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Washington Apple Pi

Volume 2 April 1980 Number 4

Highlights

In This Issue

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Membership dues for Washington Apple Pi are $12.00 per calendar year. If you are interested in joining our club, call our club number and leave your name and address. An application form will be mailed to you. Or if you prefer, write us at the above PO Box.

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday of each month. The next meeting is Saturday, April 26 at 9:30 AM at George Washington University School of Engineering, Tompkins Hall (room 206), 23rd and H Streets, N.W. On that same day the Computer Sciences Department of GWU will sponsor an Engineering Faire. Apple Pi members are invited to attend the Faire and/or give presentations on APPLE applications. We will not be able to use the APPLEs for our regular hands-on session.

NOTE: The 4th Saturday in May falls on the Memorial Day Weekend. It has not yet been decided whether we will meet on that weekend or change it to the 5th Saturday (May 31). If you do not attend the April meeting, call the club number during the week of May 19 for information on the date.

NOVAPPLE will meet at 7:30 PM on May 14 at Computers Plus in Franconia. Part 2 of the Applesoft tutorial will be presented. On May 22 the meeting will be at 7:30 PM at Computerland of Tysons Corner, when there will be a presentation on DOS.

Classifieds

FOR SALE: Super Talker by Mountain Hardware. Firmware and software, includes speaker and manual. $200.00. Scooter Conrad. (301) 725-6251.

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.

EDITORIAL

With this issue I am initiating an exchange of newsletters with INTERNATIONAL APPLE CORE (IAC) member clubs in the Eastern Region. Hopefully, this will be reciprocated for our mutual benefit. (e.g., Please see the excellent "APPLE TRICKS" article by Craig Crossman of A.C.E.S, Boca Raton, Fla. in this issue.) Articles may be reprinted in other newsletters as long as credit is given to the author and Washington Apple Pi. But be sure to credit the original source of materials which we may have reprinted, and send courtesy copies to the originating club.

As some of you may know, the Directors of IAC were given some software at the March meeting in San Francisco. Dave Morganstein, our Librarian, has copied these and has sent copies to two Eastern Region clubs at their request. Since that time, Neil Lipson, IAC Software Chairman, has notified me that he will be sending copies directly to me for mailing to Eastern Region clubs. In any event, club representatives will be getting the first and all succeeding diskettes of IAC software from either Tony Cerreta of Big Apple or from me.

Also, we have inaugurated with this issue a new column - "DEALER'S CORNER" - which is premised on our observation that computer consumers and retailers have much to learn from each other. On the supposition that the pressures of the marketplace make direct communciation difficult, Washington Apple Pi invited all Washington area APPLE dealers to address their customers in a non-commercial environment. Paul Sand's article in this issue is the first in what we hope will become a continuing dialog.

Since this is supposed to be an opportunity for information exchange, we look forward to your comments on Mr. Sand's article. Such comments might be dignified (!) in a "CONSUMER'S CORNER", or begin a lively "LETTER TO THE EDITOR" column. Let's hear from you.

minutes

The Washington Apple Pi meeting of March 22, 1980 was called to order at 9:35 by the President. There was a report by Bernie Urban about the recent meeting of the INTERNATIONAL APPLE CORE in San Francisco. Bernie and Jim Manley also reported on the Computer Faire there. A motion was passed to sell "Apple Orchard" for $2.00 by mail ($1.00 if picked up at the meeting).

After the business meeting, John Moon presented an informative tutorial on Sweet 16, the 16-bit "computer" that resides within the APPLE.

The meeting was then adjourned to the informal question and answer period and to the use of the APPLEs.

OOPS

Last month we printed Jim Simmons' program "SPIRO" - or so we told you. What actually appeared in the March issue was "RANDOM SPIRO", another excellent Simmons program. It creates, as its name suggests, random spiral-like images in HiRes. And it performs exactly as designed.

As all of you who keyed in the March program discovered, "RANDOM SPIRO" does not entertain user-defined parameters. No pyramid, right? The real "SPIRO" follows and the pyramid challenge stands. Our apologies to Jim Simmons, who is faultless, and to all those who may have been disappointed.

```
]LIST

 10  REM   SPIRO BY JIM SIMMONS
 20  REM   LAST MODIFIED 2/27/80
 30  TEXT : HOME
 40  PRINT : PRINT
 50 MX = 95:XC = 139:YC = 95:PI =
     3.1415926
100  INPUT "NUMBER OF SPIRALS? ";
     SP
110  INPUT "NUMBER OF HALF REVOLU
     TIONS IN EACH? ";HA
120  INPUT "NUMBER OF POINTS IN E
     ACH?";PO
130  INPUT "DRAW BOTH FORWARD AND
      REVERSE SPIRALS    ? ";BO$
200  HGR2
210 A = MX / (HA * PI)
220 DI = 1
230 DC = 2: IF  LEFT$ (BO$,1) = "
     N" THEN DC = 1
300  FOR I = 1 TO DC
310  IF I = 2 THEN DI =  - 1
400  FOR J = 1 TO SP
410 OF = 2 * PI * (J - 1) / SP
420  HCOLOR= 3
430  HPLOT XC,YC
500  FOR K = 1 TO PO
510 TH = HA * PI * K / PO
520 X = XC + A * TH *  COS (TH +
     OF)
530 Y = YC + DI * A * TH *  SIN (
     TH + OF)
540  HPLOT  TO X + .5,Y + .5
550  NEXT K
560  NEXT J
570  NEXT I
575  PRINT  CHR$ (7)
600  INPUT "HIT RETURN TO CONTINU
     E: ";X$
610  TEXT
620  PRINT
630  INPUT "DO YOU WANT TO DO ANO
     THER ONE? ";X$
640  IF  LEFT$ (X$,1) <  > "N" THEN
      100
650  END

]
```

Washington Apple Pi now has almost 200 members. Our current Newsletter circulation is 450.

SIGNEWS

SIGAMES, the special interest group on games, will hold their meeting immediately following the Washington Apple Pi monthly meeting in room 205 of Tompkins Hall. The topics at this meeting will include formation of a group interested in working on an "adventure" like game, and a report on the interest of SIGAMES members. Come and join the fun!! (Al Gass, Chairman)

Michael Thomas, one of our "under 16" members, is interested in starting a SIG group. He suggests that it not be just for those under 16, but for all students from 6 to ... For anyone interested, he can be contacted at (703) 928-8411 or by mail at 4412 Eastwood Court, Fairfax, Va. 22032. We will try to get some names of those interested in this group at our next meeting.

NYBBLES

For the users of Softape Forth II, there is an update available dated September 1979, from Softape for $7.50 ppd.

From Trendcom, there is a factory update that will allow Trendcom 100 printers to print APPLE's HiRes screen. It converts the screen to graphics. Contact Trendcom for price.

NOVAPPLE

OFFICERS

President - Phil Eastman
Vice President - Nick Cirillo
Secretary - Gerald Eskelund

MINUTES OF THE MARCH 27,1980 MEETING

The meeting was opened by the President. A few announcements were made concerning the Computer Faire at Trenton. It was announced that the next meeting at Computers Plus would begin a tutorial on Applesoft. After the main business was concluded, a presentation was made by Mr. William Inglish, Eastern Regional Sales Manager for Mountain Hardware. He demonstrated two main boards from their line, the Super Talker and the X-10 controller. The Super Talker adds another dimension to CAI. It encourages not only through sight but sound as well. The sounds are more than APPLE noise; they are synthesized speech. A demonstration of a math program showed an application of a teaching aid using the board.

Next, Mr. Inglish demonstrated the Introl X-10. This device uses an APPLE and a BASF X-10 controller to perform such operations as controlling lights, turning on appliances and generally controlling wall and switch units. Integration of the proper program with the unit can allow the APPLE to "run the house", preparing morning coffee, turning off lights and television, as well as dimming lights. These functions are all done remotely under the control of the APPLE program.

In May, Mountain Hardware is planning to come out with a new music board. They say that this will not be like any other system; it will have multiple voices and as many as 32 notes in the scale. Supposedly, it will be easily programmed.

MINUTES OF THE APRIL 4, 1980 MEETING

The meeting was opened by the President. The Program Chairman presented the program schedule for the next several meeting, as follows:

April	24	Total Home Control
May	14	Applesoft Tutorial, Part 2
May	22	DOS
June	11	Applesoft Tutorial, Part 3
June	26	Z80 CPM (tentative)
July	9	Applesoft Tutorial, Part 4

Several members informed the officers that they had not received their Apple Pi Newsletter. The Secretary agreed to let the publisher know about the problem.

The program was presented by Dr. Nick Cirillo, the Vice President. He began a new tutorial series on Applesoft. It was well received. In the first of a four-part series, he began with a review of the basic nomenclatures and conventions. He hopes to develop a useable financial package before the tutorial is over, demonstrating most of the techniques used in programming. Even though the level is basic, there is much to be gained even by the experienced programmer. All are encouraged to come and contribute to the discussion.

FROM THE SECRETARY

I would like to publish the following letter from one of our young members and my reply, because I feel that other members may have similar feelings on this or other subjects. Perhaps it will provide food for thought.

Dear Apple Pi,

I was very displeased with the disks you gave us! Alot of programs were missing and tons of 'em had errors! I think that if you're going to try to keep up a good group you'd better shape up. I am not trying to be pushy or a brat, but that is how I feel! Is there any way we can get our programs?

Sincerely,
XXXX XXXXXX, Age 11

Dear XXXX,

Thank you for your letter expressing your displeasure with our library disks. We appreciate your taking the time to let us know how you feel. I can understand your frustration and anger when programs that you bought don't work. Perhaps the following thoughts will help you see "the other side of the story" and keep you from feeling that we're the bad ogre selling rotten apples to kids (pun intended).

First of all, we are not a professional group. Instead we are a group of volunteers trying to offer services to other members. By that, I mean we don't get paid for the work we do for the club. The programs in the library have been donated to us, many of them from members who either wrote them or typed them up from a magazine, enhanced or modified them, and gave them to the library. By and large, they are a good batch of programs. Our librarian has spent many hours going over the programs, organizing them, and then copying them for distribution. The club does not sell them for a large profit - only enough to cover costs and a little extra to buy more supplies and equipment needed to reproduce them. The price is cheap compared with commercial programs.

Sure, they're not all perfect, even though we've tried hard to make them so. There could be many reasons why your programs don't work - not enough memory, a different hardware configuration, a faulty diskette, or just plain old error. Perhaps you and your family could try to figure out the problem, remedy it and share it with others in the club. Remember, when you say "you'd better shape up", that 'you' includes you as a member.

Please write down your problems in detail, the disk no., the name of the programs and what happens when you try to run them, or the names of the ones missing. With this information call me - or see me at the next meeting - and we'll get together with the librarian and try to straighten it all out.

I hope this letter will help you feel better about our club and its services. Looking forward to hearing from you,

Sincerely yours,
Genevie Urban, Secretary

GREENAPPLES

by Andy Rose

DISK ORGANIZATION - "WHERE'S THAT DISK I WANTED?"

If you have a system for organizing your disks, this article is not for you (most of the club will read it). There are many problems facing the organization of disks (Oh, really). The first problem is where to keep the disks. A box is OK but I recommend disk jackets that hold one or two disks in a three-ring binder. Next it is best to number your disks by volume as opposed to names so that you can file them in some sort of order. The next problem facing disk organization is which disk to put which software on. I have found that there are two solutions to this problem. The first is to divide your disks into categories and put each program in its corresponding category. I think the most suitable categories are:

a) Games
b) Adventures and simulations
c) Demos and utilities
d) Programs being worked on

If you have one disk with a number of programs relating to one another (such as APPLE contributed programs) you can leave them on that disk and make an exception. The second approach to this problem is to use a data base management system and input all the names of your programs into a file. I think that Name, Type, Volume and Language are the best choices for fields. This way you can sort, print, change and keep an active file, and other nice things like that. The following is an example:

Sorted by Name

NAME	TYPE	VOLUME
ABE	PICTURE	15
ADD LIBS	GAME	20
ADVENTURE	ADVENTR	08
AIRFOIL	UTILITY	03
APPLE TREK 2.2	TREK	09
APPLE TREK 2.3	TREK	09
APPLE VISION	DEMO	03
BACH MUSIC	DEMO	12
BINARY ADDRESS	UTILITY	12
BONE TUMOR DIAGNOSIS	UTILITY	12
BOUNCER	DEMO	14
BOWLING	GAME	01
CANDLE	DEMO	18
CATCH	GAME	00
CATCHIT	LIPSON	06
CHASER	GAME	20
CHECKBOOK	UTILITY	12
CHESS	GAME	01

CATEGORIES (TYPE)

ADVENTR (Adventure)
DEMO
GAME
LANGAGE (Language)
LIPSON (Lipson Light Pen Programs)
PICTURE (Hi-Res Pictures for Printing)
SIMULAT (Simulations)
TREK (Star Trek Games)
UTILITY

THE FASTEST MAZE MAKER THIS SIDE OF THE MISSISSIPPI

I have always been plagued by the problem of slow maze routines, so I decided to make my own. By taking various maze-using programs and butchering them up until I found the maze routine, I was able to make a faster-than-usual maze maker. The meat of this program was found in one of those escape type programs (might have been from MUSE). I made the printer routine myself. It is made for a Paper Tiger printer, but it can easily be changed. The most time consuming part of the program is the ten second wait in the beginning of the program. This wait is caused by a FOR loop in which a variable that has sixteen hundred subscripts has to be initialized. This can be taken out as long as you make sure to type CLR before running the program.

```
  4 REM  MAZE MAKER***** BY A.  ROSE*
    **THANKS TO MUSE
  8 DIM MAZE (1600),INCR(4)
  9 INCR(1)=1:INCR(2)=40:INCR(3)=-1:
    INCR(4)=-40
 10 DIM LEFT(5),RIGHT(5),TOP(5),STR$(40)
 11 DIM PRH(18),PRL(18),PRC(18),DETR(3),
    DN$(20)
 12 DIM BOTM(5),TRACL(5)
 15 PRINT "HOW MANY MAZES DO YOU WANT ":
    INPUT A
 16 PRINT "HOW WIDE (2-17) ";:INPUT WIDTH
 17 INPUT "HOW LONG (2-17) ", LENGTH
 19 FOR LMO=1 TO A
 20 FOR K=1 TO 1600:MAZE(K)=0:NEXT K
 21 TEXT :  CALL -936
 23 CALL -1059:  GOSUB 1000
 28 GR :  PRINT:PRINT "          GENERATING
     MAZE":  PRINT
 29 COLOR =15
 30 POS=42:NEW=42:MAZE(42)=15
 35 ULIM=(40*LENGTH)+WIDTH+1:UHIR=79-WIDTH
 40 OLDIR=RND(4)+1:DIR=OLDIR
 50 X=(POS-1)/40:Y=(POS-1) MOD 40:PLOT X,Y
 60 NEXT=POS+INCR(DIR):SECD=NEXT+INCR(DIR)
 65 Y=(NEXT-1) MOD 40
 70 IF SECD>ULIM OR SECD<1 THEN 80:  IF
    Y<1 OR Y>WIDTH THEN 80:  GOTO 90
 80 DIR=((DIR+1) MOD 4)+1:  IF DIR=OLDIR
    THEN 120:  GOTO 60
 90 IF MAZE(SECD)>0 THEN 80
100 MAZE(NEXT)=15:MAZE(SECD)=15:POS=SECD
101 X=(NEXT-1)/40:Y=(NEXT-1) MOD 40:
    PLOT X,Y
110 GOTO 40
120 OLDIR=POS
130 POS=POS+2:X=(POS-1)/40:Y=(POS-1)-
    (40*X)
131 IF Y>WIDTH THEN POS=POS+UHIR:
    IF POS>ULIM THEN POS=42
135 IF POS=OLDIR THEN 175
139 IF MAZE(POS)>0 THEN 130
140 DIR=0:FOR K=1 TO 4:SECD=POS-
    (2*INCR(K))
141 Y=(SECD-1) MOD 40:  IF Y<1 OR Y>WIDTH
    THEN 160
145 IF SECD>ULIM OR SECD<42 THEN 160
150 IF MAZE(SECD)>0 THEN DIR=K
160 NEXT K:  IF DIR=0 THEN 130:SECD=POS:
    NEXT =POS-INCR(DIR)
170 GOTO 100
175 MAZE(2)=12
```


contd.

```
180 COLOR=15:  PLOT 0,1
200 PRINT "":REM PUT PRINTER ON LINE
    (CTRL-Q)
201 FOR I=0 TO WIDTH:  PRINT "*";:  NEXT I
202 PRINT "*"
210 FOR I=1 TO LENGTH
220 FOR J=0 TO WIDTH+1
230 IF SCRN(J,I)=0 THEN PRINT "*";
235 IF SCRN(J,I)=15 THEN PRINT " ";
240 NEXT J
245 PRINT
250 NEXT I
255 FOR I=0 TO WIDTH:  PRINT "*";:  NEXT I
256 PRINT "*"
260 PRINT "":  REM ADVANCE TO TOP OF FORM
    (CTRL-L) AND DESELECT PRINTER(CTRL-S)
270 NEXT LMO
280 END
1000 REM
1030 LENGTH=2*LENGTH-1:WIDTH=2*WIDTH-1
1070 RETURN
```

```
  >
  ************************************
Start *         *                  *   *
  *** *** *** * * * *** ***** * * ***
  *   *   *   * * * *   *   * *   * *
  * *** * *** ***** * * * ******* * *
  *   * *   *     *   * * *     *   *
  *** *** *** * *** * * ***** *******
  * * *   *   * *   * *   *   * *   *
  * * *** ***** *** *** * *** * *** *
  * *   * *         *   * * *       *
  * *** * * * ***** *** * * *** *****
  * *   * * * * *   *   * *       * *
  * * * ***** * *** *** * ******* * *
  * * *   *   *   * *   *     *     *
  * ***** * * * *** ********** *****
  *       * * * *         *   *   *
  * ********* * *** ***** *** * *** *
  *           *       * * *   *     *
  ********** *** *** * * *** ***** *
  *         *   *     *   * *     *
  *** *** *** ***** ******* * ***** *
  *     * *     * * *       * * *   *
  * ***** * * * * * * * *** * * *** *
  * *     * * *   * * * *   * *     *
  ***** * *** ***** *** * *** *******
  *     *     *     *   * *         *
  * ***** ******* * ***** * ***** ***
  *   *     * *   *     * * *       *
  * * ***** * ***** *** * ******* ***
  * *   *   *   *   *   * * *   *     *
  * ***** *** * * ***** * * * * *** *
  * *     *   * *   *   * * *     * *
  * ********* * * * ******* ***** ***
  *         * *   *         * Finish*
  ************************************
```

A Hardware Change On New APPLES

by John L. Moon

Apple, Inc. has made another change to the hardware of the APPLE. They have changed the keyboard to remove the reset bogie! First a desciption of the change and then some speculation as to why they did it.

The key feature of the new keyboard (pun intended) is a switch that allows selection of a mode where the control key has to be held down by the left hand while the right hand hits reset in order for a reset to actually take place. There is also another switch position that makes the APPLE work like all other APPLEs. The two-handed reset should all but eliminate the unwanted reset (one could argue that it should be shift, control, reset but to my way of thinking, I've never had problems with the original single button version...).

The fascinating part is the way in which the change was made. The keyboard in the old APPLE was made on a single printer circuit (PC) board with both keys and logic on that board. The new keyboards are made from two PC boards, a big one that has all the keys on it and a smaller one that has all the logic. They are plugged together with a special connector and plastic ties, and then a normal ribbon cable plugs into the APPLE motherboard from the little card just like the old system.

The big board has all the keys just like the old system (they even look like the same maker, mounting, and such). However, the board has all the traces and lands (the wiring that is etched on the board) on the back whereas the old system had some on the back and some on the front. This should provide somewhat greater resistance to coffee spills and the like.

The little logic board seems to have a different character generator chip (this would be hard to tell without specification sheets on the chips which I didn't have access to). Also, there are PC lands, holes, traces and silk-screened layouts which don't have any part installed. The switch to select the reset mode is on this little card. There seems to be room for another switch and a little logic.

My speculation (and from here on out, it is pure speculation with no inside knowledge), is that a later version of this keyboard is going to support upper and lower case at a flick of a "to-be-installed" switch. This option might even be available to these purchasers of new APPLEs as a dealer installed backfit. It might also require a ROM replacement in order to take advantage of the change since the normal monitor character input routine shifts all incoming characters to uppercase.

Other alternatives that I can think might be in the wind would be other keyboards, say maybe the proximity thin type like Atari uses in their cheapest computers (this could be for a lower entry cost APPLE); or perhaps they made the change so that the keyboard will have manufacturing commonality with a new or improved APPLE (APPLE III?). Then, perhaps they just found out it was cheaper to build them this way. Well, if we wait (and what alternative is there?) we will find out in due time. We can see what kind of prognosticator I really am.

Dealer's Corner

HOW TO BUY SOFTWARE

by Paul A. Sand
Computerland of Rockville

A computer without software is like a stereo without records, a car without gas, a day without sunshine. But the person who has wisely chosen to buy an APPLE computer instead of brands X, Y, or Z may not know beans about how to buy the programs to run on it. An APPLE user wants and needs good software. Just as important, he needs to avoid buying programs that won't do the job for him. Computer stores will often flatly refuse to refund money to a dissatisfied customer on software, on the (reasonable) grounds that the customer could have copied the program and documentation while he had it in his possession. I hope that some of the tips given below will help you in evaluating software for your machine.

First, you should make sure that the programs you are thinking about purchasing will run on your particular machine. This sounds easier than it actually is, for there may be a number of things that will prevent any given program from running on your APPLE:

a) Lack of memory - obviously the first thing you should look for. Most programs will prominently display their memory requirements, but some do not. (By the way, the retail price of APPLE expansion memory has dropped again. If you don't have 48K of RAM in your machine, it may be time to get it.)

b) Lack of hardware - The software may require one or more disk drives, or a printer, etc. Again, any peripheral requirements such as this should be obvious from the documentation. A few programs have the feature of being able to use additional hardware beyond the minimum requirements such as more memory, or a second or third disk drive. That's all well and good. However, find out if the program will satisfy your needs on your present system without requiring an additional hardware investment. If the program is good enough, of course, it may justify buying more hardware.

c) The wrong Basic - The program is in Integer Basic and you have an APPLE II Plus wihout a firmware card or Language System. Or you have an APPLE II with RAM Applesoft and the program requires ROM Applesoft. Or vice-versa. (You people with RAM Applesoft should notice, if you haven't, that APPLE is kind of shying away from supporting that version.) For example, the Apple Invaders game from Creative Computing will not run on a Plus (it has about 10 lines of Integer code) but the disk version will run on a II or a II Plus. The similar game from Programma on tape will go on either, but the disk version requires Integer Basic. To make this confusion complete, many programs do not display this information on the outside of the package, and a few don't even tell you on the inside!

d) Hardware incompatibility - Some clever people, for one reason or another, put "hooks" in their software that may catch on your system. For example, there are a a few programs around that will not run on an APPLE with a Language System. Sargon II on disk from Hayden is one. I've never seen this "feature" documented, so Pascal lovers beware.

A related question is: can you "back up" the software by making extra copies of it on disk or tape? Some software publishers, for obvious and understandable reasons, try to prevent unauthorized duplication by making duplication as near impossible as they can. Whether this affects your decision to buy the program is up to you--I can understand both sides. But find out what the policy is on returning such programs should the recording medium fail.

After you have satisfied yourself that the program in question will run on your machine, you must decide, simply: is this software worth the money?

Ask to see the documentation for the program if you haven't seen it already. Is it clear and complete? For more complex software, the documentation should include sample executions that the first-time user can use as a tutorial. It should contain a list of possible problems with their causes and solutions, a "troubleshooting guide." APPLE's documentation tends to be superb - the best I've seen for any software on any computer. On the other end of the scale, I've seen some documentation that gave flatly wrong instructions on how to run the program. Of course, an excellent program may have lousy documentation, but poor documentation may prevent you from ever using the software to its full potential. And good documentation will usually mean good software.

The documentation should also answer any remaining questions you have about the operation of the program and help you decide if it does the things you want. Assuming you are shopping in a retail store instead of a mail-order catalog, ask the salesperson any questions for which you cannnot find the answers in the documentation. (An aside is in order here - Please don't get upset if he can't answer your question immediately. It's nearly impossible to know everything about APPLE software. But he should be willing to attempt to find the answer.)

For many programs, a demonstration should be requested. If the store is seriously interested in selling software, this should be no problem. (But please don't ask for a full demonstration of a $7.95 Creative Computing tape containing five programs.)

If you get a chance to get your hands on the computer during the demonstration, try to know what you are looking for in the program rather than just poking about aimlessly. Keep in mind your requirements. Try to use the software as it would actually be used in your

contd.

application.

I like to test the "human engineering" of a given program. Many complex interactive programs can be baffling without careful design by the programmer. Does the program test the information the user enters for reasonableness? Does the program give the user enough information to run it? Or is the program overly gabby, with an excessive number of "bells and whistles" that waste your time?

For game programs, it is important to ask if the game is sufficiently interesting, challenging, or flexible enough to maintain your interest beyond a few sessions with it. For more serious programs, the key question is whether the software will handle your present and future needs.

I feel that people who own APPLEs are fortunate - the APPLE has been around long enough so that really first-class programs are now coming out for it: a multitude (or as my favorite sportscaster would say, a "veritable plethora") of text processors, Visicalc, Desktop Plan, CCA Data Management, etc. Game programs like Sargon II, various versions of Alien Invasion, Computer Bismarck, and Temple of Apshai make old favorites like Breakout and Star Trek seem a little behind the times.

In any case, buying good software is still easier than writing good software. But if you suffer (as I do) from the programming bug, and you wind up writing a program you believe is commercially viable, bring it to the store and show me a demo. We may get you started as a rich software publisher...

An Error In DOS 3.2.1

by Hersch Pilloff

On a recent trip to the San Francisco Bay area I had occasion to attend an Apple User's Group meeting. During the course of this meeting it was mentioned that the APPEND function will overwrite all previous sectors (text file) if the last existing data byte ends on the last (256th) byte in the sector. Under these conditions the APPEND function incorrectly sets the pointers to the beginning of the file and in effect performs the equivalent of an OPEN. Although this problem seems to be well known on the West Coast, this was the first I had heard of it. In order to verify this I wrote the simple program listed below. Indeed this problem is real and represents a potentially disastrous situation. The probability per APPENDing operation for this error is on the order of 1/255. (256 bytes can be stored in a sector, but there must be at least 1 byte in a given sector in order to start APPENDing within that sector.) In effect APPENDing data files amounts to playing Russian roulette with valuable and possibly irreplaceable data. In summary this problem is real and, until it is corrected, there is a real probability for catastrophic data loss. My own guess (and wish) is that APPLE will introduce a new DOS to correct this problem.

```
]List

10  REM  THIS PROG DEMOS THE ERROR IN THE
         APPEND FCN IN DOS 3.2.1
20  D$ = CHR$(4)
30  PRINT D$;"OPEN TEST"
40  PRINT D$;"WRITE TEST"
50  FOR I = 1 TO 128
60  PRINT 1
70  NEXT I
80  PRINT D$;"CLOSE TEST"
90  PRINT D$;"APPEND TEST"
100 PRINT D$;"WRITE TEST"
110 FOR I = 1 TO 5
120 PRINT 9
130 NEXT I
140 PRINT D$;"CLOSE TEST"
150 PRINT D$;"OPEN TEST"
160 PRINT D$;"READ TEST"
170 FOR I = 1 TO 15
180 INPUT X
190 PRINT X
200 NEXT I
210 PRINT D$;"CLOSE TEST"
220 END
```

(Ed. Note: See "Append Fix Apnote", pg 13.)

Programing Quickie

by Bruce F. Field

When multiple choice type INPUT statements are used in Basic it is often helpful to provide a default value so the user can respond with only a carriage return. For example, suppose a program contained the following statement.

```
200 INPUT "MORE DATA TO BE
     ENTERED? (Y/N)";A$
```

The user is expected to enter either a 'Y' or 'N' ('YES' or 'NO' should also be acceptable). If one choice predominates, assume YES for this example, it would save time to only require pressing <return> rather than typing 'Y' then <return>. This can be accomplished by checking A$ with the statement shown below.

```
230 IF LEFT$(A$,1)<>"N" THEN (go get
                              more data)
```

Any response other than something that starts with 'N' will be treated as a yes response. This can save some time if you are entering 200 pieces of data and the question is asked after each data value. Also you are less likely to make a typing mistake if only <return> is to be pressed.

In order to use this technique effectively the user must know which of the choices is the default value. One way to do this is to display the input request with the default value in reverse video (black on white). For this example the 'Y' would be reversed. This is a little awkward on the APPLE but the example below shows how it can be done in Applesoft.

```
200 PRINT "MORE DATA TO BE ENTERED?  (";
210 INVERSE : PRINT "Y"; : NORMAL
220 INPUT "/N) ";A$
230 IF LEFT$(A$,1)<>"N" THEN (go get
                              more data)
240 STOP
```

Similar code can be written in Integer Basic where the INVERSE and NORMAL commands are replaced by POKE 50,63 and POKE 50,255 respectively.

A PAGE FROM THE STACK

LIBRARIAN'S CORNER - Dave Morganstein

Library Disk Volume 14 contains utility programs, most of which come from the INTERNATIONAL APPLE CORE disk. These programs are particularly useful and valuable to owners of APPLE II Plus and owners of Language Cards. Among other utilities are the following: A RAM Version of Integer Basic and the Mini-Assember Trace and Step Functions. Now owners of APPLE II Plus can use all Integer programs and owners of Language Card Systems who want to use machine code can use the valuable single step and trace operations available in the original Integer Basic ROM. Another utility program in this volume is a disk to disk transfer which runs in DOS 3.2.

Volume 15 contains several unusual new games, three of which have come from the "Nybble" magazine. One of these is a very fast HiRes arcade-style StarWars, written in machine language.

I appreciate the help that has been provided by many people. The contributions of programs are beginning to flow in. Please keep those disks and listings coming! Some of the many people who have contributed programs or suggested modifications include Steve Hadley, Ed Garner, Michael Thomas, and James Devilbiss.

What we need now is some written instructions and reviews of the programs. Please volunteer to take a disk and write comments on it for the Newsletter.

NO.	VOL	TYPE	PROGRAM
0	001		FREE SECTORS = 84 (21K)
1	001	I	HELLO
2	001	I	IMPROVED CATALOG
3	001	I	DISK AIDE DOC.
4	001	I	DISK AIDE
5	001	B	DISK AIDE MAC.
6	001	B	DISK MAP
7	001	I	TONY'S SUBROUTINE PAK
8	001	I	LOCK DISK
9	001	I	DISK PROGRAM ELIMINATOR
10	001	I	SUPERCATALOG.DOC
11	001	B	SUPERCATALOG.O
12	001	I	DISC SPEED INFO
13	001	I	DISC SPEED TEST
14	001	B	DSPEED.OBJ
15	001	I	L O O P
16	001	I	SLOW MEM TEST
17	001	I	FAST MEM TEST
18	001	I	MEMORY SPY
19	001	I	CAT. TO MENU
20	001	B	SYMBOL TABLE XREF
21	001	B	LINE # XREF
22	001	I	STOP LIST DOC
23	001	B	STOP LIST
24	001	I	SPLIT CATALOG
25	001	I	FREE SECTORS
26	001	B	OKIDATA.OBJ
27	001	I	B/BSTAT
28	002		FREE SECTORS = 209
29	002	I	HELLO (52.25K)
30	002	I	SWEET 16 DISASSEMBLER
31	002	I	DISK TRANSFER
32	002	A	DEBUGGING AID
33	002	B	B.FIND
34	002	I	FIND TEXT-TOKEN
35	002	B	B.TRACE
36	002	I	PROGRAM TRACE
39	002	I	TED II SAVE/RETRIEVE
40	002	I	TED START
41	002	I	TED3
42	002	B	TED.DISK
43	002	I	BASIC TED PRINTER
44	002	A	DOS UTILITY #1
45	002	I	CODES FOR 6502
46	002	I	PASSWORD KEY
47	003		FREE SECTORS = 1
48	003	I	INTRO (.25K)
49	003	I	TOWERS OF HANOI
50	003	I	TENNIS
51	003	I	ROULETTE
52	003	I	MIDWAY
53	003	I	COLOR TEXT
54	003	I	MERRY CHRISTMAS
55	003	I	BAGELS
56	003	I	DRIP
57	003	I	DIGITAL CLOCK
58	003	I	POKER
59	003	I	KENO
60	003	I	SEA CHASE
61	003	I	NIGHTMARE #6
62	003	I	SLOT MACHINE #2
63	003	I	COLOR WORM
64	003	I	XMAS TREE
65	003	I	MASTERMIND
66	003	I	KALEIDOSCOPE
67	003	I	MOUSE MAZE
68	003	I	SANDYS FOLLY
69	003	I	SAUCER WAR
70	003	I	THE MAZE
71	003	I	BLACKJACK
72	003	I	SHOOTING STARS #2
73	003	I	A TRILLION STORIES
74	003	I	POET
75	003	I	GARYS QUICKY
76	003	I	COLOR LIFE
77	003	I	AWARI
78	003	I	SEVENS
79	003	I	OTHELLO
80	003	I	MAD-LIB
81	003	I	BIORHYTHM
82	003	I	BANANAS
83	003	I	ANDROMEDA STRAIN
84	003	I	CRAPS
85	003	I	SQUARES
86	004		FREE SECTORS = 37
87	004	I	HELLO (9.25K)
88	004	A	PRO FOOTBALL
89	004	I	ATOM 20
90	004	A	CIVIL WAR
91	004	A	LEM
92	004	I	DR. Z
93	004	I	RED GNIK
94	004	A	DEEPSPACE
95	004	A	ADVENTURE
96	004	A	ELIZA
97	004	I	QUEST
98	004	A	STOCK MARKET
99	004	I	STARSHIP ATTACK
100	005		FREE SECTORS = 10
101	005	I	HELLO (2.5K)
102	005	I	BLACK BOX
103	005	I	SHOOT OUT
104	005	A	HUNT THE WUMPUS
105	005	I	BEGINNER MATH
106	005	I	SPELLING BEE
107	005	I	APPLESTAND
108	005	I	LEGACY/TAKE IT
109	005	I	LO RES FOOTBALL
110	005	I	TOGNAZZINI CHESS
111	005	I	NIGHTMARE GAMEPAK
112	005	I	SIMPLE SIMON
113	005	I	BRAIN BUSTERS
114	005	I	CRYPTOGRAM
115	006		FREE SECTORS = 37 (9.25K)
116	006	I	HELLO
117	006	A	TRADER
118	006	I	DEATH STAR
119	006	B	SPACE ADVENTURE
120	006	I	HI-RES BREAKOUT
121	006	B	HI RES BREAKOUT.MC
122	006	I	INTERACTIVE BASEBALL
123	006	A	INSPECTOR CLEW-SO
124	006	A	ROLE-PLAYING STARWARS
125	006	A	TREK 79
126	006	I	PIT 2
127	007		FREE SECTORS = 106 (26.5K)
128	007	I	HELLO
129	007	I	SPELUNKER
130	007	I	CHESS
131	007	B	CH 800.FFF
132	007	A	SPACEMAZE
133	007	A	KINGDOM
134	007	A	STARLANES
135	007	A	FUR TRADER
136	007	I	BATTLESHIP 2
137	007	I	OREGON TRAIL
138	008		FREE SECTORS = 253 (63.25K)
139	008	I	HELLO
140	008	B	PRINT IDS 440
141	008	B	HI-RES BDUMP
142	008	A	IDS 440 HI-RES SCREEN DUMP
143	008	B	AMPER.OBJ PLUS (NEW)
144	008	A	AMPERSORT DEMO
145	008	B	PAGE LIST
146	008	B	AUTO NUMBER
148	008	I	COPY/DUAL CONTROLLER
149	008	I	TED II+
150	008	B	LINE# REF
151	008	B	SYMBOL XREF
152	008	B	REN/APPEND
153	008	B	PACK&LOAD
154	008	B	RELOCATE
155	008	B	TAPE VERIFY
156	008	B	LAZARUS
157	008	B	HIRES
158	008	I	SHAPE GENERATOR
159	008	B	COPY.OBJ
160	008	B	SINGLE DRIVE COPY
161	009		FREE SECTORS = 86 (21.5K)
162	009	I	APPLE HELLO
163	009	I	TYPING PRACTICE
164	009	I	QUIZBUILD

contd.

NO.	VOL	TYPE	PROGRAM
165	009	I	MORSE TRAINER
166	009	A	MORSE CW
167	009	I	FLASH CODE
168	009	I	FLASH CARD
169	009	A	NAME STATES
170	009	A	STATES/CAPITALS
171	009	I	COLOR MATH
172	009	I	MATH TUTOR
173	009	A	ECHOCARDIOGRAPH
174	009	I	INTGER INSTRUCTION SET
175	009	A	TITRATION
176	009	I	TOP DOWN PROGRAMMING
177	009	I	CONVENTIONS
178	009	I	SIMULATION-6502
179	009	A	NORTHERN CONSTELLATIONS
180	010		FREE SECTORS = 45 (11.25K)
181	010	I	HELLO
182	010	A	FUTURE VALUE OF AN INVESTMENT
183	010	A	ANNUITY
184	010	A	REGULAR DEPOSITS
185	010	A	REGULAR WITHDRAWALS
186	010	A	INITIAL INVESTMENT
187	010	A	MIN INVEST FOR WITHDRAWALS
188	010	A	EFFECTIVE INTEREST RATE
189	010	A	EARNED INTEREST TABLE
190	010	A	DEPRECIATION RATE
191	010	A	DEPRECIATION AMOUNT
192	010	A	SALVAGE VALUE
193	010	A	DISCOUNT COMMERCIAL PAPER
194	010	A	PRINCIPAL ON A LOAN
195	010	A	REGULAR PAYMENT ON A LOAN
196	010	A	LAST PAYMENT ON A LOAN
197	010	A	REMAINING BALANCE ON LOAN
198	010	A	TERM OF A LOAN
199	010	A	ANNUAL INTEREST RATE ON LOAN
200	010	A	GREATEST COMMON DENOMINATOR
201	010	A	PRIME FACTORS
202	010	A	MORT AMORT TABLE
203	010	A	AREA OF POLYGON
204	010	A	VECTOR ANALYSIS
205	010	A	PARTS OF TRIANGLE
206	010	A	VECTOR OPERATIONS
207	010	A	COORDINATE CONVERSION
208	010	A	COORDINATE PLOT
209	010	A	ANGLE CONVERSION
210	010	A	POLAR EQUATION PLOT
211	010	A	FUNCTION PLOT
212	010	A	LINEAR INTERPOLATION
213	010	A	CURVILINEAR INTERPOLATION
214	010	A	SIMPSON'S RULE
215	010	A	GAUSSIAN QUADRATURE
216	010	A	TRAPEZOIDAL RULE
217	010	A	DERIVATIVE
218	010	A	QUADRATIC FORMULA
219	010	A	ROOTS OF POLY NEWTON
220	010	A	ROOTS/POLY/HALF-INTER-SEARC
221	010	A	TRIG POLYNOMIAL
222	010	A	SIMULTANEOUS EQUATIONS
223	010	A	LINEAR PROGRAMMING
224	010	A	SIMPLE MATRIX OPERATIONS
225	010	A	MATRIX MULTIPLICATION
226	010	A	MATRIX INVERSION
227	010	A	PERMUTATIONS AND COMBINATIONS
228	010	A	MANN-WHITNEY U TEST
229	010	A	MEAN-VAR-ST DEVIATION
230	010	A	GEOMETRIC MEAN
231	010	A	BINOMIAL DISTRIBUTION
232	010	A	POISSON DISTRIBUTION
233	010	A	NORMAL DISTRIBUTION
234	010	A	CHI-SQUARE DISTRIBUTION
235	010	A	CHI-SQUARE TEST
236	010	A	STUDENT'S T-DISTRIBUTION
237	010	A	STUDENT'S T-DISTRIBUTION TEST
238	010	A	F-DISTRIBUTION
239	010	A	LINEAR CORRELATION COEFFICIEN
240	010	A	MULTIPLE LINEAR REGRESSION
241	010	A	LINEAR REGRESSION
242	010	A	NTH ORDER REGRESSION
243	010	A	GEOMETRIC REGRESSION
244	010	A	EXPONENTIAL REGRESSION
245	010	A	ALPHABETIZE
246	010	A	SYSTEM RELIABILITY
247	010	A	AVERAGE GROWTH RATE
248	010	A	FEDERAL WITHHOLDING TAXES
249	010	A	TAX DEPRECIATION SCHEDULE
250	010	A	CHECK WRITER
251	010	A	RECIPE COST
252	010	A	DAY OF THE WEEK
253	010	A	DAYS BETWEEN TWO DATES
254	010	A	ANGLO TO METRIC
255	010	A	NOMINAL INTEREST RATE
256	010	A	BUSINESS
257	010	A	MATH
258	010	A	STAT
259	010	A	MAP CHECK
260	010	A	MISC
261	011		FREE SECTORS = 206 (51.5K)
262	011	I	HELLO
263	011	A	SHAPE MENU
264	011	I	GRAPHIC CRAPS
265	011	A	ASSEMBLER
266	011	A	SHAPER
267	011	B	CARDS
268	011	I	COLOR EATER I
269	011	I	PLAYING CARDS
270	011	I	FIFTY-TWO PICKUP
271	011	I	FAST SHUFFLE
272	011	I	CARDS MENU
273	011	A	BULLET
274	011	A	IMPACT
275	011	A	EASTER EGG
276	011	A	T.CIRCLES
277	011	I	OBJECT DRAWING
278	011	I	FLAG
279	011	I	HIRES LINES/FUNCTION
280	011	B	HIRES.OBJ
281	011	I	HIRES END
282	011	I	HIRES ART
283	011	I	HIRES SKETCH
284	011	I	HIDDEN LINES
285	011	I	LINCOLN
286	011	I	WASHINGTON
287	012		FREE SECTORS = 83
288	012	I	HELLO (20.75K)
289	012	I	MENU
290	012	A	FOOTBALL
291	012	I	MINI TREK
292	012	I	GOSOEM
293	012	I	AIR DEFENSE
294	012	A	SUPER HOCKEY
295	012	I	HANDBALL-PONG
296	012	I	BOUNCING BALL
297	012	I	SPACE NAVIGATOR
298	012	B	SPACE NAV/A$800/L$20
299	012	I	AIRPORT
300	012	A	LUNAR-500
301	012	A	CHECKERS
302	012	A	GUNNER
303	012	A	LUNAR-120
304	012	A	POKER-
305	012	A	APPLE KINGDOM
306	012	I	TV TRIVIA
307	012	I	GO BACK
308	012	I	DODGEBALL
309	012	I	FLYING SAUCER
310	012	I	SCRAMBLE
311	012	A	GOLF-REVISED
312	013		FREE SECTORS = 86 (21.5K)
313	013	I	HELLO
314	013	A	CONNECTION
315	013	A	BLACK BOX II
316	013	A	SUPER NIM
317	013	A	CRIBBAGE
318	013	A	DOG STAR
319	013	A	FORT
320	013	A	ORBIT MATCH
321	013	B	O.M./CHARGEN/TABLES
322	013	B	O.M./TONES
323	013	I	SHOOTING GALLERY
324	013	I	BACKGAMMON
325	013	I	SUB KILLER
326	013	I	BOWLER
327	014		FREE SECTORS = 200 (50K)
328	014	I	DISK/DISK XFER
329	014	I	IMPROVED CATALOG
330	014	I	TUBS
331	014	I	DISK HELPER
332	014	I	MEMORY CHECK 6502 A2048
333	014	I	MEMORY TEST L512
334	014	I	MASTER KEY
335	014	A	IAC APPLE II+ DISK
336	014	A	INTEGER @ $6000-TAPE
337	014	A	INTEGER @ $A000-TAPE
338	014	A	APPLE II+ MINI/ASM
339	014	A	DISK SORT
340	014	A	CONTREVEAL
341	014	B	INTEGER BASIC-DISK
342	014	B	SUPPLEMENT
343	014	B	RWTS
344	014	B	INTERGER SUPER LOCK
345	014	B	MEMORY CHECK 6502

NUMBER OF PROGRAMS

INT	FP	TEXT	MACH	TOTAL
156		136		0

YOUR AD HERE !

RATES		
	$30	full
	$ 15	half
	$ 10	quarter
	$ 6	eighth

(line copy only - no half-tones or colors)

APPLE Tricks

by Craig Crossman (A.C.E.S.)

Two little known "tricks" will be revealed in this article. First, a simple patch to DOS 3.2 which will make it INIT a disk in half the time, boot up in approximately 2 seconds, and shorten certain other functions of DOS. Secondly, a way to type those "unaccessible" characters (like the - \ [ ) without any hard or soft modifications!

To obtain the "FASTDOS", you must first have DOS Version 3.2. This will NOT work with DOS 3.2.1! (or any other version). First, boot normally with 3.2. Second, go into the Monitor (use CALL -151). Third, type the following code: BEAD:28 BF62:07 BFAC-EA EA. Next, type a "3D0G" to get back to Basic with DOS intact. Then, all that is needed is a blank, un-initialized disk. Type in whatever "HELLO" program you want and then type "INIT HELLO". That's all there is to it! You will hear your disk drive going from track to track much quicker and it will "INIT" in about half the time! WARNING! DO NOT UPDATE THIS DISK OR IT WILL REVERT TO THE OLD "SLOWER" DOS. Also, if you use the copy program to try to copy the disk, it will copy it, but the copy disk will have the slower DOS! So, the only way to obtain the FASTDOS is to initialize the blank disk in the aforementioned way. I am working on a program that will "update" current disks but, in the meantime, this is the only way it can be done.

The patch for DOS 3.2.1 is: BEB1:28 BF66:07 BFAE:EA EA. The patch for 3.2.1 was figured out by Andy Wells. Thanks, Andy. Oh yes, as far as it can be determined, this DOS is compatible with all programs, disk interactive or not.

"Obtaining the Unobtainable" is the topic of this section. To get those special characters, do the following: Hold down the "SHIFT" key. Then press the "U" and the "I" keys together and continue to hold all three keys down. The following keys will return the following characters: Y = Underline, H = Reverse Backslash, and J = Left Square Bracket. Some other characters will be printed along with the special characters but these are easily edited out with the arrow keys and editing keys. Now you can see these characters in your listing instead of CHR$ statements in Applesoft. In Integer, this beats having to go into the Monitor and use tokens (after you find the one byte in your 200-line program). As an extra bonus, if you have the Paymar Lower Case Adapter, these same keys will give you the left squiggly bracket, the small white block and the other strange ones the LCA is capable of generating. These two little "tricks" should make life a little simpler on your APPLE II.

Here's another APPLE TRICK" given to me by Craig Vaughn from Peripherals Unlimited in Signal Hill, CA. This is a way to make your Applesoft programs "UNLISTABLE"! It's really a clever method and quite easy to do. First, write or load the program you wish to make unlistable. Next, place a "REM" statement on line 0. Next, type in: POKE 2049,1. TRY TO LIST YOUR PROGRAM AND SEE WHAT HAPPENS! Then try running it and the program should execute as normal. You just won't be able to list it! It would have been nice to just "SAVE" it to disk but unfortunately, DOS changes that byte back to its correct format. However, there is a way to overcome that too! After you have typed in the POKE statement, get into the Monitor by typing: CALL -151. Next, type: AF.B0. YOU SHOULD SEE 2 SETS OF 2 NUMBERS. They represent one byte past the last byte of your program. Note these, remembering that the first 2 numbers represent the low order byte and the last 2 are the high order byte. For example, if after typing the above you see 90 08, the actual location is 0890 (in hexadecimal). Now, for our example you would type: BSAVE Program Name, A$800,1$90. You have now saved the Applesoft program as a binary file. To actually run the program you would simply make sure you are in Applesoft. Then "BLOAD" the binary program. It will be loaded as an Applesoft program! Do not "BRUN" it!! That doesn't work. Just type "RUN". If you try to list it before running, it won't list! But it will still run! In most cases, the program will also self destruct upon completion of execution. You now have an Applesoft program that will not list and self-destructs when it has finished its run!

(Editor's Note: Thanks to Apple Computer Enjoyment Society Newsletter, March 1980 for the reprint of this article.)

A COMMENT ON 'RENUMBER'

The following letter from Apple Computer, Inc. is in response to a letter from Bob Schmidt questioning why an appended program (2nd entry) had rounding routine INT(X*100+.5)/100 changed to INT(X*510+.5)/100 when start of 2nd entry began at line 500.

Dear Mr. Schmidt:

Thank you for your letter. Renumber is a very powerful tool for developing programs but if you use it and find some strange alterations in your program, Renumber may have done it. What happens is that the number after a '*' sometimes is mistaken as a line number and Renumber renumbers it. So if you had a line

```
   10 LET A=B*10
```

it might renumber as

```
   20 LET A=B*20
```

The fix is:

For RAM Applesoft	For ROM Applesoft
]LOAD RENUMBER	]LOAD RENUMBER
]POKE 14342,172	]POKE 4815,172
]POKE 14343,171	]POKE 4816,171
]SAVE RENUMBER	]SAVE RENUMBER

.....

Yours truly,

John Crossley,
Marketing Applications Engineer

NETWORK LINKS UNITS, INCLUDES MASS STORE

The following is excerpted from the January 31, 1980 ELECTRONICS magazine:

"A new world of applications is opening up for personal computers now that time-sharing and distributed-processing procedures are being added to their repertoires. Much of the groundwork for these additions is coming from a small California firm, Nestar Systems Inc.

The Palo Alto company last year developed a personal computer cluster--several machines time-sharing a large program library--that is finding a niche as a limited function, local network in classroom and laboratories. Now Nestar is following up with a network having greatly expanded storage and far more sophisticated communications.

NEW AFFILIATIONS. Whereas the initial Cluster/One system allows as many as 30 personal computers access to a central program library, it did not provide communications between terminals or a means of maintaining an on-line data base. Now that those functions are available in the model A, personal computers can be expected to vie with small business computers in many existing office-system applications, among them word processing and electronic mail, and to make computer nets affordable for lower-level applications. In a 10-station network, the cost per work station would be less than $2,800, or about one third that of existing communicating word processors.

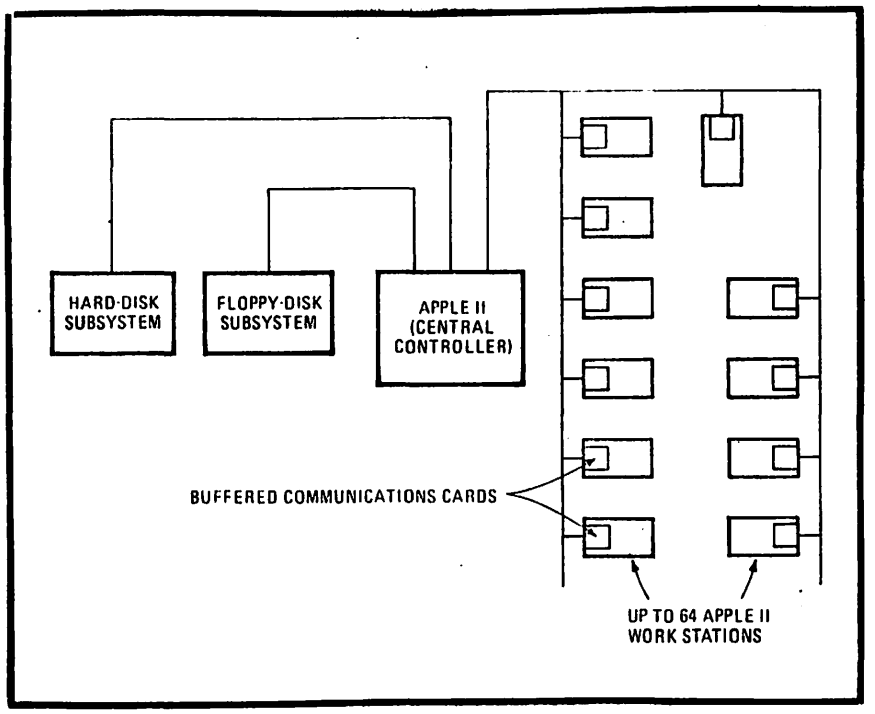
Intended also for the educational market, the new hardware and software link as many as 65 standard Apple personal computers--one serving as a central mass storage manager--into a high-speed computer network (see figure). The model A allows users transparent access to programs, files, and data resident in the central processor.

According to Harry Saal, president of the 1 1/2-year-old firm, message blocks can be transmitted at 120 kilobits a second directly from work station to work station. Each station can connect to a central memory able to store up to 33 million bytes. 'It allows for the ultimate combination of personal computers and central resources, because it moves applications based in an 8-inch disk into a network for multiple users to access,' says Saal.

CONTROLLER. In the model A network, a standard Apple computer with 48 kilobytes of random-access memory functions as a dedicated central controller and mass-storage manager with connections to storage subsystems and other Apples that serve as user stations. All stations share access to a common read-only library of programs and data and can have their individual data bases simultaneously updated. Basically, Nestar's model A offering consists of a 10-by-20-by-29-inch metal package with a read-only library of two double-sided 8-in. floppy disks having a formatted storage capacity of 1,260 kilobytes; the necessary electronics that plug into the central controller to provide communications and mass-storage control; the ClusterBus comunications card; the communications cards required for each Apple station; and the necessary software. The communications cards for each station contain a 1-kilobyte RAM for transparent buffering and 2 kilobytes of read-only memory for network interface routines, as well as all necessary bus electronics.

The software includes protection to preserve data and prevent unauthorized access. A 'lock' command permits a primary user to update a specific data base unhampered.

The model A has a gateway feature that, Saal says, allows users to interconnect two or more networks. One work station in each network has two communications cards, each linked to a different network. Users can write programs in one network requesting programs or data from another.-Bruce LeBoss"



Apple network. A hardware-software package from Nestar Systems organizes as many as 65 Apple II personal computers into a low-cost network with sophisticated communications.

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Application Note

March 15, 1980
J2

APPEND FIX IN DOS 3.2 (& 3.2.1) FROM APPLE COMPUTER CORP.

The problem with APPEND in DOS 3.2 is that DOS doesn't write an End Of File marker on the disk when you chose a file. DOS normally fills new sectors with EOF markers, so the newly APPENDed information usually has an EOF after the last character. However, when the last character of the file falls exactly at the end of a sector, DOS doesn't find a new sector to fill with EOF markers. The next time DOS does an APPEND it can't find the EOF marker and defaults back to the beginning of the file.

The fix is to write out an EOF maker before closing the file after each write. Here is a five byte routine that will supply an EOF. It can be moved to any address if you are already using 768 to 772.

```
 10 LET D$= CHR$(4)
 20 POKE 768,169
 30 POKE 769,0
 40 POKE 770,32
 50 POKE 771,237
 60 POKE 772,253
 70 REM HOW TO USE IT--
 80 PRINT D$; "APPEND FILE"
 90 PRINT D$; "WRITE FILE"
100 PRINT "THIS IS DATA"
110 PRINT "SO IS THIS"
120 CALL 768: PRINT: REM THI IS IT
130 PRINT D$; "CLOSE FILE"140 END
```

NOTE: The PRINT statement in line 120 is a must.

Using this method, one need never worry about APPEND overwriting the start of a file.

Adding Photos To A Newsletter

by Crab Apple

PROLOGUE

Dear Editor. I enjoyed talking with you about Apple Pi, word processing and newsletters, so I thought to myself, "Myself, talk's cheap!". Epic observations are rare for me, so I'd better do something, process a few words and hope they hang together well enough so that the more ambitious reader could exercise a little mental cryptography and extract a meaningful thought or so. Apple Pi, like most newsletters, depends on the efforts of a few to benefit the many. The "many" includes me. The amount of effort, frustration, exaspiration and perspiration involved is illustrated by comparing this mental image: a one-armed paperhanger with the fleas. While you, the members, struggle with the implications this should generate, consider contributing an article; anything is bound to be better than what follows.

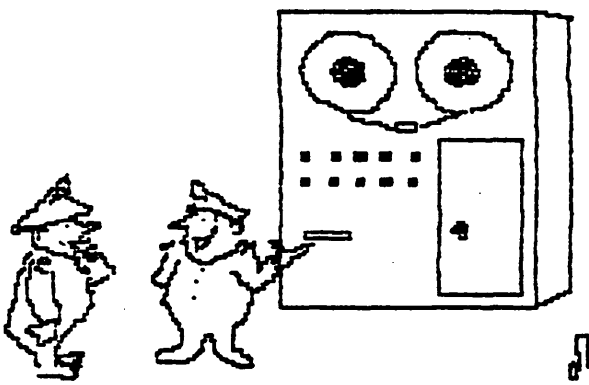
ARTICLE

Given a 35MM camera (or any other), an enlarger with a reasonably good lens, high contrast stabilization paper (like AGFA TP-6 which can be obtained from most graphic arts suppliers), trays, chemicals, interest and an abounding faith that ignorance is no bar to success, one can add photos to any newsletter. There is a tiny catch - halftones.

This formerly secure mystery can be at your bidding. There are two ways to accomplish this miracle: blind fumbling, an educational and time consuming adventure into madness; or--for those locked into the humdrum lackluster world of programmed lifestyles occasionaly ruled by logic, write a letter to Royal Dossett at DOSSETT CORPORATION, 2793 Pheasant Road, Excelsior MN 55331. Ask for his catalog and wait with trembling anticipation. He has written two of the best novice texts on the subject that I have seen. "GRAPHIC ARTS" and "SCREENED HALFTONES", both for 35MM users, were first published in 1974 and sold for $3.00 each. There have been revisions since and the current price may have changed.

For those who can't wait, an interim solution to the problem can be had by the purchase of the following materials: a Speed-Ez-El; a framed stretched monofilament silk screen (the fabric must be a mesh size between 65 and 85 to the inch) which is the same size as the Speed-Ez-El if you persist toward convention; and a can of spray photo black paint. Wash the screen with TSP and hot - very hot - water. Then scrub with steel wool to abrade the fabric. Dry in the sun or still air for a day or so (the screen MUST be DRY). Now spray paint evenly and lightly until the fabric is matte black. Do not overspray - misting is an apt description of the desired effect. Place a negative, one that has good contrast with both highlight and shadow detail, in the enlarger, set the f stop to about 8, calculate the exposure, or try. Place the TP-6 in the easel and rest the screen on top, fabric down. (The wings on the easel hold the screen fabric about the proper distance from the paper emulsion to vignette the image. The image should have dark solid blacks, bright solid whites and a range of black dots to 50 percent more than white dots. The dots should range from 10 to 20 percent for Xerox.) Expose about 35 seconds, remove negative, re-expose about 4 to 5 seconds, remove TP-6 and process either in a tray or with a stabilization processor, following directions if so driven. You may have to adjust the f stop slightly and one or both main and flash exposures. A variation would substitute a two stop procedure. Expose the main as before, remove the negative as before, then close down the f stop two stops and expose for about 40 percent of the main exposure. Then process.

The result is a screened positive which may be pasted and trimmed to fit the space reserved on the copy, and which will reproduce.



You shove your question in here, press the button, and a private steps out and announces the answer!

(Editor's Note: Don Buchanan's fine cartoon was generated by an IDS 440 Paper Tiger printer and Computer Station software.)

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