The Apple Core Newsletter

The Journal of The Independent Apple Users Group

Vol. I No. 6

INFORMATIVE AUGUST MEETING

Many good things came out of our last meeting, really too much to talk about. Bruce Tognazzini pointed out some programming tips... Ed Avelar and Larry Danielson reported on their contacts with other Apple groups... There was some discussion about a 'hard core', a national organization of APPLE user groups... Andy Hertzfeld will be offering a machine language course on the AP LE microprocessor, the 6502; The AP LE CORE will handle the registration... Ed Rosenzweig and Jim Doty will look into producing a translator program to convert other BASICs into APPLE BASIC... Andy Hertzfeld is thinking about a BASIC compiler; our programs will occupy less space and run faster that way... Arthur Wells gave a very good talk on the legal aspects of protecting our software; we heard about copywright and patent law...

One of the most important functions of a group such as ours is the end-of-meeting software swap. This one saw more good programs coming out... There was a 'database' program for keeping lists, more hi-res pictures, some of Andy Hertzfeld's utilities, including LAZARUS, and a lot more.

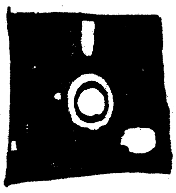
See you at the next meeting! T.H.

ALIENS ACCESS ARCHIVES - ARCANE ASPECTS ANNUNCIATED

Foreign members - i.e., those living outside of Northern California or in Milpitas - may now access the APPLE CORE Library through the mails.

The initial medium will be diskette. Here's how it will work:

1. Member puts programs s/he wants to donate to the library on a disk.
2. Member includes note indicating which one of the following categories s/he wants copied onto the diskette:
    a. Games
    b. Display - programs you look at w/ some interaction
    c. Hirez Graphics
    d. Lorez Graphics
    e. Utility - various programming aids
    f. Education - not many here yet
    g. Business - currently, a thin category
    h. Music
    I. Heuristics - for those w/Speech Lab
    J. Disk Of The Month - a group of programs recently donated to the library



3. Member places diskette between two stiff pieces of cardboard or some other suitable material along with the note spoken of above, <u>PLUS A SELF-ADDRESSED STAMPED ENVELOP suitable for holding the returned diskette.</u> All items are carefully wrapped in a package marked
    "CONTAINS LIVE COMPUTER PROGRAMS"
    "DO NOT X-RAY OR EXPOSE TO ELECTRICAL FIELDS"
    "DO NOT BEND"
4. Package is mailed to:

    LIBRARY EXCHANGE
    THE APPLE CORE
    BOX 4816
    SAN FRANCISCO, CA. 941Ø1

5. The happy gremlin who lives in our P.O. Box will pluck his magic twanger and take care of the rest. Soon your postperson will return your diskette to your eager disk drive, and you will spend many joyful hours trying to discover why the dos won't boot.

Thus endeth the happy exchange.

-S.K.

....

****

LIBRARY NEEDS BUSINESS PROGRAMS

A number of members have expressed interest in getting business programs from the library. Unfortunately, we have practically none. Particularly needed are General Ledger, Accounts Payable & Receivable, Payroll and Inventory.

There is a general lack of commercially available business programs for the APPLE at this writing, and the ones that do exist are extremely expensive.

If you have written a business program for the APPLE, please donate it to the library. If you have written it for commercial reasons and the price is reasonable, let us know that, too, and we'll announce it next month.

Do it now - the need is great!!!

S.K.

****

COMMODORE'S PET GOES BELLY-UP
CORE BIGGIE ARRESTED
GLITCH SOUGHT IN SURROUNDING SCANDAL

DATALINE.......SCANDAL.......BT.........AUGUST 33,1978

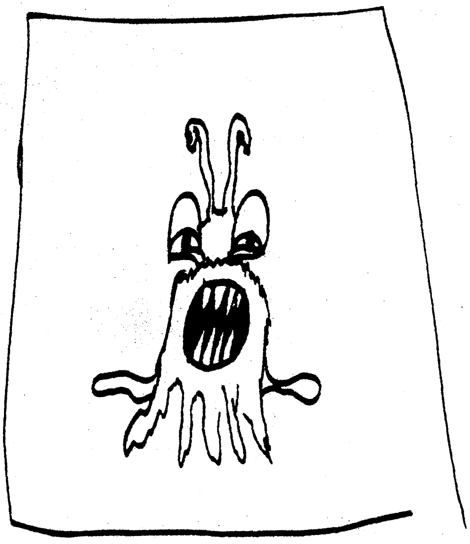
Carnage swept this tiny seaside community this morning during what appears to have been a reiterative altercation centering upon our own beloved John Scribblemonger, just shortly after he had ventured FORTH from his hospital bed.* According to eyewitness accounts, the incident began shortly after nine A.M. as John S. brought his yacht, the "BUSTER BROWN" into the harbor of Scandal. After tying the passenger vessel (of the giant "Floating Bus" RS-232 class) up to Port 1, one of eight which parallel the Deyemmay Memoriable Daisy Field, Scribblemonger disembarked the ship, accompanied only by his trusty dos Tige (he lives there too!) who had been disembarked on a much earlier occasion.

As the Commodore and Tige walked beside the cabled walls of the great hulking slots, the dos suddenly jumped through one of the small openings, lined with dinner plates, which punctuate the port's ponderously planked platform. As Scribblemonger squeezed his massive main-frame through the hole, screaming for his little chum, the frightened dos popped up through another plated-through hole, finding himself beneath the very underpinnings of City Hall, at 65Ø2 H St., corner of 7th. Those of you as familiar with Scandal as John Scribblemonger will well understand the plight of the plucky dos as he dodged the streaming traffic. He ran east on H St., past the four-way stop lights on 13th, around the ping-pong courts on 14th near J, and then south on 14th St., past the paint store on 14th and F. He was next spotted cutting through the industrial section, over to 1Øth St., racing down along side the goat farm.

{For the sake of those readers who cannot for the life}
{of them figure out what is going on, let us offer a }
{brief explanation: this article is in fact a cleverly}
{disguised tour-de-farse of the inside of your apple. }
{If you will open your red book to page 123 and refer }
{to pages 143 to 151 you will be able to follow the }
{path of the errant pair. The address of the City }
{Hall, for example, tells you that it is located in }
{row H, column 7, and is a 65Ø2 chip. }

Eyewitness report from farmer Vidgen [rhymes with 'pigeon']: "Ayup, I recon it was long about eleven. The wife come out to the pastcha to tell me that the goats 'uz·thusty. 'Never mind', says I, 'you put on the kettle, and we'll give them rams something nice and refreshing.' It was just then the wife seen the dos go yappin' by, with that big fella lopin' just behind."

And yapping and loping they went, all the way to A St., Broadcast Row, and the local offices of The Apple Core Journal at 2513 A St., corner of 5th. Here the badly scared dos tried to find refuge but was refused entrance by an unidentified guard described only as having a "rather fiendish grin".



*Our Milpitan Mentor had soon realized the attendant difficulties of capitalizing any new product from the confines of an infirmary and therefore had moved to the the yacht with his lovely private nurse.

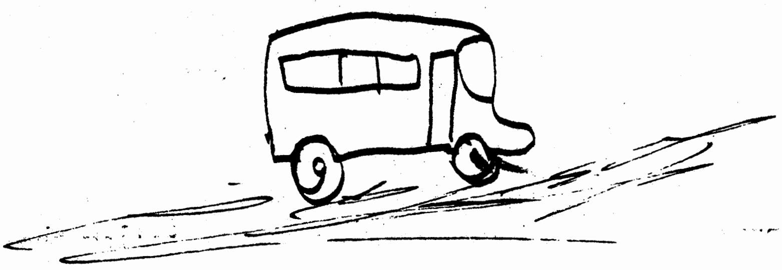
(MORE)

With a winded and wilting Scribblemonger chuffing behind him, the tired beast headed North, straight into the path of 16 bi-directional bus lines. He scurried across the rails, pausing momentarily on one of the green safety islands while a burst of bits went screaming by.

We talked with Chip Pfuller, a foreigner, who is, judging from his accent, either from Southern Whales or Northern Milpitas.[Southern Whales are found underwater and are given to a slight drawl; this fellow was both.] "Yes, sir, it shore looked like the little guy was going to make it too. But then he starts kinda veerin' North-west, toward the little Timer-life building [at 555 3rd.]. Well, sir, all of a sudden, this old cursor, lookin' like Columbo 'cept with a right strange smile, up and flashed him and that ole dos liked to drop right into a wait-state."

Yes, and it was while friendly Tige, the tenque dos was locked helplessly in that wait-state, that the rogue address bus came careening around the corner, and, bearing down on him, scrambled him into apparent pseudo-randomness!

Arriving only moments later, Scribblemonger grabbed his little friend and booted him, repeatedly, in a vain effort to get him back on the right track. The bus lines became crowded with angry chatter [cross-talk?] about the violent goings-on. Chip Pfuller: "He booted him pretty good. Even bounced the little sucker off the walls a couple times, but it warn't no use; everybody could see that that ole boy had a dead dos on his hands."



Scribblemonger's rising rage branched toward the offending address bus when he noticed to his horror that the bus driver was non-other than J. Alfred Glitch, that Evil Genius behind so many of our beloved editor's recent tribulations. And as the Commodore's pet lay belly-up, J. Alfred sped away from the scene, with a cursing Scribblemonger, having forced an interrupt on a data bus, taking off after him. (John had accidentally left his Lone Ranger costume at the cleaners, thereby making this his very first [sigh] non-maskable interrupt.)

Hip Flash, ace photographer for the Journal, reports that the police were shortly in hot pursuit of the pair, even going so far as to notify Oregon and Nevada of the chase, to enable (of course) the setting up of a tri-state buffer. [nobody's forcing you to read this, you know.]

Scribblemonger proved to be a valiant bus-driver, but he was no match for the nefarious Glitch, who, being able to leap from bus line to bus line, finally managed to completely delude (and thus elude) the baffled John S. by trapping him in a loop. Yes, poor John, coming upon what he assumed to be Glitch's bus, climbed aboard and, not realizing that he had in fact looped back upon himself, repeatedly rammed the driver until he had beaten himself into something that appeared to be (according to photog Flash) an interrupt driven, real-time clock.

As we go to press, John S. has been taken into custody by the local constabulary and is being held for observation: "We want to find out what makes this guy tick". We are currently raising money to pay for John's bail and a ni-cad stand-by power supply. But John informes us that, barring any unforseen events, he will definitely be at this upcoming meeting of your Apple Core. And John is one man you can count on.

And as for Mr. Glitch, Hip Flash has just located his hiding place in the area surrounding Scandal, and the Apple Core Journal takes great, nay fiendish, pleasure in revealing it to everyone. Yes, J. Alfred, we know you are located at SØCWO3HIMEM:3ØKSLS?*** FORMULAE TOO COMPLEX ERR39LCLCATALOGSO39GKD***SYNTAX ERREIFLSRESET...........

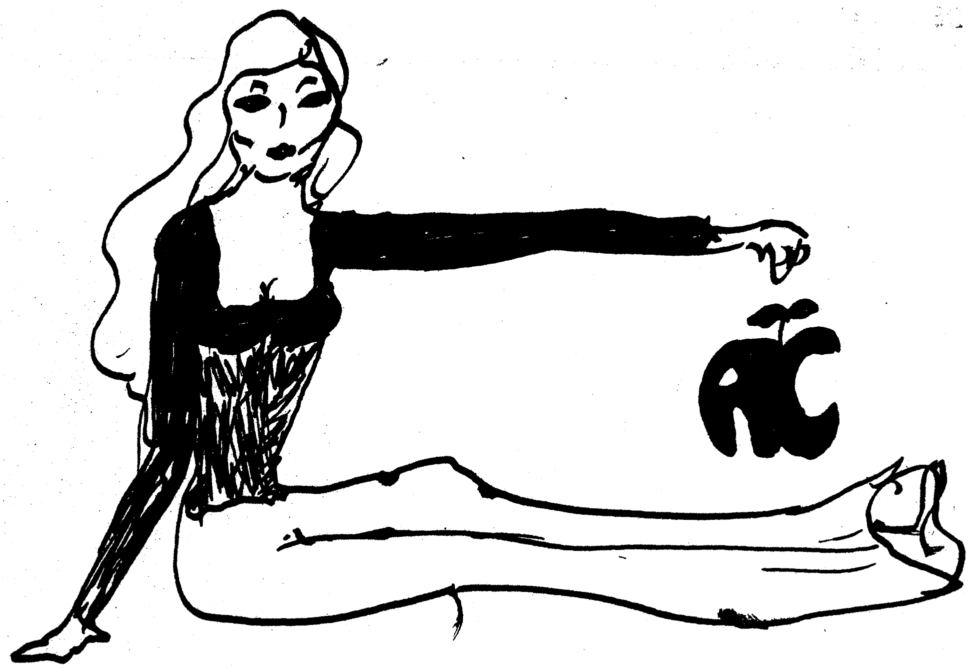
APPLESOFT VS INTEGER BASIC - A CRITIQUE

There may be several reasons to not use APPLESOFT II- it's slower, statements aren't corrected on input, it isn't usually resident in ROM, it crashes often, etc., etc., ...There are some nice features of the language, however; it has a more powerful instruction set, and that means simpler programs. That's true even if you don't have a business or scientific application.

APPLESOFT II strongly resembles the standard basic that you see used in the hobby magazines. If you try to code one of their programs into APPLE Integer BASIC, you must tortuously compensate for the lack of READ...DATA statements, the missing functions, the multidimensional strings that can be of any length. APPLESOFT II allows you to just copy what you see.

Of course APPLESOFT II really shines when you try to write business or recordkeeping programs. We all know that our checkbooks contain dollars and cents, recepies have fractional amounts, etc. This is what floating point numbers are for. Since APPLESOFT II will allow string arrays, you don't have to code a separate string for each name and address, or try to keep track of many little strings placed somewhere in a big string. The APPLE II can now become a true home appliance - hold and retreive our lists (laundry, mailing, enemies?).

I found one really great feature that falls into the Structured programming ideal - the way the IF statement is handled. Integer BASIC would force you to code'if A then B: If A then C: If A then D'. In APPLESOFT II this becomes 'If A then B: C: D'. Everything on a line after a true IF statement is executed.



There is one thing in APPLESOFT II that I sorely miss - the MOD operator. It's not just a guy who has a way with women, but the instruction that tells your program what the remainder is after division has taken place. You use it if you poke the lower 8 bits of a memory address into a memory location. If you want to set up a starting address for a cassette write operation, say at decimal 2048, the address will be in two bytes; the first will contain 2048 / 256 . The second will contain 2048 MOD 256. You can simulate this in APPLESOFT by:

```
     LOWADDRESS = FNMOD (ADDRESS%)
and  FNMOD (ADDRESS%) = ADDRESS% - (INT( ADDRESS% / 256)*256)
```

Good luck with the programs that are now more doable!   ...TH

$.XX
TRAILING ZERO'S FOR MONEY PROGRAMS

The new APPLESOFT language is really terrific - especially if you have been fortunate enough to get it on the ROM card. It does, however, have some pesky quirks - among which is the lack of trailing zero's.

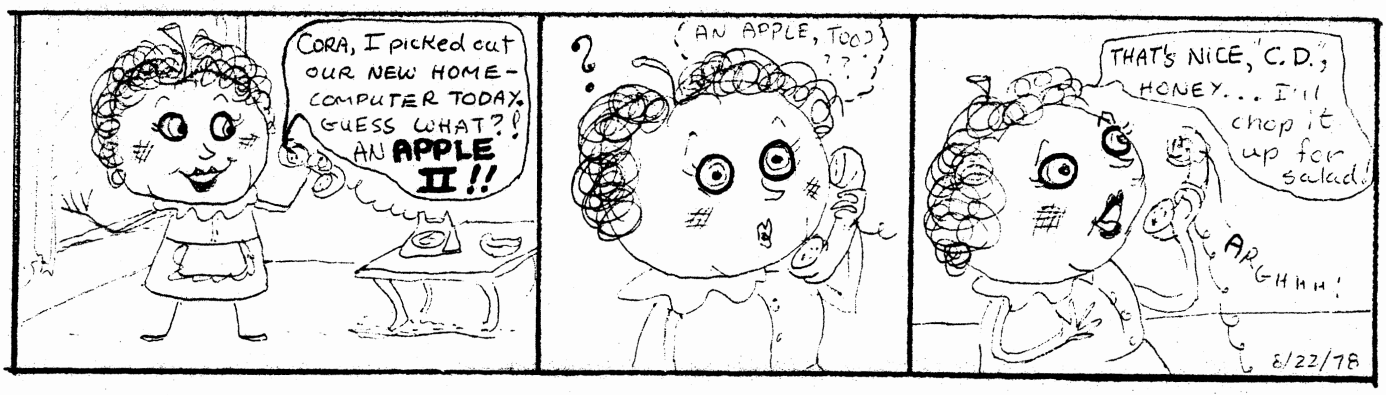
One feels this lack when trying to write business and finance programs that use two digits after the decimal point - i.e., money stuff. Following is a solution to the problem which, while inelegant, does the job.

```
      Ø Z2$=".ØØ":Z1$="Ø":D$="$"
      1 CALL -936
      4 REM  HERE COMES A ROUNDOFF FUNCTION
      5 DEF FN A(R)=INT(R*1ØØ+.5)/1ØØ
     1Ø INPUT TEST:?:?:REM GIMME A NUMBER
     15 T$=STR$(TEST):REM WE TREAT THE NUMBER LIKE A STRING
     18 REM HERE COMES A "SPECIAL CASE" FIX (I DID SAY INELEGANT!)
     2Ø IF LEN(T$=2 AND MID$(T$,1,1)="." THEN 1Ø1ØØ
     3Ø FOR SEEK=1 TO LEN(T$):REM IS THERE A DECIMAL IN THIS NUMBER?
     4Ø IF MID$(T$,SEEK,1)="." THEN 1ØØØ:REM IF YES BRANCH TO LOCATION
                                          FOR FURTHER CHECKING
     5Ø NEXT SEEK:REM KEEP LOOKING UNTIL THE CHARACTERS RUN OUT
     55 T$=T$+Z2$:REM SINCE THIS NUMBER HAS NO DECIMAL, CONCATENATE
                     A DECIMAL WITH TWO TRAILING ZERO'S
     6Ø GOTO 2ØØØØ:REM BRANCH TO THE PRINTOUT
   1ØØØ IF MID$(T$,LEN(T$)-2,1)="." THEN 2ØØØØ:REM IF THIS NUMBER HAS A
                                              DECIMAL W/2 DIGITS AFTER
                                              IT, GO GET PRINTED
   1Ø1Ø IF MID$(T$,LEN(T$)-1,1)="." THEN 1Ø1ØØ:REM IF 1 DIGIT, GET ANOTHER
   1Ø2Ø T$=STR$(FN A(TEST)):REM ROUND OFF THIS NUMBER TO 2 SIGNIFICANT
                                DIGITS BEYOND THE DECIMAL
   1Ø3Ø GOTO 3Ø: REM GO BACK TO MAKE SURE TWO DIGITS FOLLOW A DECIMAL
  1Ø1ØØ  T$=T$+Z1$:REM CONCATENATE THE NUMBER WITH ONE TRAILING ZERO
  2ØØØØ  ?:?:? D$+T$:?:?:REM PRINT A DOLLAR SIGN FOLLOWED BY THE NUMBER
                             WHICH NOW HAS TWO SIGNIFICANT DIGITS BEYOND
                             A DECIMAL POINT
  2ØØ1Ø  GOTO 1Ø: REM GO GET ANOTHER NUMBER
```

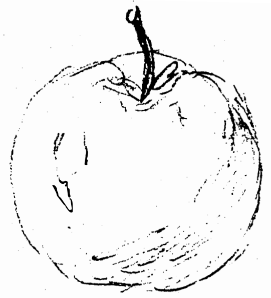
S.K.

$.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX $.XX

THE APPLEHEADS E. Hance


CORA, I picked out our NEW HOME-COMPUTER TODAY. GUESS WHAT?! AN APPLE II!!
?
(AN APPLE, TOO??)
THAT'S NICE, "C.D.," HONEY... I'll chop it up for salad!
ARGHHH!
8/22/78

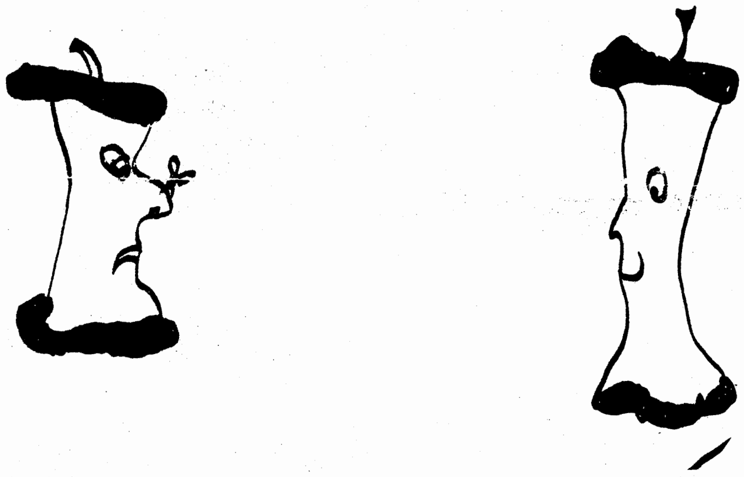
NOTE: If you've called your Apple a LIAR; it only means that your left hand was located one key to the left when you typed LIST.



PHOTOGRAPHY

For those into the business applications with Apple, the data reduction capability, and the high and low resolution graphics in color is ideal for both report publication and visual aids for presentations. All that you need for a professional job is a 35mm SLR camera with at least a 100mm lens and a tripod. A direct light reading can be made from the TV screen. A low shutter speed will provide sufficent line scans to reduce the shadow effects. The longer lens will reduce the straight line distortions of the TV screen. Remember the four lines on the labeling at the bottom. Lights out with the window shades drawn will eliminate all glare and reflections.

Next, you can try movies. JS



QUOTE OF THE MONTH

Spake by Paul Wyman (Nebraska Chapter), hovering over his APPLE which at the time was hooked via MODEM to a monster somewhere in Chicago:

"See? Maxi's <u>do</u> have their uses. They make wonderful peripherals!"

##

I purchased a Teletype Model 43 for use as a printer on my Apple. If you don't know, the Model is a serial printer with a RS232 interface. In order to use it with the Apple I put the Communication Interface Card into use. The trouble with this card however is that it won't line feed the printer. After talking to apple I found out they have a revision in software to correct for it. The following listing is the coreection from Apple. This allows a line feed after each carriage return, makes a TAB runction available, and BASIC listings may be formatted for wide column printers.

It is saved by *300.3AFW and loaded by *300.3AFR.

To activate the print routine use CALL 773 (*305G) or with DOS CALL 775 (*307G).

```
*305G-NN}300LLLL

0300-   02          ???
0301-   28          PLP
0302-   08          PHP
0303-   05 C2       ORA   $C2
0305-   18          CLC
0306-   B0 38       BCS   $0340
0308-   98          TYA
0309-   48          PHA
030A-   AC 00 03    LDY   $0300
030D-   08          PHP
030E-   A9 05       LDA   #$05
0310-   8D 03 03    STA   $0303
0313-   A9 C0       LDA   #$C0
0315-   18          CLC
0316-   6D 00 03    ADC   $0300
0319-   8D 04 03    STA   $0304
031C-   A9 FF       LDA   #$FF
031E-   99 78 07    STA   $0778,Y
0321-   A9 11       LDA   #$11
0323-   99 F8 07    STA   $07F8,Y
0326-   98          TYA
0327-   0A          ASL
0328-   0A          ASL
0329-   0A          ASL
032A-   0A          ASL
032B-   A8          TAY
032C-   A9 03       LDA   #$03
032E-   99 8E C0    STA   $C08E,Y
0331-   A9 11       LDA   #$11
0333-   99 8E C0    STA   $C08E,Y
0336-   A9 28       LDA   #$28
0338-   8D 01 03    STA   $0301
033B-   A9 36       LDA   #$36
033D-   85 2A       STA   $2A
033F-   A0 00       LDY   #$00
0341-   8C 02 03    STY   $0302
0344-   84 2B       STY   $2B
0346-   28          PLP
0347-   90 0E       BCC   $0357
0349-   AD E7 03    LDA   $03E7
034C-   E9 6D       SBC   #$6D
034E-   85 2A       STA   $2A
0350-   AD E8 03    LDA   $03E8
0353-   E9 00       SBC   #$00
0355-   85 2B       STA   $2B
0357-   A9 63       LDA   #$63
0359-   91 2A       STA   ($2A),Y
```

```
035B-   C8          INY
035C-   A9 03       LDA   #$03
035E-   91 2A       STA   ($2A),Y
0360-   68          PLA
0361-   A8          TAY
0362-   60          RTS
0363-   48          PHA
0364-   48          PHA
0365-   AD 02 03    LDA   $0302
0368-   C5 24       CMP   $24
036A-   68          PLA
036B-   B0 03       BCS   $0370
036D-   48          PHA
036E-   A9 A0       LDA   #$A0
0370-   2C 62 03    BIT   $0362
0373-   F0 03       BEQ   $0378
0375-   EE 02 03    INC   $0302
0378-   08          PHP
0379-   20 A9 03    JSR   $03A9
037C-   28          PLP
037D-   68          PLA
037E-   48          PHA
037F-   90 E4       BCC   $0365
0381-   49 0D       EOR   #$0D
0383-   0A          ASL
0384-   D0 0D       BNE   $0393
0386-   8D 02 03    STA   $0302
0389-   A9 8A       LDA   #$8A
038B-   20 A9 03    JSR   $03A9
038E-   A9 58       LDA   #$58
0390-   20 A8 FC    JSR   $FCA8
0393-   A9 00       LDA   #$00
0395-   85 24       STA   $24


0397-   AD 02 03    LDA   $0302
039A-   F0 09       BEQ   $03A5
039C-   ED 01 03    SBC   $0301
039F-   E9 F7       SBC   #$F7
03A1-   90 04       BCC   $03A7
03A3-   69 1F       ADC   #$1F
03A5-   85 24       STA   $24
03A7-   68          PLA
03A8-   60          RTS
03A9-   6C 03 03    JMP   ($0303)
03AC-   00          BRK
03AD-   00          BRK
03AE-   00          BRK
03AF-   00          BRK
03B0-   FF          ???
03B1-   FF          ???
03B2-   00          BRK
03B3-   00          BRK
03B4-   FF          ???
03B5-   FF          ???
*
```

"I've invented a computer that's almost human", boasted one scientist to another.

"You mean it can think?" asked his colleague.

"No, but when it makes a mistake, it can put the blame on some other computer."

Reader's Digest Aug.'78

TWIN ALGORHYTHMS PROVE NON-IDENTICAL

Yes, you're right, another silly headline, but an article that will prove fascinating to many, if not some, of our readers.

A few of you will recall the exciting algorhythm presented several issues ago (August of 1973, I believe) for filling in a block of memory with a desired number. This would be useful for doing things like clearing the hires screen, setting basic memory space to all zeros and then loading a program for purposes of exploration, or perhaps for "seeding" a Life game. The method presented at that time for filling in the Hexadecimal locations $ØØ.$3Ø with all EA's (the no-op[eration] command in 65Ø2 code) was as follows: Type Ø:EA EA EA EA EA.........EA. Now this worked very well back in 1973 on the Apple -1 when our memory only went from $ØØ.$3Ø, but now that we've gone from 48 bytes to 48K bytes, it can take several days.

So we offer a solution so daring, so imaginative, that we didn't even think of it. No, it took one of those unsung resident geniuses at APPLE to come up with this one. To fill (for example) $4ØØ to $7FF with EA's, Type the following:

```
*4ØØ:EA 4Ø1<4ØØ.7FEM ("RETURN")
```

Now don't panic, that was the screen buffer you just filled. Try preceeding the "4ØØ" with "CØ5Ø" to turn on graphics and change the "EA" to some other "seeds". And when you're ready for the big time, try this:

```
*CØ5Ø CØ53 CØ57 2ØØØ:1Ø 73 EA Ø 14 AF 2ØØ6<2ØØØ.3FF9M ("RETURN")
```

The general formula follows:

```
(startaddress):({digit{digit}}) [space] (startaddress+number of
{digit{digit}}s) < (startaddress) . (endaddress-number of {digit{digit}}s)
M(ove) (return)
```

There is another interesting thing that we can do by forcing the computer to repeat it's steps. To do this, start your command sequence with the "N" command and terminate it with "(space) 34:Ø (space){space}. For example, try this one:

```
*N CØ5Ø CØ53 CØ57 2ØØØ:Ø1 34 64 82 96 73 2ØØ6<2ØØØ.3FF9M 2ØØØ:FF AØ 77 B3 D9
EE 2ØØ6<2ØØØ.3FF9M 34:Ø (space)(space)("RETURN")
```

For a technical explanation of why this works, we turn now to S. Wozniak, that delightful fellow who whispers *** SYNTAX ERR at us every night.

> The APPLE-II MONITOR command input buffer begins at location $2ØØ and is scanned from beginning to end after the user finishes the line by typing a carriage return. An index to the next executable character of the buffer resides in location #34 while any function is being executed. By adding the command "34:Ø" to the end of a MONITOR command sequence the user causes scanning to resume at the beginning. Because the "34:Ø" command leaves the MONITOR in "store" mode, an "N" [normal text] command should begin the line. [-- printed by special permission of Steven Wozniak]

There, now that wasn't difficult to understand, now was it (Hey Scot, what's a MONITOR? What about the Civil War? Oh.) Try different "seed" numbers with both lores and hires and let us know what you come up with. Have fun............

BT

COMPUTER PROGRAMMING LAW

This article will discuss some of the laws pertaining to the portection of computer programs and data bases. As the law in this area is complex and confused, and as I am not an expert in the field, and as this is just a general article, I am sure you will be careful about relying on it before you do something you think is important.

There are theoretically several ways you can try to legally protect computer programs from unauthorized use. Basically, these are to try to patent them, copyright them, or treat them as trade secrets or "know how". Patent protection, even if available for computer programs, is an expensive process from the outset. As contrasted with other possible protections, the granting of a patent requires that a search be conducted to demonstrate that the item for which the patent protection is being sought is novel, that is, no one else has "invented" it. Patent protection for programs, if available at all, might be had where firmware is integrally involved with hardware.

The most common attempt at protection is via a copyright claim. In order to claim copyright protection, on need only put a notice of copyright on the work, which consists of the word "copyright", or a © with the name of the claimant and the year of publication. This claim must be followed by registration, which involves filling out a simple form (available from the Copyright office in Washington, D.C.), payment of a small sum, and submission of a "copy" of the work for which copyright is claimed.

Having the notice and the registration do not mean that you actually have the copyright protection you claim. You get that protection only after a lawsuit in which the court says you have protection. Such lawsuits are expensive and time consuming and it is extremely doubtful that anyone but a large company would bring such a suit over a program and then only if the program were very valuable. Many specific problems and questions are presently unresolved as far as copyright protection for computer programs and data bases. In fact, a new copyright law effective in 1978 specifically left questions about how to treat computer material for future discussion and several professional committees seem to be still grappeling with the problems.

Some of the questions and problems are;

1. to claim a copyright, the work involved must be "original". When is the assembling, selecting, arranging, editing, and literary expression (if any) that goes into the set of operating instructions (program) or compilation of reference material (data base) sufficient to constitute original authorship?

2. What protection attaches to works created by a computer, based on a program?

3. In which form ought the program to be protected; input, output or both?

4. When does unauthorized use of only a part of a program, such as one elegant subroutine, constitute an infringement?

5a. How do we distinguish between the situation where the program "communicates information" and is thus copyrightable, and where it is an integral part of the mechanical elements of some device, and therefore protection of its "utility" can be obtained by patent only.

5b. Does this mean we draw distinctions between systems firmware or software (compilers, assemblers,etc) and other programs? Is a program ever non-"functional"? Or, is it alway "communicating" information, even if it is only to a machine?

6. Copyright protection gives the exclusive right to reproduce copies, and to prepare derivative works. Where is the line to be drawn regarding the use of programming algorithms?

7. Copyright protects original works of authorship fixed in a tangible medium that does not extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery regardless of the form in which it is described, explained, illustrated, or embodied in the work. How is this rule to be applied to computer programs and data bases?

8. Copyright is supposed to encourage people to produce original works by giving them monopoly-like rights in their works for a specified period of time. But use of copyrighted material without permission is sometimes allowed to further societal goals such as teaching, criticism, scholarship and research. Whether such "fair use" is permitted depends on the purpose and character of the use,

(MORE) A

the nature of the material, the amount of material used, and the effect of the use on the market for or value of the copyrighted material. How is the fair use doctrine to be applied to computer material?

There are a host of other, and/or subsidiary questions, but the above will do for a start.

Given the problems with patents and copyrights, it is not surprising to find that many companies dealing with intellectual property do not rely completely on those legal tools for protection. Surveys of firms providing consulting, feasibility studies, systems analysis and designs, contract programming proprietary software packages, timesharing, telecommunications, data center management, and computer research indicates use of various protective devices. Preffered methods seem to be contracts requiring that material be treated as confidential both by employees and users. In addition to treating the material as a trade secret, and to patent and copyright, companies also use limited access to technology, cryptographic coding, software locks and other similar devices. Protection of software seems to be viewed as most important for general business and financial applications and for systems software, and least important for complex production and management and for engineering and scientific applications. Probably this is so because marketing considerations and design and development costs play a great role in providing meaningful protection for the latter.

As applied to the hobby user, it is very doubtful that anyone would or could ever successfully proscecute an infringement or misuse suit against someone who pirated a pro-ram. Conversely hobby users who develop their own material should either keep it secret an to themselves or give it to all in the hopes of making a good reputation. The hobby user will hardly be in a position to enformce his rights, if he has any.

The fundamental concepts for this field have been well stated by others:

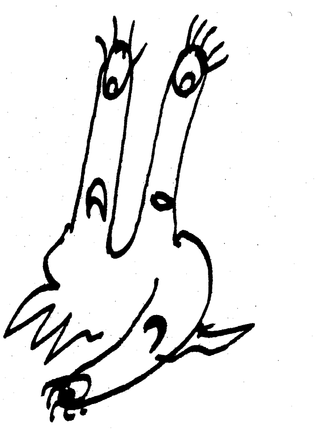
1. Creators and developers should receive compensation for the use of their product,

2. Society should have maximum access to the creative products of its members.

The resolution of these two somewhat conflicting principles, especially as applied to a new complex technology, will need years to be worked out; that is why, in summary the field of computer program law will contrive to be obtuse and obscure.

In light of the above you serious programmers and other computer professionals have my sympathy and my condolences. Also my apologies for such faults of this article as may contribute to those attributes.

ANY QUESTIONS ABOUT
THE ARTICLE CAN BE
SENT TO ARTHUR, CARE
OF US HERE AT P.O.
BOX 4816, S.F., CA.,
94101



SLOGAN OF THE MONTH

(Press the "RESET" key, the "ESC" key, hold the "SHIFT" key and press the "@" key to "home" the cursor and clear the screen. Then type the following:)

```
*7ØØ:C9 C6 AØ D9 CF D5 AØ C3 C1 CE A7 D4 AØ C2 CF CF D4 AØ
C9 D4 AC AØ D2 C1 CD AØ C9 D4 61
```

(and then press the "RETURN" key)

..........BT

BON VOYAGE

We bid adieu this month to a friend of the Apple Core with whom we have all spent a great deal of time. But while I'm sure we shall long remember him, we are all certainly glad to be rid of him. No, I'm not speaking of the Apple Core librarian, and no ground-swells need apply; I am talking of course of good old ESC A.

"Going?", you ask incredulously, "ESC A?". "But however will we steam past those huge horrible holes in our listed quotes and rem statements?" Enter stage left, our hero, POKE 33,33. Yes, our old friend POKE, helping us out of yet another jam. Try him out the next time you have to copy a listed print statement.

Press ESC (shift) P (return); then type "POKE 33,33" (return). Now LIST your line(s) to be edited. You will note that the print statement is all scrunched up* with no extra spaces on the left-hand side. Now COPY over the line, using the forward arrow. Since you have set a scrolling window 33 characters wide, the cursor will automatically jump to the next line as soon as it reaches the right margin of your text. How do you get out of this mode? Just type "TEXT". This little trick will work in both Integer and Applesoft. And whom do we have to thank? Well, it appears everybody in the known world was aware of this one except the Apple Core, so I guess we have to thank J. Alfred Glitch for keeping us in the dark so long. Thanks a lot, Alf.

*This author has been asked to define the term "scrunch". In this author's opinion, those cretins who asked him to do so should spend a little more time studying their technical manuals and a little less time criticizing those who would utilize proper terminology. "Scrunch" is, of course, an historical term dating from the late 4Ø's and the original Apple, ENIAC. It was short for, appropriately enough, ESC CRUNCH, a command which would cause a shift-right of all the electrons available in the entire five-story building. Needless to say, ESC CRUNCH was the ENIAC's single most powerful instruction; so powerful it led to the computer's eventual downfall, when an operator carelessly punched it up while using the full 3ØK of core and the right side of the building collapsed from the sheer weight of the electrons.

BT

THE BOTTOM LINE

Wanna list line Ø in an APPLESOFT II program? Well, you can't! For some reason which no-one seems to understand, the language doesn't allow you to do it. You can, however, come close:

```
]LIST -1
```

will get you lines Ø and 1. APPLESOFT II allows you to list UP TO a line number, using the dash symbol (-) to mean "from the lowest line in the program up to and including". Crude, but effective.

C

S.K.

*************** ****************

****CREDITS****

THANKS TO ALL THE APPLE CORE MEMBERS WHO HAVE CONTRIBUTED ARTICLES AND MEMBERS WHO HAVE HELPED TO PUT IT TOGETHER THIS MONTH-------

PAT CAFFREY   PEG HUGHES
TONEY HUGES   SCOT KAMINS
JOHN SCRIBBLEMONGER E. HANCE
KEN SILVERMAN   JOHN SUSTAR
BRUCE TOGNAZZINI   PAUL WYMAN
ARTHER WELLS JR
J. ALFRED GLICH

A SPECIAL THANK-YOU TO HOMESTEAD SAVINGS BANK
AT GEARY & 22ND AVE IN SAN FRANCISCO, OUR CURRENT HOSTS.
THE SEPT ~~3RD~~ 2ND MEETING WILL BE HELD AT THE BANK AT 10:30AM

>