAFT GUNNER
I 035 MATH GAMES
B 000 SPACE.DOC
I 006 CLOCK DISPLAY
I 024 EVIL
I 014 STARSHIP BATTLE
I 019 BLACK BOX
A 008 COST-BENEFIT ANALYSIS
I 002 SPEC.CHARS
B 031 CHARACTERS
A 032 ADDRESS LIST
A 050 TAX FORM 1040
A 018 PHONE NO.PROGRAM
```

MINI'APP'LES DISK 2 (DISK I, 3)

```
I 026 APPLEVISION
A 004 STRING ART
I 017 TWOVOICE
A 008 SINE WAVES
A 013 TAXMAN
I 015 STAY AFLOAT
I 016 TOWERS OF HANOI
I 008 SAUCER WAR
I 007 AIRCRAFT GUNNER
I 012 SINK THE SHIP
I 009 THE WORLD
I 029 PINBALL
A 004 POLAR.DEMO
I 029 THE MACHINE
A 004 MOIRES
A 022 URSA
I 043 APPLESOFT
I 009 COLORS
I 002 PROL READ
I 005 GAME BUTTONS DEMO
I 007 PADDLE BUTTONS DEMO
I 007 BLOCKADE
I 007 BLOCKADE.COPY2
I 007 BLOCKADE WITH DEATH BLOCKS
B 002 PRINTER ROUTINE
I 008 CHESS INSTRUCTIONS
```

DISK 4 (UTILITIES) VOL 1, 5

```
*A 005 SHAPEMAKER DIRECTIONS
*A 014 SHAPEMAKER
*B 006 SHAPETABLE
*I 021 MASTERMIND
*A 003 HEXTODEC
*A 005 DECTOHEX
*A 005 RENUM.EXEC.MAKER
*A 004 RENUMRANGE.EXEC.MAKER
 A 017 BIORHYTHM DELUXE
 I 022 CREATES H8192
 B 006 HIRES
 B 003 RENUM/APPEND
 I 008 RENUM/APPEND INST.
 I 026 APPLESTAND
 I 008 T.E.INSTRUCTIONS
 B 006 TEXT EDIT
```

LOWER/UPPER CASE CHARACTER EDIT

In the MINI'APP'LES Newsletter, May edition, we announced a new mini editor which allows input, display and output to printer of lower case and upper case letters in ASCII code. The game button #0 is used as the shift key. The program is now on the MINI'APP'LES user bank in two versions:-

1. Applesoft in ROM 16K.
2. Regular Applesoft 32K

We recommend this program as the tool for submissions of text to the MINI'APP'LES newsletter and other Apple related documentation.

Operation

The program is loaded from tape or disk as a normal LOAD. However, duue to a trick employed to load the machine code and tables below the Applesoft BASIC program, Applesoft does not return control to the keyboard after loading. It is therefore necessary to do the following:

Reset*6000:0$_{0G}$

The above is for the 32K version in non disk environment.If you plan to copy program, either do not run program after LOADing before copying, or,

POKE 104,8 (for ROM version)
POKE 104,96 (32 K version)

prior to SAVing the program.

Some users have reported problems running the program under the disk system. Both the 16k and the 32k versions have been run on the president's system but not under DOS. It is possible that there are some differences in addressing between the DOS and non DOS system though the 32k version was run once successfully under DOS, we think? Please call the President if you have any problems and we will get it straightened out.

After displaying the instructions, the program requests input of up to 8 lines of text. A line is defined as 0 to 255 characters. A line is terminated by the user with a C/R, but the C/R is not saved. It is assumed that the main text editor to which the output from this mini editor will be fed, will justify the text and supply C/Rs. A line may be null, i.e. no characters.

The cursor is a "_". Of the special characters and edit controls only the ← and C/R are functional.

After 8 lines have been input, they are redisplayed in their respective 'cases' and the user has the option to correct any string of characters in a specified line by inputting a change from "OLDSTRING" to "NEWSTRING". The procedure is self documenting. When the edit has been completed, the user may enter another 8 lines or output the partially completed buffer of characters. All information input and edited is maintained in an output buffer which is 1024 characters long in 16k version and 2048 characters long in 32k version. Each time the buffer fills, the operator is notified to mount a cassette tape, and the buffer is written out to that tape.

The tape records are in standard ASCII format, high order bit set on, and are therefore compatible with most printers.

How does it work?

The program uses the subroutine package developed by Rob Wentworth. This package utilizes the base address of a table containing the character configurations(dot matrix pattern) of the individual letters. In the subroutine, base page location CC hex contains a number 'p' such that the base address of the character table is at 'p' * $200.
That is if 'p' = 4, the character conversion table is found at $800

The revised Wentworth package utiles an upper case table starting at $C00 (16k version) or $6400 (32k version) and a lower case table starting at $A00 (16k version) or $6200 (32k version) . A third Italic table is included for future use at $E00 (16k version) or $6600 (32k version)

LOWER/UPPER CASE EDIT - Continued

```
1000-   0A          ASL
1001-   0A          ASL
1002-   0A          ASL
1003-   85 C9       STA   $C9
1005-   A5 CD       LDA   $CD
1007-   2A          ROL
1008-   85 CA       STA   $CA
100A-   60          RTS
100B-   A5 25       LDA   $25
100D-   29 18       AND   #$18
100F-   0A          ASL
1010-   0A          ASL
1011-   05 25       ORA   $25
1013-   29 78       AND   #$78
1015-   65 24       ADC   $24
1017-   0A          ASL
1018-   85 CB       STA   $CB
101A-   A5 25       LDA   $25
101C-   29 07       AND   #$07
101E-   09 40       ORA   #$40
1020-   4A          LSR
1021-   85 CC       STA   $CC
1023-   66 CB       ROR   $CB
1025-   60          RTS
1026-   48          PHA
1027-   20 00 10    JSR   $1000
102A-   20 0B 10    JSR   $100B
102D-   98          TYA
102E-   48          PHA
102F-   8A          TXA
1030-   48          PHA
1031-   A2 00       LDX   #$00
1033-   A0 07       LDY   #$07
1035-   B1 C9       LDA   ($C9),Y
1037-   81 CB       STA   ($CB,X)
1039-   A9 04       LDA   #$04
103B-   18          CLC
103C-   65 CC       ADC   $CC
103E-   85 CC       STA   $CC
1040-   88          DEY
```

```
100  PRINT "ENTER 8 LINES": FOR I
 = 0 TO 7
110  GOSUB 60:X$(I) = Q$
120  IF X$(I) = "" THEN 130
130  IF  ASC (X$(I)) = 4 THEN 200
140  NEXT I
150
```

PART OF APPLESOFT MAIN PROGRAM. Note must also include a POKE 54,80: POKE 55,16 to initialize Monitor vector locations $36 & $37 to intercept output and give control to $1050. If subroutine is moved, change values in POKEs accordingly.

Wentworth Subroutine to display lower case letters in HIRES (page 1)

```
1041-   10 F2       BPL   $1035
1043-   68          PLA
1044-   AA          TAX
1045-   68          PLA
1046-   A8          TAY
1047-   68          PLA
1048-   4C F0 FD    JMP   $FDF0

104D-   4C F0 FD    JMP   $FDF0
1050-   C9 A0       CMP   #$A0
1052-   90 F9       BCC   $104D
1054-   8E 4C 10    STX   $104C
1057-   A2 07       LDX   #$07
1059-   C9 E0       CMP   #$E0
105B-   90 05       BCC   $1062
105D-   A2 06       LDX   #$06
105F-   38          SEC
1060-   E9 20       SBC   #$20
1062-   86 CD       STX   $CD
1064-   AE 4C 10    LDX   $104C
1067-   4C 26 10    JMP   $1026
```

APPLESOFT INPUT SUBROUTINE

Utilizes game button #0 as shift key.

```
60 Q$ = ""
65  PRINT "_";: GOSUB 95
67 ZX =  PEEK (-16384): IF ZX <
128 THEN 67: REM   INPUT CHA
R
70  POKE  - 16368,0: REM    CLEAR
 STROBE
75  IF ZX = 155 THEN 92
80  IF  PEEK (-16287) < 128 AND
ZX > 192 AND ZX < 219 THEN Z
X = ZX + 32: REM  LOWER CASE
85  IF ZX = 141 THEN 99
87  PRINT  CHR$ (ZX);
90 Q$ = Q$ +  CHR$ (ZX): GOTO 65
92  PRINT " ";: GOSUB 95: IF  LEN
(Q$) > 1 THEN 94
93  POKE 36,0: GOTO 60
94 Q$ =  LEFT$ (Q$, LEN (Q$) - 1)
  GOSUB 95: GOTO 65
95 W =  PEEK (36) - 1: IF W >  =
0 THEN 96
96 W = 39:H =  PEEK (37):H = H -
1: IF H < 0 THEN H = 0
97  POKE 37,H
98  POKE 36,W: RETURN
99  PRINT " ";: GOSUB 95: PRINT  CHR$
(ZX);: RETURN
```

LOWER/UPPER CASE EDIT Continued

Each character table is 512 bytes long representing 64 characters, 8 bytes being needed to define the dot matrix pattern for each character. The characters the ASCII codes of which lie between $20 and $5F (32 and 95) or, $A0 and $DF (160 and 223) are decoded. Codes in the range $60 to $7F (96 - 127) or $E0 and $FF (224 -255) are converted to the former range before decoding. The latter are of course the lower case letters. In the subroutine, the character being output is intercepted and tested. If it is in the range $E0 to $FF , the lower case pointer to table at $A00 is stored in $CC, otherwise the upper case pointer to table at $C00 is stored at $CC .

An Applesoft subroutine takes care of character input and storing lower case letters as true ASCII lowere case codes. This subroutine could be used with any editor in conjunction with the machine code output routine. The only restrictions are that the HIRES graphic area is required to display the letters and scrolling is not supported.

The subroutine works like this:Button zero is tested as the character is input. If the button is off (i.e. lower case letter), $20 (32) is added to the character code before it is stored in the string . This converts the code to a true ASCII lower case code compatible with all ASCII printers. In this scheme, all characters input via the Applesoft subroutine will be in the range $A0 to $FF , i.e the high order bit is on. Applesoft INPUT statement normally strips that bit, but it does'nt make any difference to processing.

This particular edit package into which the above subroutines have been incorporated, provides a text correction capability and outputs the strings characters in 1024 character blocks to cassette tape. The cassette may then be used as text input to a master word processing system which will set the line length, etc.

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