APPLE BUG

is the Newsletter of APPLE Q: the Brisbane Users' Group.

Post Office Box 721 South Brisbane Old 4101.

March 1987

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NEXT MEETING: - 15th MARCH 1987

> Membership Renewal Form <

(It really is in March this time!)

<<< CREDITS >>>

Graham Black -> He typed it all in
Vince Crosdale -> He typed some too
ZARDAX II -> Word Processing
KPSON LQ-1500 -> Typesetting
the Hooper Centre -> Printing & Distribution
the APPLE computer -> The reason for it all

[Executive Committee]

Terry Sweetser Chairman.
Vince Crosdale Secretary.
Bric Conolly - Treasurer.

Graham Black - Registrar - Trading Table Manager - BBS Sysop.
Peter Lane-Collett - Assistant Editor.

Peter Lane-Collett - Assistant Editor.
Richard Egglesfield - Hardcopy Librarian.
Bob Godbehere - Software Librarian

[Bulletin Board System (BBS)]

Apple Q RABBS : online 24 hrs

Telephone: (07) 284-6145 (DATA)

: (07) 284-0999 (VOICE)

Baud Rates: 300, 1200/75, 1200 and 2400. CCITT and Bell

Data Specs: 8 Data bits - No Parity - 1 Stop bit. (full duplex)

Sysops : Graham Black : Vince Crosdale

BBS equipment : Apple //e 128k

: 1 x 800k 3.5" drive : 2 x 1 meg. Ram Cards

SYSOP stands for: SYStem OPerator

RABBS stands for: Remote Apple Bulletin Board System

The BBS will be on show at each Open-Day.

[What's When]

Sunday 15th March 1987

Open Day at the Hooper Centre. Hours: 9.00.am. till 4.30.pm.

Monday 16th March 1987

Committee Meeting at the Hooper Centre.

Starts: 6.30.pm.

Sunday 19th April 1987

Open Day at the Hooper Centre. Hours: 9.00.am. till 4.30.pm.

Monday 20th April 1987

Committee Meeting at the Hooper Centre.

Starts: 6.30.pm.

[Registrar's Notes]

by Graham Black

For the members who are still having trouble decyphering the mailing labels, your membership number and membership expiry date are on the first line (at the top). Your expiry date is in the form year/month e.g. 8709 = 1987 September.

Example:

MBR # 0068 - Exp: 8709

THE SECRETARY

APPLE-Q: THE BRISBANE USERS' GROUP
P.O.BOX 721
SOUTH BRISBANE.QLD 4101

You have all received your new membership cards. This card will cover you until your membership expires. Members are required to display their card on their machine at each meeting. If for some strange reason you do not have one of the NEW Membership cards, then please let me know and I will rectify the matter.

It has been decided, that if a newsletter is returned to us (by Australia Post), then that mailing address of that member will be erased from the club records, until such time as the member sees fit to inform us of his/her new address. We have to pay for that postage, and we do not like throwing away club funds on an obselete address. If you do not receive your newsletter, then you will probably find that we do not have your correct address. Hence, no newsletter.

We require an address for David Makepeace (again)

Many thanks to the few members who have taken the time to fill in the Membership Renewal forms, and returned them to us so we can update the club records.

[Editor's Notes]

Last month a vicious rumour got started that there was no meeting in February. Well... it started in the newsletter. Somehow I loaded the wrong header file when I put Apple-Bug together. Sorry about that, but these things happen from time to time. Always remember that APPLE-Q ALWAYS meets on the third Sunday of each month (except December), Unless there is a notice stating there will be no meeting.

[News Update]

by Graham Black (Registrar - Sysop)

As you know, early last month the Executive Committee met with Mr.Roger Lovesy, of Apple Computer Inc., at his office in Margaret street, Brisbane. The financing of the Bulletin Board System was discussed at length, and Mr.

Lovesy assured us that $\mbox{\it Apple}$ would support us in our plight to expand the system.

Last month, we received a phone call from Mr.Lovesy's secretary, as to the nature of the assistance that we could expect from Apple. They have offered us two 5 meg Profiles, at a special discount price of \$400.00 each. This offer was discussed at length by the committee at a special Committee meeting on Sunday 1st March, and we are now awaiting their written reply to confirm their offer of assistance.

Due to the lack of support from Apple, it may be necessary to increase the membership fees to something like:—a joining fee of \$10 — Adults \$25 — Students/Pensioners \$15. That might sound like quite a hefty increase to some of you, but please remember that there has been no increase in membership fees for over five years, and we have never had a joining fee before. That is pretty good going, considering the running costs of the club have more than doubled. This was one of the suggestions put forward at the meeting.

The club's computer, along with two other systems, are required to run the club's affairs on meeting days. We have been spounging on the generosity of certain members for too long, and it's about time we did something about it, but to do something, we need funds.

If anyone has any ideas on how to raise funds, then please share your knowledge with the committee.

At the next meeting (15th MARCH) we will be raffling a box of disks for 20 cents per ticket.

Bernie Benson and Graham Black have started the ball rolling with a \$10 donation each.

[Secretary's Notes]

by Vince Crosdale

Well, I suppose by now you have all realised there was a bit of a typo on the cover of last months edition of Apple-Bug, stating that the next open day was on March 15. Well the information was sort of correct in that there IS a meeting on the 15th of March, but unfortunately Graham, you forgot to mention the meeting on the 15th of February. We all know that the gremlins get into everyone's systems now and then, so we are willing to forgive you this time, but please don't let it happen again as my mother is considering charging me for answering the phone.

Various newsletters and magazines have arrived from various places throughout the month, and these are available from Richard, for those of you who are interested. One of interest that arrived, was from a new user group in Sydney, the Apple //GS User's Group. This group are not restricting their membership only to NSW, but would like to hear from all //GS owners in Australia. They have software and information available for the //GS that seems to have eluded the Apple Dealerships around the country. If you would like to get in touch with this group, the address is:

The Apple //GS User's Group P.O. Box 210
Wentworthville NSW 2145

and their phone number is (02) 688-2701. They would love to hear from //GS owners everywhere, so if you are interested, drop them a line.

In the November edition of the newsletter, I asked for feedback from members about the possibility of placing members names, phone numbers and home suburbs in a file on the BBS and in the newsletter following a rather large number of requests for this information from club members who run into trouble with software acquired at a club meeting or members who find it uncomfortable and/or inconvenient to travel a large distance to attend the club open days. Up till now, I have received only one reply to my request. This came from Jim Pulman of Jindalee, and the following is an extract from Jim's letter.

"In response to your paragraph in the November issue of Apple-Bug re: feedback from members, I would like to voice my opinion (for what it is worth), that I think it is an excellent idea.

In fact, I would like to know if there are any members, within easy distance of Jindalee, who would like to spend a few hours a week at my place for the purpose of mutual improvements in ProDOS.

This may be of interest to a high school student or anyone interested in Family Tree research as I am an advanced hobby geneaologist and would be happy to share my experience in this field."

Well Jim, thank you for taking the time out to write back to us, and your opinion is worth a great deal, of that I can assure you. Anyone interested in this offer can get in touch with Jim on 376-1213 at reasonable hours please. Jim has been doing family tree research for a number of years and most of his information is stored under DOS 3.3 and he is experiencing some difficulty in the transfer of these files to ProDOS. So if you may be able to help Jim out, please give him a ring first and arrange a time of mutual convenience to both parties.

In relation to this matter of publishing members names, phone numbers and home suburbs, we are still being flooded with requests for this information. So we have decided to take a different stand on this matter. We will publish this information in the April edition of Apple-Bug. Now to be fair to all club members, if you wish to NOT have your name, phone number and home suburb placed in the newsletter, you have until approximately April lst to either leave us a message on the BBS, see us at the March open day or send us a letter stating this. If we do not hear from you, then we will assume that this arrangement is fine and we will go ahead and publish the list. This list is for the convenience of all members as it will provide a member with a person in their area who may be able to help them with a problem that they are experiencing with their machine or software, and it will also allow members to get in contact with the people from whom they acquired software at the open day in case something goes wrong, or they need additional information in the operation of the software. Remember, April 1st is the deadline, otherwise you will see your name in print in Apple-Bug.

Another inquiry has been received from a member about an update of Applewriter under DOS 3.3 to Applewriter under ProDOS. If anyone can help out in this situation, could you please see me at the Trading Table on the next open day or write back to us.

Bob Godbehere, the club software librarian, would like all members to know that the software library is available to all members at any time during the month. Bob asks that anyone who wishes to go through the software library during the month, to please ring him first on (07) 808-3892 to arrange a time of mutual convenience to both parties.

Executive Committee had with Mr. Roger Lovesy of Apple Queensland. Unfortunately, things seemed to have changed since that meeting and it would appear as though the club is still having to make a go of it on its own. We are currently in the process of trying to extract information about this situation and we will pass on a full report of the meeting and other events which have since taken place in respect to this meeting in a later edition of Apple-Bug. At the current time, however, we would ask all members to please try and make the effort to write into us and state their views on what they think that Apple Australia should be doing for our users group. All feedback on this subject would be greatly appreciated in providing us with some idea of just what the members of the club would like to see done by the company in which we all have a large amount of money invested.

Well, that is about it for this month, so please remember to write back if you don't want your name published in the April edition and that contributions, no matter how small, are always welcome for the newsletter. These can be left at the Trading Table on Open Days or sent to us as a text file on a 5.25" or 3.5" disk. Disks will be returned to contributors after we have removed the relevent files.

So until next month, Good Computing.

Vince.

[BBS Report]

by Graham Black

The BBS has been extremely well received by members and the general public. We have very discreetly changed the Name from RAPPLEQ to APPLE-Q, as the club was becoming known as RAPPLE-Q. Actually, I don't think anyone has even noticed the change.

Calls to the system: 2172 (as of midnight 3rd March)

Registered Users : 199

The system is constantly in use and the message bases are filling up rapidly. The game called STOCK MARKET, has been operating for only a month, and is already proving to be extremely popular. People are logging onto the system just to play this game.

We have replaced the old file transfer module, with the new one that arrived from America, via Perth, and this allows you to download files from the BBS to your computer, and also to upload files from your computer to the BBS.

The BBS is running under ACOS, which is a special language operating under PRODOS. The modem we are using, is a NetComm 1234A, and it handles all the baud rates (Data transfer speed) listed below.

The system has undergone a major rewrite, and now it searches the membership register, which is updated each month, to see if the members are still financial. If not, then their user access is automatically reduced from MEMBER ACCESS, to USER ACCESS, with the loss of membership priviledges.

[Special Discount Offers]

The following Dealers, have offered a cash discount on all Apple products to FINANCIAL MEMBERS ONLY, on production of CURRENT membership cards. Please note: Members MUST produce their current membership cards if they wish to take advantage of this offer.

DELSOUND ELECTRONICS

1 Wickham Terrace (corner Wharf Street), Brisbane telephone: (07) 839-6155 ask for John

COMPUTER ORCHARD

671 Gympie Road, Chermside, Brisbane telephone: (07) 350-1255 ask for Scott

THE BYTE CENTRE

49 Park Road, Milton, Brisbane telephone: (07; 369-4099 ask for James Donegan

[Tips & Techniques]

Digging into DOS

An extract from the Newsletter 'OPEN-APPLE'

Reading a text file with an Applesoft program has always seemed like a pretty straightforward affair. You OPEN the file to READ from it, and INPUT it

If you know how many lines are in the file, you issue that many INPUT statements, then stop. Often, however, the number of lines in the file isn't known. In that situation the typical procedure is to read the file until DOS sends an END OF DATA message and then stop.

ONERR GOTO errors. To accomplish this you issue an ONERR GOTO statement. When an error occurs, program control will go to your error-handling routine. There you check to see if the error was indeed END OF DATA (error number five). If not, you will want to take some true error-handling action. But when the error is simply your signal that the end of the file has been reached, you want to continue processing.

At this point most programmers send control back to their main program. This works for a while, but if you read enough files in sequence your program will die quite unexpectedly.

For example, try this little program. It tries to read an empty file called EMPTY over and over. It reports its efforts as it proceeds. After it tries the 18th time it crashes into the monitor - fairly unusual for an Applesoft program this simple.

- $100 \quad D\$=CHR\(4)
- 110 N=1
- 120 F\$="EMPTY"
- 500 L=1 : ONERR GOTO 550
- 510 PRINT D\$; "OPEN"; F\$

```
520 PRINT D$; "READ"; F$
520 INDUT TO I I I I I GOTO 500
550 PRINT : PRINT D$; "CLOSE"; F$
560 IF PEEK (222) = 5 THEN GOTO 200

570 PRINT "ERROR #"; PEEK(222); " IN LINE "; PEEK (218) * 256
580 END
```

After the program crashes, return to Applesoft with a 3DOG and issue a GOTO 570 command on your keyboard. Our program will report that we were killed by error number 77, OUT OF MEMORY, in line 550.

That may seem pretty incredible to you, given the small size of this program. But people often forget there's more than one kind of memory to run out of. The usual way to run out of memory is to have a program so large and with so many variables that it won't all fit in your computer. For example, just type on your keyboard DIM A(1000,1000). An array of that size won't fit and you'll see ?OUT OF MEMORY ERROR appear on your screen.

All stacked up. The other kind of memory you can run out of is called stack memory. Applesoft saves all kinds of stuff on the stack, which is a 256-byte area that the 6502 microprocessor can access quite easily. Whenever you do a GOSUB, for example, Applesoft pushes the current line number on the stack before passing control to the subroutine. That way, when the subroutine's RETURN is executed, Applesoft can find its way home by pulling the line number off the stack and jumping to it.

Modify line 500 of our program to 500 GOSUB 200 and run it. This will cause a whole bunch of GOSUBs to be executed without any RETURNs. You'll again see the ?OUT OF MEMORY ERROR message; this time during the 26th pass. But unlike when you typed DIM A(1000,1000), you've now run out of STACK memory rather than program memory.

Just as GOSUB pushes a line number on the stack, so does the ERR GOTO command. And the RESUME statement is ONERR GOTO's RETURN. The reason our first program crashed was that we never used RESUME.

However, the solution isn't that easy as just beginning to use it. RESUME sends control back to the line in which the error occurred. If we tried to RESUME after an END OF DATA, we would just get another one and our program would lock up in a tight circle of ONERR GOTOs and RESUMEs.

The solution to all this is to use a call to a machine language subroutine within Applesoft that will clear the stack. Use this call in place of RESUME. The call is mentioned in Apple's Applesoft BASIC Programmer's Reference Manual, Volume 2 on page 265. The subroutine lies at \$F328 and can be executed with a CALL -3288.

Earlier Apple manuals included a short machine language program that could be poked into memory and called that would also clear the stack. CALL -3288 does the same thing, and is obviously much easier to execute.

Using this call, you can put the portion of your program that reads files into a subroutine. If you try without this call, you get a RETURN WITHOUT GOSUB ERROR when you try to return to your main program after the first END OF DATA error.

So here's the standard way to read a text file from Applesoft. This program will run forever or until you press Control-C.

```
100 D$#CHR$(4)
110 N=1
120 F$#"EMPTY"
```

210 GOSUB 500 220 GOTO 200

500 L=1: ONERR GOTO 550 510 PRINT D\$; "OPEN"; F\$ 520 PRINT D\$; "READ"; F\$

530 INPUT T\$(L) : L=L+1 : GOTO 530 550 PRINT : PRINT D\$: "CLOSE": F\$

560 IF PERK (222) = 5 THEN CALL -3288 : RETURN

570 PRINT "ERROR #"; PEEK(222);" IN LINE "; PEEK (218) * 256

580 END

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AppleWorks Patch for Epson APL Printer.

Reprinted from the February 1987 issue of 'AUSOM NEWS'

Question: How does one get AppleWorks to run with an Epson APL card?

: With difficulty, you can patch the software using a sector editor such as Bag of Tricks. The following patch appeared last year in Capital Apple, Wellington Apple Users Group, Vol. 3.6, June 1986.

Using a sector editor the referenced bytes should be replaced. NOTE: Track and Sector numbers are in DOS 3.3 format.

DON'T PATCH YOUR ORIGINAL COPY. YOU ARE APPLYING THE PATCHES TO A BACKUP COPY 'AREN'T YOU?

49 DO 17

Epson Printer Patch for AppleWorks 1.3

Sec \$02 bytes FD FE FF Trk \$0A Old 09 CO 85 New C9 01 F0 Sec \$01 bytes 00 01 02 Trk \$0A Old 37 A9 00

Epson Printer Patch for AppleWorks 1.2

New

Trk \$07 Sec \$08 bytes 7E 7F 80 81 82 83 09 CO 85 9B A9 00 01d C9 01 FO 49 DO 17 New

Epson Printer Patch for AppleWorks 1.1

Trk \$07 Sec \$0A bytes 7A 7B 7C 7D 7E 7F 09 CO 85 9B A9 00 Old C9 01 F0 49 D0 17 New

For the patches given, you should set up the printer information selection for an Epson MX/Graftrax +.

The more I read of the 'OPEN-APPLE' Newsletter, the more fascinated I get. It would have to be the best source of information for the Apple, that I have ever come across. Here are some more extracts:

80-Column Puzzle

Question: Whenever you turn on the Apple //e or //c 80-column card with a PR#3, the screen is cleared. This is Great when your program begins, but what if your program turns on a printer with a PR#1? To return to the screen after printing do you have to destroy what's already there with another PR#3 command?

Answer: To return to the 80-column card without clearing the screen, do this:

DOS 3.3

POKE 54,7: POKE 55,195: CALL 1002

ProDOS Note: D\$=CHR\$(4)
PRINT D\$; "PR#A\$C307"

Comment:

This trick connects the 80-column firmware at its warmstart address (\$C07), which doesn't clear the screen. with DOS 3.3, you can safely do this by poking the warmstart address into page-zero output hooks and calling the page-3 vector table routine at \$3EA (1002), which forces DOS to use the current contents of those hooks for future output.

With ProDOS, this same trick can be accomplished much more easily because the a(ddress) parameter can be used with the ProDOS pr# and in# commands.

-0-

Question: Why is it that all variables are cleared whenever the most minor change is made to a line of an Applesoft program residing in memory?

I have worked with other machines that let you change a program line, issue a GOTO to resume processing, and have all variable values still intact. This is a big aid in debugging a program since you need not start back at the beginning with a RUN.

Is there a poke or some other technique that will restore pointers or values for variables in Applesoft after altering a program line?

Answer: The reason Dr.Basic clears all the variables is that your program and its variable tables are adjacent to each other in memory. When you edit a program, the memory space used by the program listing itself gets either bigger or smaller. To keep the variables intact, they would all have to be moved to keep them adjacent to the program.

The other Basics you've worked with probably use a different memory allocation scheme so that the problem doesn't occur.

If you are using ProDOS, however, there is a solution. Before editing your program, issue the store command. This will save the current values of all variables in a file on your disk. After editing, issue a restore command to bring the variables back into memory. GOTO (not RUN) will then resume processing with all variables intact.

Converting CONVERT for Mouse Text

by Cecil Fretwell - Waterloo, Iowa.

I have an enhanced //e and also a //c. Using either of these systems with the ProDOS CONVERT utility causes the inverse bar that highlights filenames to show the names in Mouse Text. I finally got tired of this and went looking for a solution to the problem.

The following Applesoft routine fixes the problem:

- 10 PRINT CHR\$(4); "UNLOCK CONVERT"
- 20 PRINT CHR\$(4); "BLOAD CONVERT, TSYS, A\$2000"
- 30 POKE 26523,14
- 40 POKE 26711,63
- 50 PRINT CHR\$(4); "BSAVE CONVERT, TSYS, A\$2000, L20481"
- 60 PRINT CHR\$(4); "LOCK CONVERT"

For the technically curious, line 30 fixes an initialization problem. The author of the code enabled the alternate character set instead of disabling it. Without line 40, the highlighted filename flashes. If one likes that feature, don't bother with line 40.

-0-

Apple II phone machine

by Andrew Reeves-Hall
19 Glenmount Ct
Whitby, ONT LlN 5M7 Canada

I wrote a program that answers the phone...big hairy deal...anyone with a modem can do that. But this isn't any ordinary modem, it's a Novation Apple Cat. Why anyone buys a Hayes I do not know for this thing does what a Hayes can do for about the same price plus oodles more. In the Novation manual there's a demo program that shows how to have the modem answer the phone with speech using a Votrax system wired to the auxiliary connector on the card (you won't find that on a Hayes). Once connected, the program would get the modem to answer the phone and have the Votrax speak to the person on the other end.

Since I don't have a Votrax I looked around for some other way and found one. The synthesizer is called 'Software Automatic Mouth (S.A.M)'. It consists of a card and a software routine. Just by accident (honestly!) I set the slot number for speech output to my modem slot. Low-and-behold voice over my phone WITHOUT wires and no need for the SAM card! I was estatic...my fingers went wild at the keyboard. I wrote a program I call "Answering Machine', the the 'Originate Machine' (a phone number dial-out database). When I put the two together I had 'Phone Functions', which won first place at the computer fair here in Whitby.

Comment:

I find this kind of software very exciting. I'm convinced that the Apple II can be turned into a telephone that would give AT&T and other telephone manufacturers the heebie-jeebies. (Here's something interesting to do with an Apple II-Plus.)

For several years now the major Savings and Loan in Kansas, Capital Federal, has offered a telephone bill payment service. It consists of a

synthetic voice that answers the phone and tells you what to enter. You respond by pushing buttons on a touch-tone phone. Systems like this can now be built out of Apple IIs.

They can be used to take orders, to quote prices, to leave messages, and to retrirvr messages. And all this could be done at a price the big manufacturers couldn't touch. I think I hear opportunity knocking.

[Software Reviews]

At the January meeting, someone gave me these software reviews for inclusion in the newsletter. Sorry, but I forget who it was.

1. PROGRAM : Carriers at War

SUPPLIER : Strategic Studies Group

Strategic Studies Group is an Australian company that specializes in strategic war games. Carriers at War has won the Computer game of the year award and has made great profits in the U.S. The game is controlled by a sequence of menus, and comes with 6 preset scenarios in which you can select a battle to fight. The object of the game is to destroy the enemy's forces. Players can take up any side they wish. The game is played by useing a series of hard-copy cards. These are essential to the game. The package comes with 4 battle maps, 1 menu card, and several labels for games disks. SSG also produces a monthly magazine on all of their games. This game takes time to master but beats the arcade game hands down.

GRAPHICS : **
SOUND : **
INTEREST : ****
BASE OF USE: **

2. PROGRAM : Create with Garfield

This is a program in which you make your own lovable garfield characters. If you're a Garfield Buff then this is an essential for you. You start off with a menu, select a background, the characters and print them out. The package comes complete with pretty little pictures of Garfield in his usual lovable positions. There are about 10 pictures of him for you to select which stance will take part in your picture. You can select Odie, Jon, Street Cat, Pookie and even little Nermal. There is a small library of some of Garfields famous little quotes for you to paste on your picture. You have a range of over 30 props such as televisions, hamburgers, beds, alarm clocks, all the things Garfield has in his home nearly. This is a great piece of software to suit not only Garfield fans but the average interested apple user.

GRAPHICS : *****
SOUND : *
INTEREST : ****
EASE OF USE: ****

3. PROGRAM : Fantavision

SUPPLIER : Broderbound Software

Fantavision is an animation package from the makers of the famous Printshop series. The package comes with 2 disks. The first disk is the Program disk,

the second a data disk. It consists of a mousepaint style drawing tablet with pen/brush, knife for cutting, hand for moving parts in or out, plus circles, squares and around 10 fill patterns. The disk comes with a few demonstration cartoons such as Can Can, High Dive and a few others. There is a disk storage option so you can recall and save your artwork. It can go over 100 frames which can be controlled by rotating squashing the character. This would be pretty close to being the best animation package on the earlier generation apples (][+ //e & //c).

GRAPHICS: ****
SOUND: N/A
INTEREST: ***
EASE OF USE: ***

4. PROGRAM : Newsroom

SUPPLIER : Springboard Software

The Newsroom would have to be the best Desktop publishing/newsletter program available on the apple //. It consists of 6 modules, photo, banner, copy, layout, wire service and the press. You start off your newsletter with a banner. This goes right across the top of the 8 inch page. You can select up to 30 graphics on one banner from a library of over 2000 individual pictures. Once you have your top banner/title you proceed by making small photos, just like little reports in the morning papers. Graphics are still able to be Once you have your photos made up (6 max), then select the copy desk and convert them into plates. The layout then selects where you want your photos/reports and saves them. Then you move to the press to select print page. The printer then starts to churn out your newspaper after it has a bit of a think session. The library has a range of pictures from maps to people, animals etc. You do not have to printout a whole page as you can print out individual photos and banners. This software has been written with a lot of effort in which has turned up a great job.

GRAPHICS : *****
SOUND : N/A
INTEREST : ****
EASE OF USE: ***

[Scuttle—Butt] from the BBS

Subject ->Applesoft #\$!?*!? From ->JAMES REEVE (#106) Date ->02/07/87 16:48:23

Anyone,

I am humiliated to have to ask this question after so many years use in machine language on Apple][s, but I've just completed a long Applesoft program that keeps track of all my stock-market activities. Cents in a financial program are essential as you may well know, but when I try to perform a simple task I'm foiled by BASIC's bug. It is that, for example, when I ask for 200.51-200.48 (which any vegetable school maths teacher could tell you is .03) I am told the answer is .02999999 or with other functions sometimes .0300001 etc. Why??????? Or more to the point, can I get around this? To tell you the truth, I have basically rectified the fault, but my

method is time consuming and lengthy. What I need is...H E L P !

James.

-0-

Subject ->Re: Applesoft #\$!?*!?
From ->DAVID MAKEPEACE (#114)
Date ->02/14/87 22:07:24

James,

The problem is called "rounding error" which occurs when floating point numbers are expressed in binary with only 32 bits of precision. Part of the problem may be the floating point routines in Applesoft but just about any computer using 32-bit floating point has the same problem.

Possible cures:

- * use a "print using" package that is loaded as a binary file and called through the use of the & hook. There are lots of these around (they can format output so that there are always 2 digits after the decimal point, etc.).
- * use STR\$() and a few string manipulations to do the same thing.

David.

-0-

Subject ->Re: Applesoft #\$!?*!? From ->TIM MOWCHANUK (#44) Date ->02/15/87 02:08:30

The problem is that Applesoft stores numbers in binary form. It is not possible to represent most decimals (base 10. e.g. normal numbers) exactly in binary notation. (e.g. It is theoretically impossible to represent 1/10 as an EXACT binary fraction.) This naturally leads to so-called "round-off" errors. MATHEMATICALLY (which will work under most conditions) try the following formula, where VA is the value to be rounded to the nearest cent (0.01):

```
VA = INT (VA * 100 + 0.5) / 100
```

This is the basic formula (It can be modified and improved). Let's say VA = 1.0199. Multiplied by 100 give 101.99. Add 0.5 to give 102.49. Take the integer value to get 102. Divide by 100 to get 1.02, the value you want. Hope this helps, Tim M.

[The Trading Table]

by Graham Black

The Trading Table will be operating as usual. The prices are being reduced again, simply to clear out our existing stocks. We still have a supply of Single Sided Double Density disks in stock, at \$23.00 per box.

We have some modems on sale, so that members who don't have one yet, will have the oportunity to buy a good quality modem at the right price, so that they can enjoy the pleasures of BBSing, along with the rest of us. We are able to sell the NetComm 3+12 manual modem for \$299. NetComm produce a very good range of modems, and it is only a matter of personal preference as to the type of modem you need, at a price that is realistic. The BBS (RAppleQ), is operating with the NetComm 1234A modem. This modem is almost top of the range, and will handle a variety of baud rates. The NetComm 3+12 modem uses 300 baud and 1200/75 baud (Viatel).

PRICE LIST for March 1987

These prices are correct at the time of compilation, but are subject to change without notice.

Single 5.25" disks
5.25" DS/DD. Control Data (in library case) 29. 3.5" DS/DD. Wabash 6. Basic Programming (book) 12. Workshops Vol.1 (book) 16. Workshops Vol.2 (book) 16.
3.5" DS/DD. Wabash
Basic Programming
Workshops Vol.1
Workshops Vol.2(book)
Computer Connection(book) 9.0
Word Processing with ZARDAX(book)
Assorted books
DX 100 media storeage boxes
FD30 media storeage box 9.8
Epson MX80 ribbon cartridges (fit GENUINE EPSON ONLY) 10.0
Epson LX/MX80 ribbon cartridge
Hardcopy binder 7.0
Disk labels (fanfold) (per sheet of 8)
(or 12 sheets) 2.0
Zero-force sockets (I/O port extension)

[Late News]

Some I.A.C. library disks are missing, and Bob Godbehere, the Software Librarian, would appreciate their return. These are old and valuable disks, and many of them cannot be replaced.

When you take a disk to copy, please make sure you return it afterwards. These disks are to be copied at the club only, and must not be removed from the premises.

The missing disks are:

- I.A.C. disk #17
- I.A.C. disk #27
- I.A.C. disk #39
- I.A.C. disk #42

Apple-Q: the Brisbane Users' Group

MEMBERSHIP RENEWAL

Membership of Apple-Q is on an annual basis from the month that you join. All members on our books are required to note any changes to their personal details and forward to the Registrar upon renewal of membership.

MEMBERSHIP FEES

\$18.00 Adult and Family memberships \$ 9.00 bona fide students under the age of 21 \$ 9.00 pensioners upon production of pension card ******************************

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Other names:	• • • • • • • • • • • •		
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