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Washington Apple Pi

Volume 1 November 1979 Number 10

Highlights

Interfacing the IDS 440 Printer page 5

by Hersch Pilloff Putting the game I/O to work!

Here comes International Apple Core!

by Bernie Urban page 3

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NEXT MEETING: November 24 (see page 1)

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Washington Apple Pi
PO Box 34511
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EVENT QUEUE

Next meeting of Washington Apple Pi is November 24 (Saturday) at 9:30 am at G.W. University School of Engineering in Tompkins Hall Room 206 which is located at the corner of 23rd and H Streets N.W. NOVAPPLE will continue to meet on second Wednesdays at Computers Plus, Franconia and Fourth Thursdays at Computerland of Tysons Corner (November 22).

Classifieds

FOR SALE - Novation Modem 3102A. $200. APPLE Communication Interface Card. $200. George Hinds 585-0979

WANTED - Articles for the Apple Orchard. Our best efforts should be sent forward via Mark Crosby to Val Golding to be incorporated into the special IAC newsletter to be published prior to the March West Coast Computer Faire. Articles due by December 1, 1979. Send to Washington Apple Pi, P.O. Box 34511, Bethesda, Md. 20034.

Classified ads accepted from members 50 words or less at no charge provided the material is obviously non-commercial. Submit your classified at least 30 days in advance attention CLASSIFIED ADS, PO Box 34511, Washington, DC 20034.

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MINUTES

The October 27 meeting of Washington Apple Pi was called to order at 9:45 by the President. The following items of interest were covered:

1. Members were asked to refrain from making any hardware adjustments to the GWU APPLEs (e.g., changing cards). One of the computers was "fried" at our last meeting.

2. Hersch Pilloff presented two items of interest from Apple, Inc. 1) Instructions for adding colors to HIRES via hardware modification and 2) a descriptive utility package for functioning as a terminal.

3. Hersch also gave a report on the group purchases of the Paper Tiger printer. To date there are eight units on order with the first shipment to arrive around November 12. There is a 12% discount plus 2% additional if prepaid. A representative from the vendor, KDA Associates, Linthicum, Md., gave a short description of the printer and details of service, warranty, etc.

4. A question was raised concerning programs published in our Newsletter - are they public domain? What should our general policy be in this area? After some discussion a motion was carried to delay any further discussion until the Board has a chance to develop a proposal in this area.

5. There was a discussion concerning a list of members with their addresses and/or phone numbers for distribution to the membership. A motion was carried to include a space for release of address and/or phone number on the new application form for 1980 dues.

6. Dave Morganstein, our librarian, gave a report on the library. He now has a list of programs available and would like members to contribute more.

7. Jim Nielsen discussed the new DOS 3.2.1 release. (See "Nybbles" for details.)

8. There was a demonstration of the Paper Tiger printer after the formal meeting.

NOVAPPLE Minutes for October 10, 1979

Jim Nielsen opened the meeting with a request for further nominations for the offices of President, Vice President, and Secretary. No further nominations were placed on the floor. The President said there would be one last chance to enter nominations.

The meeting was then turned over to a demonstration of Pascal. Pascal is a new language available for the APPLE. It is a structured language developed by the University of the City of San Diego. When Pascal is used the APPLE performs as a 16-bit machine. The compiler uses a P code not 6502 used in the conventional mode. Pascal requires a combination of hardware boards and software programs. Although you can use the BASIC language with a Pascal card in place, you cannot use a program which uses both BASIC and Pascal. A demonstration was given of the graphic uses of Pascal. Basically, Pascal is a fast, powerful language especially useful to the advanced programmer. One big advantage is its compatability with other machines using the same Pascal.

NOVAPPLE Minutes for October 25, 1979

The first order of business was the election of officers. The following were elected for the next year: President, Phil Eastman; Vice President, Dr. Nick Cirillo; Secretary, Gerald Eskelund. The Secretary explained that dues are now being accepted at the meetings and can also be sent to the NOVAPPLE address on the application form. You are asked to fill out both top and bottom of the application since they go to two different people. If dues are not paid by November, your name will be dropped from the mailing list no later than December. Forms will be available at the meetings, and dues are $6.00 for six months. If you have paid dues to Apple Pi you do not have to pay new dues to NOVAPPLE.

Gerald Eskelund gave a report on the happenings at the Philadelphia Computer Convention. The theme was computer music with many lectures and demos devoted to the subject. An excellent demonstration was given of the APPLE control capability called "Alfred the Office." An APPLE was made to perform functions by voice command.

Dr. Nick Cirillo reviewed a new high resolution character generator which he bought from Call-A.P.P.L.E. The software is new and apparently has some problems. When he gets the bugs out he will provide more information on its utility.

The meeting continued with a discussion on tape systems and other components which can be used with the APPLE. For a future meeting we hope to have some hardware demonstrations for such items as an alternate speaker system which lets you hear the tape input, breadboard interfaces and the like. Let your skills be made known to the officers so we can help you present a program.

Remember, dues for the next six months are due now. Please fill out the application form top and bottom, and mail or bring in. Checks, Please!!!

NYBBLES

Advanced Business Technology, Inc., Saratoga, Calif., sells a 13-key numeric pad for use with the APPLE II. ABT's Key Pad has keys for the ten decimal digits, as well as decimal point, minus sign and ENTER keys. It sells for $125.

Teksim, available through CYBERSOFT Systems, Rochester, Mich., emulates Tektronix 4010-series graphics terminals by means of a ROM plugged into the APPLE II. So for $795, the APPLE can take advantage of the many graphics packages written for Tektronix equipment, but it does so with about 1/4 the resolution and with the usual somewhat jagged diagonal lines in hi-res. This may not be too great a drawback. Interested, Sam?

For those of you who may have missed the exhibits at the Federal Computer Conference at the Sheraton last week, Bell & Howell had a booth with several battleship-gray (ugh) APPLEs on display. They call it the Bell & Howell Microcomputer System. I picked up several fancy brochures which will be available at the next meeting. It's pretty much the same as the promotional literature that Apple Computer, Inc. puts out, but in the introduction Bell & Howell hints at their role. "The innovative design, features, and outstanding quality of this exciting new line of microcomputers is no accident. It is the result of superior technology from Apple Computer, Inc. and Bell

& Howell's reputation for software and services working together to take the mystery out of modern computer technology . . ."

There is a new DOS release from Apple Computer, Inc. - DOS 3.2.1. It is available at dealers but will be copied free only onto your 3.2 diskette. The new version fixes some problems of 3.2 when using more than one disk drive. Bring your APPLE serial no. and your 3.2 diskette to your local dealer for this service.

Dave Skillman contributes the following Nybbles: In tinkering with Applesoft, I came across a quirk and would like to know if it's my machine or common to all. Type in: PRINT 4.9999999999 (there are ten nines) and a return. My system gives 5.00000001 as the answer.

I am planning to use my APPLE for control of a telescope, and also for numerical analysis of the astronomical data. Are there others who have a control or scientific application who might be interested in a special interest group? Give me a call at 301-474-0653 if interested.

Here Comes International Apple Core!

by Bernie Urban

The meeting in San Francisco was very eventful and productive. In what was really a very short time (about eleven hours over two days) we defined the outlines of an international APPLE users' group called INTERNATIONAL APPLE CORE (IAC), which promises to be of significant use to you, the individual APPLE enthusiast. It's big, equipped with matching expenses, but filled with potential for your benefit. What is it? .... Well ....

It is an international organization of member APPLE user groups run by a President, Vice President, Secretary and Treasurer elected for one-year renewable terms by a Board of Directors. The Board of Directors is comprised of eight elected representatives from four regions covering the entire U.S. and two representatives from other countries. All user groups west of the Rocky Mountains are within one region. Similarly, all user groups east of the Appalachian Mountains are within another region. In between, the regions are defined by their location north or south of the Mason-Dixon Line. User groups within a region who choose to join IAC can elect two representatives from that region to the Board for two-year staggered terms. Not yet clear is how the representatives from other countries are elected. The Board, from within its ranks or elsewhere, elects a Chairman who becomes the President of IAC as well. The donor region elects a replacement representative if one of the Board members is elected Chairman, thereby maintaining the number of representatives. The Board develops policy and the officers of IAC carry it out.

That's all fine, you say, but why should we join? To start things off, Apple Computer, Inc. is sending an extensive set of APnotes to all user groups registered with them. These cover the innards of the APPLE not covered by the WOZPAK and that have been accumulating over the years. With this material will come a letter inviting the user group to join IAC. Those who do will be given immediate free access to the Source. This ties them together with their counterparts nationally and provides an information/communication channel to Apple Computer, Inc. Members also gain access (by Spring 1980) to all programs contributed to Apple and to individual user group libraries. Details of this software exchange are forthcoming from Neil Lipson of Philadelphia, who is Chairman of the Software Exchange Committee, with our Sandy Greenfarb also on the committee. Next, members will also exchange newsletters for local user group libraries' use. More will accrue as policies and concepts are further developed. The objectives of IAC were tentatively established that Saturday morning and include:

A. Communication to all member clubs by means of:
   1. A core newsletter, probably to be published bi-monthly.
   2. Information transfer all ways. This would include individual APPLE owners and user groups, between user groups and between Apple, Inc. and IAC.
   3. A free subscription to the Source.
B. Support of special interest groups.
C. Establishing and promulgating software and hardware standards and conventions.
D. Establishing and adhering to a code of ethics regarding software and written materials to minimize piracy and sale of copyrighted items.
E. Preparing and providing information to individuals and neophyte groups to assist them in properly organizing user group functions and resources, e.g. a User Group Information Kit.
F. Software dissemination including access to the entire contributed library held by Apple and the libraries developed by member user groups.
G. Technical support covering questions and problems on any subject dealing with the APPLE.
H. Annual User Group meetings (to be rotated geographically).

To get on with the job and especially to define things more precisely, we appointed pro-tem Board representatives, IAC officers, and established nine committees. (See list below.) Dick Sedgewick and I were designated to serve as representatives from the East Coast until those user groups from our region choosing to join could convene and elect representatives of their choice. Your review of the list will give you some idea of the direction we set.

By reflecting on our own activities to date you can easily conclude that this will cost money. Where is it to come from? Here's a partial answer. First, if we agree to join, we and other user groups must remit an initiation fee of $50 by January 1. This is to get the ball rolling. We are also asked to participate in the preparation of an authoratative 100+ page newsletter devoted to the APPLE, which will be provided to our members at a cost of $1.00 per member, in lieu of the March 1980 newsletter they would ordinarily receive. This newsletter, to be called The Apple Orchard, will be chock full of the best submissions from groups across the country and will become a collector's item for APPLE owners. These will be sold for $5.00 per copy at the West Coast Faire in San Francisco in March. They will also be sold to Computer Stores who will in turn sell them to their customers. Apple, Inc. is donating considerable funds that they would ordinarily use for publication and distribution of their next issue of Contact. We expect to sell sufficient advertising space in this special issue to defray approximately 40 percent of the cost of publication. Proceeds from the sale should be sufficient for

IAC startup. Dave Gordon of the LA user group (and President of Programma) is developing our budget.

What this specifically means for us is that if we agree to join we should be prepared to send to IAC (Dave Gordon, Treasurer) the $50 initiation fee and approximately $250 to cover the cost of 250 copies of the special newsletter. I estimate that we can cover than number if we count the total existing memberships of NOVAPPLE, Maryland Apple Corps and Washington Apple Pi, and add a few extra for anticipated new members.

IAC plans to hold a first official meeting March 13, 1980 in San Francisco. At that time the interim Board of Directors and Officers will review the Constitution and Bylaws being drawn up by Ken Silverman, and vote on organizational issues and policy. March 15 will be our day for meeting with APPLE user group representatives and members to present the results and to participate in the several workshops being planned by Mat McIntosh and friends for the Computer Faire. Plan to attend if you possibly can.

I urged that IAC adopt a social purpose as a fundamental founding principle. This would be conducive to the creation of a good public image which would help to dispell any thoughts that this is a rich man's organization built around a rich man's toy - the personal computer. The purpose I suggested was to foster the creation of an electronic network of user groups which could be used by both the deaf and the blind. To do this our network should be able to send and receive Baudot and be equipped with Braille I/O. Several activities are underway nationally which have already proven the feasibility of doing so. Federal funding of these activities may also be possible. The group reacted favorably and commissioned me to check into what was needed.

Some final notes on IAC. Future conferences and Board meetings will be held in different parts of the country on a pre-planned rotational basis. Board representatives are guaranteed travel and per diem expenses which will be paid by IAC. Dues for member user groups, proceeds from fundraising efforts such as The Apple Orchard, sponsor organization dues (presently set at $750/yr), advertisements, etc. shall hopefully be the means for making this possible. Individual membership dues (you and me) will be decided upon in March, but will be in the vicinity of $5.00.

INTERNATIONAL APPLE CORE
Interim Board of Directors, Officers and Committees

Board of Directors

NORTH	John Lawrence ?
EAST	Dick Sedgewick Bernie Urban
SOUTH	Bob Collins Dewayne Van Hoozer
WEST	Joe Alinsky Fred Wilkinson
INTERNATIONAL	Reger Ossie ?

Officers

PRESIDENT	Val Golding
VICE PRESIDENT	Neil Lipson
TREASURER	Dave Gordon
SECRETARY	Ken Silverman

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NEWSLETTER	Val Golding - Chairman Ken Silverman Randy Hyde Ed Avelar Mark Crosby (Apple Pi) Ed Seeger
THE SOURCE	Joe Alinsky - Chairman Craig Vaughn Jim Hoyt
FAIR - LOGISTICS	Mat McIntosh - Chairman Fred Wilkinson Dave Gordon Phil Roybal
CONSTITUTION AND BYLAWS	Ken Silverman - Chairman Jim Hoyt
CARROT	Randy Hyde - Chairman Jim Hoyt
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KIT COMMITTEE	Dick Sedgewick - Chairman Bernie Urban (Apple Pi) Fred Wilkinson Bob Collins John Lawrence

TALKING WATCH

A solar-powered talking watch that not only literally "tells" the time but also nags you awake with such alarm messages as "Time to get up, go, go, go," will be marketed in January by the Windert Watch Company of Los Angeles, California.

Available in four languages – English, French, German, and Spanish – the talking timepiece will include an accumulating register snooze control that warns, "You are now ten minutes past your alarm time . . . you are now twenty minutes past your alarm time . . ."

Called the Communicator, the watch uses a 64-kilobyte chip (containing 64,000 words of computer memory), which is twice as big as anything now on the market and which "should produce twice the voice clarity of present synthesizers," said Windert's Alex Weiss. The watch will retail for less than $100.

Second-generation talking watches and clocks will be externally programmable and voice-identifiable. "The buyer will be able to request the message he wants, and we'll be able to do it in a celebrity voice," Weiss said. "It's only a matter of time before the Dick Tracy watch makes its appearance. Once we get to work on it, we'll have watches with TV screens and voice transmitters. The future is wide open." – Allan Maurer

Interfacing the IDS 440 Printer

by Hersch Pilloff

The following information is intended as an update to interfacing the IDS 440 "Paper Tiger" Printer via the Game I/O. The April-May 1979 issue of Call-A.P.P.L.E. contains an excellent printer driver written by Darrell and Ron Aldrich for the IDS 225 Printer which works very well with the IDS 440. Note that the corrected handshaking patch is given in the June 1979 Call-A.P.P.L.E., page 27. (Because this driver offers some features not readily available with serial boards and therefore may be of interest where baud rates other than 1200 are required, the baud rate is determined by the delay at hex address 383, i.e. 14 hex corresponds to 1200 baud whereas 50 hex gives 300 baud.) The result of using this driver with the 3-wire hookup described in the April-May 1979 Call-A.P.P.L.E. is that at 1200 baud some "garbage" will appear in the printed output, whereas at 300 baud correct output is printed. In order to obtain full handshaking and correct operation at 1200 baud, connect PIN 4 on the Game I/O to PIN 20 (Data Terminal Ready) on the IDS 440. The two other connections are standard: PIN 15 on the Game I/O to PIN 3 (Receive Data), and PIN 8 on the Game I/O to PIN 7 (Signal Ground) on the IDS 440. (Address and phone number: Oxon Hill, Md. 20022, 301-292-3100)

Editor's Note: Hersch has not yet tested a graphics driver for the IDS 440, since the demo printer was not equipped with the graphics option. He promises to give us more on this later. Meanwhile, he will give a copy of his program to Dave Morganstein so that you may get a copy through our library rather than having to keypunch the following program. I have duplicated the Call-A.P.P.L.E. articles referenced by Hersch for your convenience. Thanks, Val.

WRITING THE WRONGS JUNE, 1979 PAGE 27
by the Wrongdoers *Call*-APPLE

The IP 225 Printer Driver program was developed on a Heathkit H-14 printer; as a result the patch for handshaking was incorrect. The correct patch for the IP 225 printer is printed below.

329: 2C 63 CO 10 FB

The wire should go from pin 4 of the game I/O connector to pin 5 (cts) on the IP 225 printer.

A way of turning the printer driver routine off was not described in the documentation. To turn off the printer driver use one of the following statements.

PR#0 (for use without D.O.S.)

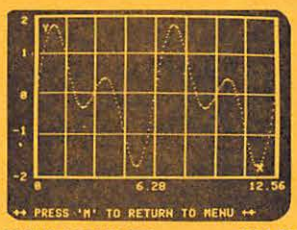
PRINT D$; "PR#0" (for use with D.O.S.) (D$=control D)

```
]LIST

1  REM HOW TO MODIFY A VAL
       GOLDING PROGRAM FROM 40
       LINES TO 4

2  REM BY DARRELL ALDRICH

10  GET A$
15  IF  ASC (A$) < 64 THEN  PRINT
     A$;: GOTO 10
20  PRINT  CHR$ ( ASC (A$) + 32);

30  GOTO 10
```

```
IP 225 PRINTER DRIVER
ADAPTED BY
DARRELL & RON ALDRICH


LIST OF CALLS:

 $300 - 768  BRING UP PRINTER
 $3A2 - 930  SET  8.3 CPI [CTRL] \
 $3A7 - 935  SET 16.5 CPI [CTRL] _

TO CHANGE THE WINDOW WIDTH UPON
INITIALIZATION, POKE 777,WIDTH

TO CHANGE THE WINDOW WIDTH AFTER
INITIALIZATION, POKE 940,WIDTH

PATCH FOR USE WITH HANDSHAKING ON SW2:
HANDSHAKING WIRE RUNS FROM PIN 4
OF THE GAME I/O CONNECTER TO 'RTS'
OF THE PRINTER

329: 2C 63 C0 30 FB

IF YOU USE DOS VERSION 3.1 RUN THIS
PROGRAM AFTER TYPING IN THE PRINTER
DRIVER AND BSAVE THE DRIVER AT $300,
WITH A LENGTH OF $100

  190 POKE 1002,76: POKE 1003,173
      :I= PEEK (55): POKE 1004,I+
      9:I=I-256*(I)127): POKE 12+
      I*256,25
  200 REM IT MIGHT BE A GOOD IDEA TO
          INCLUDE THIS PROGRAM IN YOUR
          BOOT UP ROUTINE SO THAT
  210 REM OTHER PROGRAMS THAT USE THE
          $3EA ENTRY WILL WORK WITH
          YOUR VERSION OF DOS.

IF YOU USE DOS VERSION 3.2 BSAVE THE
PRINTER DRIVER AT $300, WITH A LENGTH
OF $B0

TO UPDATE FROM DOS VERSION 3.1 TO
VERSION 3.2: BLOAD THE DRIVER
THEN BSAVE IT AT $300, LENGTH OF $B0
```

```
 1 WNDWDTH   EQU $21
 2 CH        EQU $24
 3 CV        EQU $25
 4 CSWL      EQU $36
 5 WNDSET    EQU $3AC
 6 WNDSAV    EQU $3AD
 7 DRTRN     EQU $3EA
 8 YSAVE     EQU $778
 9 COLCNT    EQU $7F8
10 MARK      EQU $C058
11 SPACE     EQU $C059
12 SW2       EQU $C063
13 VTAB      EQU $FC22
14 WAIT      EQU $FCA8
15 COUT      EQU $FDED
16 *
17           ORG $300
18           OBJ $300
19 *
20 TTINIT    TYA
21           PHA
22           LDY CSWL
23           JSR CONNECT
24           NOP
25           LDA #40
26           STA WNDSET
27           LDA CH
28           STA COLCNT
29           PLA
30           CPY #$F0
31           BEQ NODOS
32           TAY
33           JMP DRTRN
34 NODOS     TAY
35           RTS
36 *
37 TTOUT     PHA
38           PHA
39           LDA WNDWDTH
40           STA WNDSAV
41           LDA WNDSET
42           STA WNDWDTH
43 TTOUT2    LDA #$48
44           JSR WAIT
45           LDA COLCNT
46           CMP CH
47           PLA
48           BCS TESTCTRL
49           PHA
50           LDA #$A0
51 TESTCTRL  BIT RTS1
52           BEQ PRNTIT
53           INC COLCNT
54 PRNTIT    JSR DOCHAR
55           PLA
56           PHA
57           BCC TTOUT2
58           EOR #$0D
59           ASL
60           BNE FINISH
61           STA COLCNT
62           LDA #$8A
63           JSR DOCHAR
64           LDA #$58
65           JSR WAIT
66 FINISH    LDA COLCNT
67           BEQ SETCH
68           SBC WNDWDTH
69           SBC #$F7
70           BCC RETURN
71           ADC #$1F
72 SETCH     STA CH
73 RETURN    LDA WNDSAV
74           STA WNDWDTH
75           PLA
76 RTS1      RTS
77 *
78 DOCHAR    STY YSAVE
79           PHP
80           LDY #$0B
81           CLC
82 TTOUT3    PHA
83           BCS MARKOUT
84           LDA SPACE
85           BCC TTOUT4
86 MARKOUT   LDA MARK
87 TTOUT4    LDA #$14
88 DLY1      PHA
89           LDA #$20
90 DLY2      LSR
91           BCC DLY2
92           PLA
93           SBC #$01
94           BNE DLY1
95           PLA
96           ROR
97           DEY
98           BNE TTOUT3
99           LDY YSAVE
100          PLP
101 END      RTS
102 *
103 CONNECT  LDA #<TTOUT
104          STA CSWL
105          LDA #>TTOUT
106          STA CSWL+1
107          RTS
108 *
109 CTRL\     LDA #$9C
110          JMP COUT
111 *
112 CTRL_     LDA #$9F
113          JMP COUT
114 PGMEND   BRK
*300.3AF

0300- 98 48 A4 36 20 99 03 EA
0308- A9 28 8D AC 03 A5 24 8D
0310- F8 07 68 C0 F0 F0 04 A8
0318- 4C EA 03 A8 68 48 48 A5
0320- 21 8D AD 03 AD AC 03 85
0328- 21 A9 48 20 A8 FC AD F8
0330- 07 C5 24 68 B0 03 48 A9
0338- A0 2C 6F 03 F0 03 EE F8
0340- 07 20 70 03 68 48 90 E1
0348- 49 0D 0A D0 0D 8D F8 07
0350- A9 8A 20 70 03 A9 58 20
0358- A8 FC AD F8 07 F0 08 E5
0360- 21 E9 F7 90 04 69 1F 85
0368- 24 AD AD 03 85 21 68 60
0370- 8C 78 07 08 A0 0B 18 48
0378- B0 05 AD 59 C0 90 03 AD
0380- 58 C0 A9 14 48 A9 20 4A
0388- 90 FD 68 E9 01 D0 F5 68
0390- 6A 88 D0 E3 AC 78 07 28
0398- 60 A9 1D 85 36 A9 03 85
03A0- 37 60 A9 9C 4C ED FD A9
03A8- 9F 4C ED FD 00 13 00 02
```

NEW APPLE II® SOFTWARE

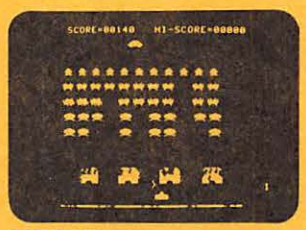


FUNCTION PLOT $24.95

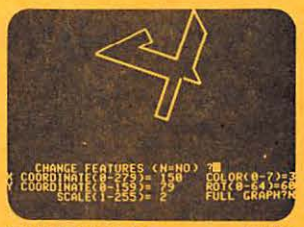
APPLE INVADERS GAME

I-CHING $15.95

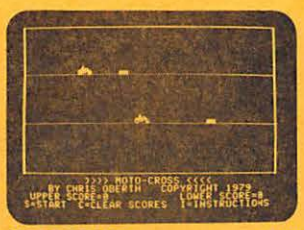
TRIVIA BOX $19.95



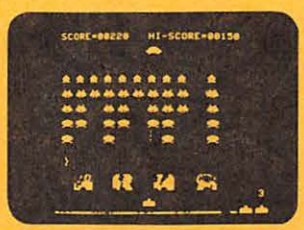
CASSETTE $15.95



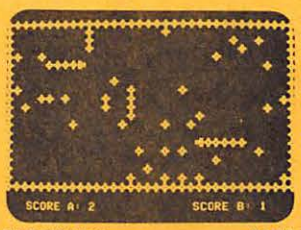
SHAPE BUILDER $19.95



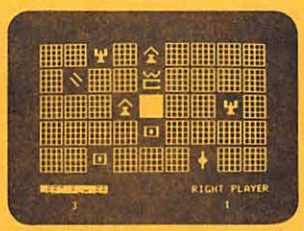
MOTO-CROSS $9.95



DISKETTE $19.95



BLOCKADE $9.95



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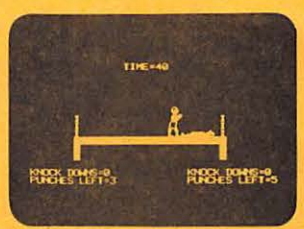

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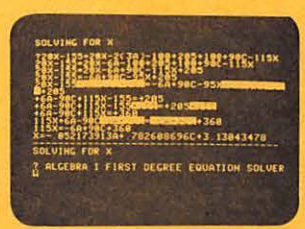

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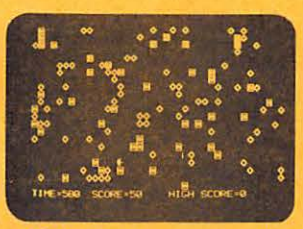

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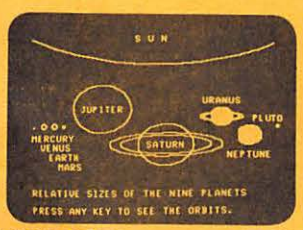

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EDITORIAL

by Bernie Urban

It is probably quite obvious to you from reading my report on the San Francisco meeting where my sentiments lie concerning the INTERNATIONAL APPLE CORPS. I know that many Washington Apple Pi and NOVAPPLE members are concerned about our growing too large too fast, and in the process losing all or part of our autonomy. For a while at San Francisco I too was quite concerned. There was, in my opinion, too much attention being given to organizing IAC and too little concerning the benefits to the individual APPLE owners. I believe that we overcame this initial emphasis, and that the way it is going currently is the appropriate way.

We have, through the Board of Directors, a way to influence its direction, purpose and services to you. Those of you who are collectors of software will benefit from the software exchange being planned by Neil Lipson. Those who are interested in well-written informative newsletters will be pleased by the efforts of the Newsletter Committee directed by Val Golding of Call-A.P.P.L.E. fame. Val as Acting President is an excellent choice to get us through this initial phase. We have already benefited in several ways. Note the interesting report on the I/O card from M & R Enterprises by Ken Silverman of San Francisco APPLE CORPS. Dave Gordon has generously donated copies of the Los Angeles library to Mark Crosby and our librarian, Dave Morganstein. Mark has offered copies of the ABACUS library and I have donated copies of the San Francisco library to Dave. He is now faced with the monumental task of organizing the material and setting up the procedures by which you can start ordering copies of disks of your choice, for the cost of their preparation. Dave will also be calling on you for your software submissions so that we can begin to reciprocate the generosity of the West Coast contingent. Washington Apple Pi has been given a copy of EasyWriter, a proprietary package developed by Information Unlimited Software, to help us put together our contributions to the special 100+ page newsletter to be published prior to the March meeting. Mark will be using this in his work with Val Golding. Other benefits are looming just over the horizon.

Yes, this will come at a cost to you and to me, but this cost will be financial in nature, rather than one involving autonomy. IAC needs money to do these good things, and as a matter of fact we are at a stage where we will have to devise fundraising techniques to defray the cost of our operations. More on that later. But for now, I urge you to support our affiliation with IAC.

****
SILICON GULCH
by Ken Silverman
****

Recently your roving reporter was in Sunnyvale, CA to see and talk to Marty Spergal of M & R Enterprises. M & R as you might know manufactures the Sup 'R' Mod we use in our Apple.

While getting a tour of the plant I was shown a working proto-type of a new I/O card. BELIEVE IT OR NOT I saw 80 columns by 24 lines, upper and lower case, coming out of the Apple into a monitor. The resolution on the inexpensive monitor (8Mz bandwith) was fantastic. I asked about this and the designer, John Wilbur, told me there is a new circuit (being patented) that adjusts the contrast between the horizontal and vertical lines to make it look like an expensive monitor.

According to M & R samples will be in computer stores for your evaluation some time in December with units for sale in January. They say the card is compatible with the ApplePascal System (so don't rush to buy a terminal), works with Apple DOS as an Hello program, and should work with most existing software. This is great for those of you working with word processors or time share programs. In fact John Draper has started to implement a new version of EasyWriter to work with this card with some new features.

M & R Enterprises says ask your local computer store for "SUP 'R' TERM 1". Take my word for it I saw it work - as of this time they did not give me a retail price.

Editor's Note: This is our guest writer from San Francisco Apple Core. Thanks, Ken.

Random Spiro

by DANA J. SCHWARTZ

This is an extremely short Applesoft graphics demo, producing extremely complex hi-res images. The pattern is similar to that produced by an old "Spirograph" drawing set, or the more recent "String Art" graphics. Essentially, a sequence of points from a regular pattern are connected by straight lines, with the lines and their intersections providing the visual stimulation.

In this application, I pick a random color and a random interconnection scheme and simply overlay each successive image. The original set of 60 points are evenly spaced around a circle, although other arrangments (ellipse, oval, uneven spacing, etc.) might also produce interesting results.

Lines 10-20 initialize and setup for full screen hi-res. HGR2 would have to be used for systems without the Applesoft ROM. Lines 25-70 generate the circle of 60 points. Lines 80-170 pick a random color and connection sequence, and connect the points. Lines 1000-1030 are a "pause" subroutine, halting pattern generation between sequences when any key is pressed (line 100), and then continuing when a second key is pressed.

```
 10     DIM X(59),Y(59)
 15     J=0
 20     HGR:  POKE  -16302,0
 25     P2=6.2831853:  ST=.10472
 27     R=95:  CX=140:  CY=96
 30     FOR I=0 TO P2 STEP ST
 40     X(J)=R*SIN(I)+CX
 50     Y(J)=-R*COS(I)+CY
 60     J=J+1
 70     NEXT I
 80     INC=INT(30*RND(1))
 90     HCOLOR=7 *RND(1)
100     IF PEEK(-16384)>127 THEN GOSUB 1000
110     HPLOT X(0), Y(0)
120     NE=0
130     NE=NE+INC
140     IF NE>59 THEN NE=NE-60
150     HPLOT TO X(NE), Y(NE)
160     IF NE<>0 THEN 130
170     GO TO 80
1000    POKE -16368, 0
1010    IF PEEK (-16384) < 127 THEN 1010
1020    POKE -16368, 0
1030    RETURN
```

Kaleido-Shape

by Mark L. Crosby

The SHAPE drawing routines available with the Apple II are variously misunderstood and sometimes difficult to implement. Although Applesoft has the routines built in, actually setting up a shape table is difficult. Once the basics are understood, however, the SHAPE routines are one of the most powerful aspects of high-resolution graphics on the Apple. With this in mind, I have set up a simple program with which you can experiment a bit.

I have set up shape vectors for a simple square and POKE'd them into memory starting at the user-program area $Ø3ØØ or 768 decimal. First is the number of shapes in 768 and 769 followed by the absolute starting point for the shape vectors themselves in 77Ø and 771 (a "4" which is four from 768 or 772). 772 through 777 are the vectors. Memory locations 232 and 233 represent the location of the shape table ($Ø3ØØ) which is used by Applesoft to locate the table.

I should mention here that I have only included one shape therefore the shape table is unusually brief. A shape table may contain up to 255 shapes if necessary and if you have the space. See page 95 in the Applesoft II BASIC programming reference manual for the table layout. If you use more than one shape, the draw commands change for each shape you are drawing (XDRAW 2 AT X,Y - XDRAW 3 AT X,Y, etc.).

HCOLOR is not needed in my program since XDRAW is always 'WHITE'. Providing the X,Y coordinates remain the same, the first XDRAW command will draw the shape in WHITE and the second XDRAW command will draw the shape in the complementary color (BLACK) which will seem to erase the shape. It is this feature which allows the KALEIDO-SHAPE to work its magic to produce some striking color combinations.

COUNT is a flag used to cycle the drawing routine through the same number sequence twice thereby eventually erasing the entire drawing before starting over again.

Try these changes: line 345 ROT=E or 345 ROT=255-E. Line 31Ø IF R=1 THEN ROT=4. Changing the random numbers will give interesting results, e.g., 22Ø B=INT(RND(1)*3+2). C should be larger than B to avoid errors. Variables B, C, and D vary the size and spacing of the shapes. R changes ROTation from Ø to 45°. O (alpha) selects the origin of the shape (X,Y) as Ø,Ø (upper left-hand corner) or 139,96 (screen center). Also, hitting control-C will stop the action and typing CONT (return) will resume. Try stopping the action then enter direct commands such as XDRAW 1 AT 120,80. See the commands on pages 98-100 of the manual aforementioned.

```
1ØØ POKE 768,1 : POKE 769,Ø : POKE 77Ø,4 : POKE 771,Ø : POKE 772,4Ø : POKE 773,54 :
    POKE 774,63 : POKE 775,36 : POKE 776,5 : POKE 777,Ø
15Ø POKE 232,Ø : POKE 233,3
2ØØ HOME
21Ø HGR2 : POKE -163Ø2,Ø : COUNT=Ø
22Ø B = INT (RND (1) * 9 + 2 )
23Ø C = INT (RND (2) *13 + 10)
24Ø D = INT (RND (3) * 8 + 1 )
25Ø R = INT (RND (4) * 2)
26Ø O = INT (RND (5) * 2 + 1 )
27Ø ON O GOTO 28Ø,29Ø
28Ø X = 139 : Y = 96 : GOTO 3ØØ
29Ø X = Ø   : Y = Ø  : GOTO 3ØØ
3ØØ IF R = Ø THEN ROT = Ø
31Ø IF R = 1 THEN ROT = 8
32Ø FOR A = B TO C STEP D
33Ø FOR E = A TO 255 STEP A
34Ø SCALE = E
35Ø XDRAW 1 AT X,Y
36Ø NEXT E,A
37Ø COUNT = COUNT + 1
38Ø IF COUNT = 2 THEN 21Ø
39Ø GOTO 32Ø
```


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