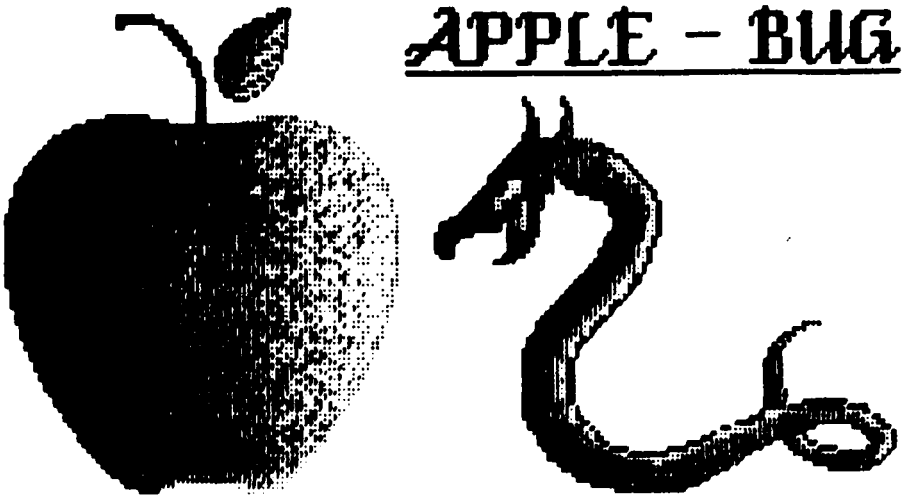

APPLE - BUG

The Newsletter of APPLE—Q: the Brisbane Users' Group

Post Office Box 721 - South Brisbane - Qld. 4101

[OCTOBER 1987]

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NEXT MEETING: — 18th October 1987

ANNUAL GENERAL MEETING

BIRTHDAY PARTY

<<< CREDITS >>>

Tony Truscott	<->	He typed it all in
Graham Black	<->	Away on holidays
Vince Crosdale	<->	He typed some too
The Members	<->	For their contributions
ZARDAX II	<->	Word Processing
EPSON LX-80	<->	Typesetting
The Hooper Centre	<->	Printing & Distribution
The APPLE Computer	<->	The reason for it all

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[Executive Committee]

Terry Sweetser	-	President	Ph.(07) 203-4210
Bernie Benson	-	Vice-President	Ph.(07) 345-1545
Vince Crosdale	-	Secretary	Ph.(07) 351-3090
Eric Conolly	-	Treasurer	Ph.(07) 261-1860
Graham Black	-	Registrar	Ph.(07) 883-1525
Tony Truscott	-	Editor	Ph.(07) 266-4705
Peter Lane-Collett	-	Assistant Editor	Ph.(07) 398-9282
Richard Egglesfield	-	Hardcopy Librarian	Ph.(07) 349-8888
Bob Godbehere	-	Software Librarian	Ph.(07) 808-3892

[Bulletin Board System (BBS)]

Apple-Q BBS : online 24 hrs
Telephone : (07) 284-6145 (DATA)
: (07) 883-1525 (VOICE)
Baud Rates : 300, 1200/75, 1200 and 2400 (CCITT and BELL)
Data Specs : 8 Data bits - 1 Stop bit - No Parity (Full Duplex)
Sysops : Graham Black & Vince Crosdale

BBS equipment : Apple //e 128k
: 1 x 5meg Profile Hard Disk
: 1 x 800k 3.5" drive
: 1 x 1meg Ram Card
: NetComm 1234A Smartmodem
: Epson LX-80 Printer

Calls to the system : 6687
Registered Users : 346 (as of noon 4th October)

SYSOP stands for: SYStem OPerator
BBS stands for: Bulletin Board System

[What's When]

at the Hooper Education Centre - Kuran Street - Wavell Heights

Sunday 18th October 1987
AGM - Birthday Party - Open Day
Hours: 9.00.am. till 4.30.pm.

Monday 19th October 1987
Committee Meeting
Starts: 6.30.pm.

Sunday 15th November 1987
Open Day
Hours: 9.00.am. till 4.30.pm.

Monday 16th November 1987
Committee Meeting
Starts: 6.30.pm.

[Membership Fees]

Joining Fee: $10 Adults/Family: $20
Students/Pensioners: $12 Corporate Membership: $50
Associate Membership: $ 5 plus $5 Joining Fee. (Pro-rata till MAY 88)
(Students under 21 years - Pensioners on production of Pensioner Card)
(at the discretion of the Executive Committee)

[Editorial]

This month is the Annual General Meeting and Apple-Q's birthday. In keeping with our 'traditions' we will have our Apple ice cream cake, apple pie and cream and Apple Cider *(non-alcholic of course)*. Very little serious computing will be done on the day and wives, children and friends are all invited to share the festivities. The formal portion - election of committee is timed for around 12:30 immediately followed by ice cream cake and cider. To round out the day it is hoped there will be no shortage of volunteers to clean up the area so that the Hooper Centre will get a good impression of the new committee.

Well, the end of the current Committees 'Reign of Terror' is coming to a close. Thanks must go out to all of the Committee members for their efforts over the past twelve months in keeping the club running in some sort of order. It has been an enjoyable twelve months with all sorts of little happenings sprinkled in just to make life that much more interesting. The BBS has planted its feet well and truly on the ground and seems as though it is here for a long time to come. This in itself has caused many a headachce, but looking at the board today, the headaches were definately worth it. The newsletter has been kept up to a high standard for the twelve editions that have been published by this Committee, and it is a reflection on the amount of time and effort that go into it. Thanks again to Bernie for all his efforts in the incorporation of the club, and to Eric for always being able to sort out Grahams cash register dockets (I'd hate to see the books if you weren't there!). On the subject of Graham, thanks for a home for the BBS, the membership register software, the cash register software (I think), looking after the Trading Table so well and mate, how could I forget the dropping of the printer?? To Bob and Kelvin, a big thank you for managing the software library so well. Keep up the great work guys! To Richard for the hardcopy library, and Tony for all his help with the newsletter. And how could I not say a big thank you to Terry, just for being there. From me, a thank you to all the members that have assisted us over the past twelve months, along with a willing and able Committee. We hope you have enjoyed our small contribution to the club over the past twelve months.

Please take note:

Members are required to display their membership cards on their equipment so as to allow identification of visitors using club facilities and causing inconvenience to bona-fide club members. Also, all club members and visitors should try to make the effort to sign the book placed near the door to the Hooper Centre.

[Secretary's Notes]

by Vince Crosdale

This month seems to be of little interest to those in the outside world writing in, so correspondance has been lax again. The majority of mail in was the usual magazines and requests for information, and we are still waiting to receive our disks and magazines from I.A.C. in the US. We are also waiting on a letter from the Justice Department of Queensland about the Clubs incorporation which we hope to bring into effect at the Annual General Meeting.

On the subject of the Annual General Meeting, nominations have been received from the following :

Bernie Benson	President
Eric Conolly	Vice-President
Vince Crosdale	Secretary
Tony Truscott	Treasurer
Graham Black	Registrar
Bob Godbehere	Software Librarian
Brett Dutton	Hardcopy Librarian

The position of Apple-Bug editor is still up for grabs, and if no nominations are received for this position before the meeting, then nominations will be taken from the floor, or the position will remain vacant as it has done for a considerable period of time now. For people considering nominating for this position, I would like to remind you that there is a lot of work involved in putting the newsletter together (about 2 full days worth actually) and it will require a mature person willing to work for no thanks at all (and believe me, I mean NO THANKS AT ALL). Still, it is a rewarding position as you can see the fruits of your labour each month and with our ever increasing mailing list, there are a lot of people out there willing to browse over you handywork.

Well, that's about it for this month. As usual I remind members that contributions for the newsletter are always gratefully received and thanks must go out to all those members who have taken time over the past twelve months in contributing articles to us. All articles for the newsletter may be forwarded to us either on disk or typed. Articles may be handed to us at the Open Days, and if you submit on disk, then all care will be taken and your disk returned. At the risk of sounding presumptuous, I will sign off in the usual manner.

So until next month, Good computing.

[BBS Notes]

by Vince Crosdale

Last month Apple-Q became the official Australian East Coast distributors of GBBS.PRO software and add-on modules from Peripherals + and First Word Software in the United States. This deal was accomplished through talks with the Australian distributor and they were happy to allow Apple-Q represent them on the east coast of Australia. A price list for GBBS.PRO software and all add-on modules should be available in the near future.

A word about the new file transfer section on the BBS. It has been brought to my notice by a few of the members that the file names that appear in the file transfer section are confusing and do not indicate what the actual files are. Unfortunately, there is no easy way around this problem, and members using the board will have to try and cope with this situation. By way of explanation, the original files come from the Apple-Q software bank, and as most of you are aware, the majority of the files contained within this are under DOS 3.3 as most of these disks are from an era previous to ProDOS. The BBS operates under ProDOS, and therefore a filename compatibility problem is created. Under ProDOS, the only legal characters allowed for file names are letters and dots. As most of you will be aware, DOS 3.3 is a bit more forgiving in it allowances for file naming. So, the catalogs under DOS 3.3 were passed through a renaming program which created a text file containing

the original names of the files and renamed the files to conform with the ProDOS standards. This file contains all the relevant filenames for the files that are currently on the BBS, that is, if there are 4 sides of a Softdisk volume on-line, then the text file will contain the filenames of all 4 sides. The filename that appears on the BBS is in the form A41.1 and this abbreviation stands for Side A, Softdisk Number 41, File Number 1. This means that side B will appear as B41.1, side C as C41.1 and so on. Now, the files from the Public Domain Volumes are contained in the first four file transfer areas and the catalog file and the renaming program are contained in area 5. The file containing the catalog will be named in the form SOFTD41.CAT. The name will vary for different volumes. The renaming program is EZYNAMER.V4.5 or another version number. Members wishing to take files from these areas should firstly either download the catalog file, or use the 'View a file' option in the file transfer menu and read through the catalog file to discover which files they want. The position of the file name within the catalog file is also the files position in the file areas. However, remember that the catalog contains ALL the file names for all four areas. So you will have to make sure that you have not passed into another file area when you read the position of the file name. When you list the areas available, the BBS will inform you how many files are in each area. With this information, you should be able to discover which area contains the file you are interested in. For example, if the BBS informs you that area 1 contains 45 files, area 2 43 files, area 3 36 files and area 4 57 files, then names 1-45 in the catalog will be in area 1, names 46-88 in area 2, names 89-125 in area 3 and names 126-183 in area 4. Hope that this helps those of you who were having a bit of trouble deciphering the file names.

[Treasurer's Report]

by Eric Conolly

APPLE-Q

INCOME AND EXPENDITURE STATEMENT
FOR YEAR ENDED 31ST AUGUST 1987

1986			1987	
	3734.82	Opening Balance		1566.53
		Plus receipts		
1656.00		Membership - full	2972.00	
342.00		Membership - student	531.00	
		Joining Fees	370.00	
3.00		Software sales	34.65	
10.00		Newsletter Advertising		
357.20		Donations	230.15	
117.98		Interest	46.72	
508.42		Trading Table Income	3169.30	
		Change for Trading Table	100.00	
		Raffles	155.40	
		Bulletin Board Income	110.00	
-------	2994.60		-------	7719.22
	-------			-------
	6729.42			9285.75

Less Expenditure

120.00		Audit Fees		
		Advertising	31.08	
339.18		Annual General Meeting	222.15	
187.57		Postage / Stationary	256.00	
170.90		Library Expenses	238.06	
25.00		Meeting Expenses	41.50	
976.34		Newsletter	2107.23	
170.00		Repairs / Maintenance	37.50	
2290.40		Equipment BBS	2875.25	
8.00		Federal Debit Tax	12.90	
78.00		Membership Cards	180.00	
27.50		Miscellaneous	41.00	
747.00		Trading Table Purchases	2546.28	
23.00		P.O. Box Charges	23.00	
-------	5162.89		-------	8611.95
	-------			-------
	1566.53			673.80
	=======			=======

BANK RECONCILIATION STATEMENT

Balance as per Bank Statement		$	895.36
Less outstanding cheques			
641	$197.06		
643	$ 25.00		
	-------	$	222.06

Balance as cash book		$	673.80
			======

CLUB ASSETS

Apple //e 128k Computer
Green Screen Monitor
5 Meg Profile and Controller
3.5" Disk Drive and Controller
NetComm 1234A Smart Modem
1 Meg Ram Card
1 Meg Ram Chips
No Slot Clock
Epson LX-80 Printer
Auto-Ice Parallel Card
Line Suppressor
Super Serial Card
BBS Software
50 x 3.5" disks
Public Domain Software
Library
Trading Table Stock $1253.95

[Software Library]

by Bob Godbehere

By resolution of the Executive Committee, there is now a copying fee for the Public Domain Software. The fees are being used to raise funds to purchase more software for the Library, and some disk drives for the copying of these disks. At the moment, the Software Librarian's drives are being used, and worn-out. The fees are as follows:

50 cents per side, with a minimum charge of $2.00 (4 sides)

Members took advantage of the Apple-Q Software Library Copying Service to the value of $7.50. I have now got a modem and communications program up and running. If you can't wait for an open day to get some software, you can download from my computer. I use Ascii Express, which has File Transfer (Upload, Download, Directory, Log Drive, View (files)) etc. You must be an Apple-Q member and have your Membership Number or you will be denied access to the files. Please ring me on 808-3892 for more information.

Thanks to Delsound for the contribution of 6 x 3.5" disks of GS programs and 5 x 5.25" disks of the Micro Educational Library. These will be available at the next meeting.

STOP FID FRETTING

For anyone with only one disk unit, the following briefest of patches to FID may prove useful to stop that program's continual requests for a slot and disk information (particularly irritating when using the Copy option). The amended program will still stop, with appropriate messages, at disk swapping points.

The menu will also still, apparently, offer the "Reset slot and disk" option; this will now be meaningless but no harm (or effect) will ensure if you are perverse enough to try it. Like FID, the amended version may be loaded into a language card for immediate recall, using Duncan Langford-Allen's routine.

To apply the patch, run the Basic program, amending line 100 if you are not using the usual slot 6. Disk 1 is implicit in a single disk system (or you would not be able to boot!) and this is covered in the remaining POKEs. Subsequently.

```
BLOAD FID
EXEC FID-DLE
BSAVE MYFID(or whatever),A2051,L4686
```

Note that FID loads to the same memory area as an Applesoft program - hence the indirect, EXECfile approach shown here. Alternatively the corresponding POKEs may be directly keyed in after a BLOAD of FID.

```
100 SLOT = 6
110 D$ = CHR$ (4)
120 N$ = "FID-DLE"
130 PRINT D$"OPEN"N$
140 PRINT D$"WRITE"N$
150 PRINT "POKE 4895,"SLOT":POKE 4896,"SLOT":POKE 4893,1:POKE 4894,1
    :POKE 2328,255:POKE 2363,96:POKE 2439,96:POKE 4899,255"
160 PRINT D$"CLOSE"
170 PRINT D$"LOCK"N$
```

After numerous requests for some help with this column Brett Dutton came good with a program to read a clock card and neatly display the day and time however whilst it worked quite well with his equipment the program refused to read my card. This has been the catalyst for this months column.

Instead of having slightly different programs to read the various types of clock cards it seems logical to have a program that is not dependant on the type of card but instead takes advantage of a facility which is part of the ProDOS program.

This program is limited to information regarding the date and the time in hours and minutes only. It also assumes that you have a ProDOS compatable clock card installed.

Each time a disk command is executed ProDOS updates four registers (49040 - 49043) with date and time data which it reads from the clock. ProDOS uses this information to add to the catalog file. By reading the data which ProDOS has stored in these registers we are overcoming the problem of the differences in the clock cards themselves. We no longer need to know how to read the time and date directly from the clock as we can now PEEK to the above registers and get the detail that is required.

The following program does just that and then displays the date and time. Line 310 is used to maintain current time, without it the program would end and the time would not be updated. From line 130 on is up to you as to how you wish to display the detail.

To update the registers to the current date and time we have to issue a disk command and in our basic program we have used the CLOSE command, however, should you wish to use an alternative disk command the result will be the same.

The time and date could also be displayed within a program with the time being updated during the period the computer is waiting for further input. This is the only way I can think of to display current time using a basic program. If there is any interest we may make it a subject for a later issue of Page 8.

```
10   TEXT : HOME
20   A$ =   "\|/-":X = 0
30   MO$ =  "???JANFEBMARAPRMAYJUNJULAUG
            SEPOCTNOVDEC"
40   PRINT  CHR$ (4);"CLOSE"
50   DA =   PEEK (49040) -
            INT ( PEEK (49040) / 32) * 32
60   YE =   INT ( PEEK (49041) / 2)
70   MN =   ( PEEK (49041) - YE * 2) * 8 +
            INT ( PEEK (49040) / 32)
80   MN$ =  MID$ (MO$,MN * 3 + 1,3)
90   MI  =  PEEK (49042)
100  HO  =  PEEK (49043)
110  IF HO > 11 THEN PM = 1
120  IF HO > 12 THEN HO = HO - 12
130  IF HO = 0 THEN HO = 12
140  PRINT : VTAB 1
150  PRINT : PRINT
160  PRINT "             DATE: ";
170  IF DA < 10 THEN  PRINT "0";
180  PRINT DA;"-";
190  PRINT MN$;"-";YE
200  PRINT
210  PRINT "             TIME: ";
220  IF HO < 10 THEN  PRINT "0";
230  PRINT HO;":";
240  IF MI < 10 THEN  PRINT "0";
250  PRINT MI;
260  IF PM = 1 THEN  PRINT "  PM"
270  IF PM = 0 THEN  PRINT "  AM"
280  X = X + 1: IF X = 5 THEN X = 1
290  VTAB 5: HTAB 32
300  PRINT  MID$ (A$,X,1)
310  GOTO 40
```

If you have digested your ProDOS manual some of the above code will bear a striking resemblance to the Time program on the Examples disk.

STOP PRESS:

For all you Appleworks users out there next month we hope to have an AppleWorks Utility feature written by Cecil Fretwell. Cecil if you don't know is a prominent author who has featured in most U.S. computer magazines specilising in Apple.

Terc Basic Enhancements - the program featured in the September issue is available from the Software Librarian at $5.00 collect or $6.00 posted. This represents excellent value for a Basic Enhancements program.

[I.A.C.Volumes: (21-26)]

The Prefix before each file name represents the file type. i.e. B=Binary T=Text A=Applesoft I=Integer. Each section is seperated by a string of -'s and each volume is seperated by a string of ='s.

Volume # 021 - Disk 1 : FREE SECTORS = 17 (4.25K)

A RUN THIS SECOND	T UPLOAD1
T TO SYSOP	T REM II INSTRUCTIONS
T UPLOAD2	T OPINION
T ABBS1	T REMEMBER II
T INSTRUCTIONS	A BUILD USERS.OBJ
T ABBS3	T SYSOP INSTRUCTIONS
T WAPABBS NOTES	A RUN THIS FIRST

Volume # 022 - Disk 1 : FREE SECTORS = 103 (25.75K)

A BASICALC	T BASICALC SAMPLE DATA
B BASICALC.COMPILED	A BASICALC.DOC
T BOOLEAN LOGIC EXAMPLE	T CHEQUE BOOK
T COMMISSION SALES EXAMPLE	A HELLO
T IF MODEL EXAMPLE	T INDIVIDUAL EXPNS REPORT FORMA
T INDIVIDUALS EXPENSE SUMMARY	A VISICALC COORD FORMULAS
A VISICALC D FILE PRINTER	A VISICALC FILE CHECKER
A VISICALC FORMULAS	A VISICALC FORMULAS INSTR
A VISILIST	A ALPHACAT

Volume # 023 - Disk 1 : FREE SECTORS = 20 (5K)

A APPLESOFT AUTO-NUMBER	A AUTO PROGRAM
A AUTO-REDIAL	A BIORHYTHM PRINTER
A BRAKING DISTANCE	T CAPTURE
A CATALOG MANAGEMENT	A CHECKBOOK BALANCER
T CLUB OFFICERS MAIL LIST	A COLOR BARS
A COMPARE MODIFIED	A DUMP INSTRUCTIONS.A
B FLIPPER	A GERMAN
B HI-RES DUMP.EPSON MX-80	B HIRES DUMP
B INVERT HI-RES PAGE 1	B LOGO 15 (PACKED)
A MAIL LABELS	A MAKE LINE CAPTURE
A MINI'APP'LES	B MOVE SCREEN BINARY A$8C00
A MOVE SCREEN UTILITY	A PARABOLIC CALCULATIONS
A PARABOLIC ERROR	A PAYMENT CALCULATOR
B PIX UNPACKER	A POKER DICE MK V
T PROG.LIST	I SLOT MACHINE
A TEXT WRITER B1	A TRICOLOR GRAPHICS

Volume # 023 - Disk 2 : FREE SECTORS = 359 (89.75K)

A IAC COMPILER HELLO.1	B IAC COMPILER.PIC
T FORGOT TO BOOT DOS?	T WHY POKE ME?
T RS-232 IS STANDARD?	T WHERE DID MY BASIC GO
T A COMMENT ON ERROR TRAPS	T APPLE SOFT KEYS

Volume # 024 - Disk 1 : FREE SECTORS = 163 (40.75K)

```
B APPLE ARRAY                       B FRED FRACTION
B APPLE BARREL                      B XZONE
B DRILL                             B ADRILL
B BOXES                             B MAKING CHANGE
A VOICEPRINT                        B VPRINT OPCODES
```

Volume # 025 - Disk 1 : FREE SECTORS = 5 (1.25K)

```
A HELLO                             B HELLO.PIC
A HELLO.BEU                         A BEU.INSTRUCTIONS
B BEU.48K                           B BINLOAD
B INTBEU.1                          A MASM INSTRUCTIONS
T MASM                              B MASMA
B MASM DOC                          B INTEGER BASIC
B SWEET16                           I MASM SAMPLE
B ALL PURPOSE DISASMB.(800)         B ALL PURPOSE DISASMB.(8B00)
A BFILE LIST                        A MEM/DUMP TO TEXT FILE
A MEMORY INTERPRETER                A MINI-ASSEMBLER INSTRUCTIONS
B MINI-ASSEMBLER ($800)             B MINI-ASSEMBLER ($5400)
I MINI-ASSEMBLER TUTORIAL           A M/L TUTORIAL
T M/L TUTORIAL.TEXT
```

Volume # 025 - Disk 2 : FREE SECTORS = 142 (35.5K)

```
A HELLO                             T BLOWN PASCAL DISKS
T DISK COMMANDS                     T DISK PROTECTION
T DOS SECTOR ORDER                  T INTERRUPTS
T INTRO TO M/L                      T NOLIST
T ONERR GOTO                        T RAM CARD
T SHORT NOTES                       T SOFTBUGS
T VIDEO GLOSSARY                    A TEXT FILE READER/PRINTER
B C.PIC2
```

Volume # 026 - Disk 1 : FREE SECTORS = 0 (OK)

```
A HELLO                             A RUBIK
A RUBIK-RANDOM                      A RUBIK-PLOT
A RUBIK-ROTATE                      A RUBIK-END
B CHAIN                             A HELLO.BRASIL
B INTEGER BASIC                     I MENU
I ADDRESS2                          I BSTAT
I SPACE                             I DISK PROGRAM ELIMINATOR
A CALENDAR                          A CALENDAR REMINDER
A FINDER                            B FINDER ASM
A FINDER DOC (DO NOT RUN)           A HELLO.MARYLAND
A HIRES SHAPE COMPILER              A HIRES TABLE FORMER
A LABEL PROGRAM                     A MEMORY DMP
A SHAPE MOVER                       A APPLOGIC ][
A CATALOG HEADER PROG.              A CHECK II
A CRYPTOLOGIC ][                    A MASTER CATALOG
A MASTER CATALOG PRINTER.REV
```

THE HISTORY OF STORAGE DEVICES
TAPE -- DISKS -- LASER

by: Brett Dutton

Almost a decade ago, the cost of Winchester Disk Drives reached a level where, although expensive, most business users could take advantage of this fast and mostly reliable form of storing data.

Prior to this, half inch magnetic tape drives had been all the rage.

1/2" Tape Gives Way to Disk

In those early days (it really doesn't seem like eons ago) mainframes, such as IBM, Sperry Univac and Burroughs, ruled the roost with mini's just starting to make a strong showing, particually in technical and tertiary environments, where the need for large storage of data was not so great.

Personal computers were no more than a gleam in most people's eyes and it was quite improbable that they would ever use Winchester disks. Floppy was more than adequate.

Cost of Disk Production Starts to Fall

By the late seventies, fixed disks had, through greater demand, better production techniques and newer chip technology, become less expensive to produce, by a substancial margin. However, retail prices had come down at a much slower rate. Computer companies were able to record 66% profit (that's 200% markup) on the sale of a disk drive, and the buyer would willingly dip his hand in his pocket.

The market theories of supply and demand played a big role, but more importantly, the factor of market control prevailed.

Mini Computers Make a Move

Only a few of the original computer manufacturers lasted the distance over the sixties and seventies. New ones emerged as the mini market developed, for example, Digital Equipment Corporation. It was at this time that a purchaser of a computer would buy most, if not all, of his immediate and subsequent peripheral needs from the original supplier/manufacturer, due to hitherto sound reasoning, i.e., maintenance and that the manufacturer must know his product best, etc. But, most importantly, there was a simple lack of alternatives.

Third Party Suppliers

The "third party" supplier was to provide such alternatives and the marketplace adjusted to accomodiate them, albeit with a little hesitation at first.

The main marketing concept behind the selling of the computer was that most manufacturers considered that, by making their CPU configeration exclusive and secretive, they would be guaranteed repeat business for all that customer's peripheral needs. But three irrevocable forces were at work that ultimately short-circuited these long term strategies.

Firstly, it became logical and cost effective for CPU designers to use disk drives from a company that knew that business best, i.e., a disk drive manufacturer with current products and a track record in production (C.D.C. may be cited as a classic example). This had the effect of creating a virtual industry standard in disk drive technology.

Secondly, as a large number of engineers flocked to join the booming computer industry organisations, not all their ideas could be accommodated. This lead to dissatisfaction and defection; or, the ultimate trip into the garage with slide rule in one hand and sweet revenge in the other.

This had two effects, cross pollination of ideas and technology, company

to company, and a multitude of interfaces, CPU's and software being designed and manufactured to be compatible with the computers of the organisation from which the engineer had recently departed in abject frustration.

Hard Disk Market Expands

Thirdly, new disk drive manufacturers appeared on the scene hungry for a slice of this big lucrative market, all providing the industry standard interfaces -- SA4000, ST506/412 and SMD. Just some of the disk drive manufacturers that easily come to mind include C.D.C., Ampex, Tandon, Shugart, Fujitsu, Hitachi, IMI and Maxtor.

Now, with a smorgasbord of disk drives to choose from and compatible controller boards to plug into most minis, the third party suppliers kicked on and, overcoming the user's fear of "the big adventure", offered peripherals at a lower price than previously experienced. This was partly due to third parties being represented by smaller organisations, typically with limited engineering and R&D facilities and, hence, less overheads.

CPU manufacturers reacted in different ways. Mainframe companies, in the main, toughed the whole show out. Others sought to hold the tide through obscure or even snappy technology. The mini companies suffered the most, and ultimately seemed contented to fight low-key rearguard actions.

By now it was '79-'80. Third party supply was growing at a phenomenal rate and was here to stay. At this time, the Japanese third party manufacturers appeared with a vengeance and prices were further reduced.

The U.S., in '81-'82, proved to be a battlegroud for the manufacturers of larger disk drives (80-500 Mbytes). The consumer, not slow to spot an opportunity, saw to it that price became the dominant issue and the Japanese came out of it a bit cut up but in the main quite happy with their new substantial market share.

In less than four years, ('79-'82), prices on most peripheral products had come down by more than 50%, making large storge within the reach of almost all computer users.

1/2" Tape Makes a Comeback

With disk drives now up around 700 Mbytes, the problem of back-up raised its head. This had slipped quietly into the background for a number of years but now started to flex its half-inch nine-track muscles and burst out from the NRZ/PE (800 BPI/1600 BPI) shackles to show the world the GCR (6250 BPI) streamer, a virtual necessity for backing up large disks.

However, another market explosion screaming for small disks (5-80 Mbytes) and tapes was brought on by the emergence of "big blue's" heart stopping PC.

The PC Phenomenon -- Just the Start

PC's were by no means a new event, (Apple for example had been doing quite nicely for some time), but their price, performance and expandibility were. Now small business houses and corporations and the man on the street could afford one or more. Some U.S. manufacturers recently recorded PC sales of almost 10,000 per month shortly after release.

Initially, U.K. manufacturers competed for this booming 5.25" disk drive business with Japan lagging somewhat behind, although it would seem not for long.

From here, the PC disk drive market development was swift and vicious. ST506/412-SEAGATE interface became the standard, stepper motor (slow access or seek time) made way for voice coil (fast seek time) and full height made way for half height. The 80 Mbytes in a 5.25" box was broken and SEAGATE interface is giving ground to new interfaces, such as SCSI and ESDI, and 3.5" disk drives are now on the market, with higher density than ever before imagined possible.

5.25" Disks -- It's All Happening

The up-to-20 Mbytes 5.25" disk still dominates the PC market but the manufacturers have lost most of the rough edges, so the rush is on. Super high performance, super high density disk drives are being brought up to the starting blocks in manufacturing centers in the U.S. and Asia with capacities around 200 Mbytes being claimed as the new 5.25" standard by industry gurus' observations appearing to be brought on by the events other than sunstroke.

Late '83 saw a sharp nosedive in 5.25" disk prices as manufacturers sought to unload quantities of ageing technology (that can mean all of six months out of date). The price has currently stabalized, but with industry journals touting figures of US$1,000 for over 100 Mbyte 5.25" disk drives, it seems there will be yet another price reduction.

As disk drives on PC's became larger, backing up on floppy was time consuming and cumbersome, especially in the new office or home environment where a DP department might not exist. Here the tape drive sphinxed itself from the ashes yet again, although as straight back-up of hard disks go, the 1/4" catridge streamers are just too cost effective for the tape drives to compete.

However, as disk drives grow, users will require a fully interchangeable medium which leads them back to 1/2" mag tape drives, a product that must indeed be poised for an imminent resurgence to its old days of glory.

Today's Micro a la Yesterday's Mini

It seems that today's micro is heading for the same mountain top as yesterday's mini, with requirements for ever larger storage capacities.

Consumers are clearly showing, in this area, that manufacturers' beliefs, that micro users would be satisfied with only 50 Mbytes of storage on a micro, to be totally unrealistic. Capacities of 250 Mbytes or more are being claimed by users as being only adequate, especially in the 22 bit and above super-micro systems. It is interesting to note that 8" Winchesters are still outselling 5.25" Winchesters. In this area, Hitachi are Fujitsu are performing exceptionally well.

Laser Disks -- Replacement for the Tape Drive on the Winchester?

The laser or optical disks currently available (in the U.S.) are for backing up the Winchester Disk. The laser effectively burns tracks onto the disk, thus allowing a write to, once only situation.

The optical disk can be used an infinite number of times to read back but is limited by its inability to to record information no more than once. (More recently manufacturers have found a number of methods in laser disk technology that allows one to read and write a number of times. However this is not yet available).

This limitation is offset by the multi-gigabyte storage capacity of the disk.

Performance such as access time and data transfer rate are marginally superior to 6250 streaming tape and substantially behind hard disk. The winning feature is simply, that in something the size of an LP record, over two gigabytes can be stored.

It's early days yet and laser disk has a long way to go, so learned claims of 70 gigabyte laser disks with Winchester Disk capabilities by 1988 could be realistic.

Where will it all end?

As we summarise the marketplace, prices are on a downward trend. Computing power is on the increase per dollar spent. It is hard to predict more than a few years ahead as to what is going to happen, and even then it can be dangerous.

Maybe our grandchildren really will pull PC's out from cereal packets.

SELLING YOUR SOFTWARE.

by Brett Dutton

You've just finished writing the greatest program in the world! You want to let thousands of other micro users in on the fun, but how? You can share the code with your favourite user group (Apple-Q Inc.) or, as many amateur programmers are doing, try to sell it commercially. The market for software is booming. As the personal computer permeates everyday life, the market is wide open for innovative and well written software.

Your First Decision

So you've decided to sell your software. Do you want to market your software directly or work with an established software company?

If you decide to market your software directly, you will probably advertise in magazines and newsletters, purchase mailing lists from direct mail brokers, mail flyers, and even visit other user groups. Don't underestimate the time and the money you must spend - typical headaches include increasing postage costs, poorly targeted mailing lists, and documentation that is not quite complete. The advantage to handling all sales and marketing yourself is that you can keep every cent sales earn.

There are also distinct advantages to working with a commercial publisher. First, they have established technical support and marketing systems. Next, they have the people and the skills to adapt your program to new systems (other than the one the software was developed on) so that the entire market can be tapped. Finally, they are virtually impossible to compete with financially. They have salespeople, lots of money for advertising, and a network of retailers already in place.

Let's assume you decide to sell your work through a software house. How do you go about that?

Choosing a Publisher

Finish your program; be sure that it operates properly without problems, and fully document its operation. (If your program is accepted by a publisher, be prepared for some final editing. What you think is the best way of saying something might indeed be the best for you, but not for thousands of users.)

What are publishers looking for? In general, the things you want from your own software. It should be user friendly, able to handle errors, show good programming practice, and be unique. Few publishers are looking for a program that can balance your cheque book.

Review the advertisement in popular magazines and see what kinds of software different companies publish, and which companies advertisements appeal too you. Some deal only with business software, while others may focus entirely on arcade games. You want to target your efforts where they will prooduce the highest likelyhood of success.

Remember also that not all software firms deal with outside authors. Many commercial publishers conduct all writing and documentation using their own staff and are not interested in purchasing out-of-house materials.

After you have found a company that looks right, give them a call and ask too speak to someone in aquisitions, new submissions or marketing. Depending upon the company, different departments handle such calls, so be patient in your search to locate the right person. Tell what you have done, and see if they are interested in leaning more. Many firms use a submissions packet consisting of all the materials you need to submit your work for consideration. Others might simply want a listing of the program. Under no circumstancess should you ever send your materials, either in disk, cassette,

or printed form to a publisher without first making an inquiry and then fully protecting yourself (which we'll get to in a moment) against misuse of your materials.

If you are hesitant to call and want to write a letter instead, be sure to include as much as you can about the program's developement, any limitation there might be (for example, memory needed) the system it was developed on, as well as a full description of what it does.

Do not be discouraged by disinterested companies. Try another firm until you've at least one invitation to submit your materials for consideration. If your work is good, someone will surely be interested.

Finally, although it's a good idea to send inquiries to more than one company at the same time, be careful not to send off the actual materials to too many publishers at once. Go first with the one you feel can best serve your needs, and then work your way down if your program is not accepted.

Protecting Yourself

Sometimes people do make the mistake of sending their programs to a company without first making inquiries. The next thing they know, their software is being passed around and they've lost their chance at the market. When you deal with any company, you must protect yourself by using a nondisclosure form and by copyrighting your materials.

A nondisclosure statement simply says that the company will not disclose or reveal the contents of your work to anyone else while discussions with you are underway or thereafter if they don't choose to publish. In other words, they cannot discuss your work outside of their own company. Any company that does not suggest you complete such a form should not be considered.

The next step you should take is to copyright your work, a much easier and more inexpensive procedure than most people think (see "How to Copyright"). In 1978, with the increase in the number of programs being written, the Copyright law was amended to include computer programs. It is important to understand that the Copyright Office only acts as an office of record. They will not verify whether your program works. For them, a computer program is defined as "a set of statements or instructions to be used directly or indirectly in a computer to bring about a certain result." In other words, they assume what you send them is what you claim it to be. The copyrighting of material in no way validates that claim.

When you are ready to copyright your work, you should enter as a comment in your printout the word "Copyright," your name and the year. You should also have it incorporated into your program itself if there is any kind of visual output. (Next time you play Pac-man, glance at the bottom of the screen.)

When you send a listing of the program to the Copyright Office, be sure that it is in a high-level language rather than machine language since the examiners will want to read at least part of it. Since some programs are very long, send only the first and last 25 pages of the listing if it is more than 50 pages.

What Should You Expect from a Publisher

A publisher should provide a good design and coding assistance, documentation (if yours is not perfect, which it rarely is), telephone support for users (especially if the program is very complex), on-going maintenance (enhancement and revisions for different operating systems), sales and marketing systems already in force (not just advertising), and finally a royalty rate that you find acceptable.

Royalties are always a sticky situation and vary widely from publisher to publisher. In general, publishers pay around 30 percent of their net sales. What this means is that they might subtract production costs (disk, printing and binding costs for documentation, and so on) from the sales cost. In

numbers the net cost is 80-85 percent of the retail costs, and this figure is what your royalty would be based on. For example if the retail price of the program is $20, the net (85 percent of $20) is $17, and your 30 percent royalty is $5.10.

The dealer, of course, also gets a discount of around 40 percent. In the end, the publishing company itself has perhaps 20-25 percent as their profit. You can see they need to sell a good number of software packages to recoup design and production costs.

The larger the predicted sales are, the more likely it is that your royalty will be higher. In the same sense, the more the publisher has to invest in bringing your software on line, the less your royalty will be.

Finally, programmers who have an established reputation can demand a higher royalty. I have not heard of any software designer getting an advance for his or her work (much like the book publishing industry does on a regular basis), but I certainly wouldn't be surprised if this is common practice in the future.

What the Publisher Does With Your Software

When you send your materials to the publisher, and after the nondisclosure form is signed, the company will begin evaluation. This can be done in several ways. One way is to have their own staff do the evaluation. Some companies, however, send it to outside evaluators who test the program on their own machines and get a feel for the everyday value of your idea.

This evaluation process can take up to three months in some cases and only a few weeks in others. It depends upon the backlog of programs to be reviewed and the publisher's procedure for reviewing. Don't call the publisher every few days asking if a decision is being made yet. They want the evaluations back as quickly as you do, so you will both have to wait.

Virtually all software that comes to a commercial firm needs some additional work, and the amount of time that it will take to get the bugs out, rewrite the existing documentation, and produce the final version are all the factors that enter the publisher's final decision whether to offer you a contract.

Although it might seem to you that the computer market is saturated (because most computer magazines are full of advertisements), this is simply not the case. The potential for sales of new programs with new users, or even new programs that do a better job than others, is expanding every day. Get to work writing and stick with it until you're successful!

[Advertisements]

FOR SALE -> Contact Bernard Doherty on (07) 262-5195 business hours only.

Apple //c expanded to 525k, one disk drive and software.	$1200.00
Above with 3.5" Unidrive	$1700.00
Daisy Whell Junior Printer	$450.00
Auto-Ice Modem, suit //e or //GS	$ Call

[TRADING TABLE]

For the Annual General Meeting, there will be no Trading Table operating. This Sunday is a day of relaxation for all members.

STOP PRESS !!!

News just to hand. Delsound Electronices of 1 Wickham Street, Brisbane will be bringing a large range of computers, peripherals and software to the November Open Day. Demonstrations will be run throughout the day.

APPLE-Q
The Brisbane Users Group

NOMINATION FORM

for a position on the Management Committee
for 1987/88

I _____ (Membership #) _____

do hereby nominate:

_____ (Membership #) _____

for the position of _____

Signature of person nominating: _____

Signature of Nominee: _____

Any financial member may nominate any other financial member for a position on the Executive Committee.

If more than one nomination is received for any position then a ballot shall be held.

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(Additional Nomination forms can be obtained at the Open Day)

Rec:..... Exp:..... Membership Number .....

Apple-Q: the Brisbane Users' Group

MEMBERSHIP RENEWAL

Membership to 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 their membership.

MEMBERSHIP FEES

[ ] $20.00 Adult and Family memberships
[ ] $12.00 bona fide students under the age of 21
[ ] $12.00 pensioners upon production of pension card
(at the discretion of the Executive Committee)

****

Membership Renewal Form

Surname:.....

Other names:.....

Private Address:.....

.....

Private telephone: (...).....

Postal Address:.....

.....

Business telephone: (...).....

I hereby declare that the above details are true and correct, and agree to abide by the Rules and Regulations of the group.

Signed: .....

Please complete these details to allow our records to be checked. DO NOT use this form for an initial membership application. Forms for that purpose may be obtained from the Registrar or the Secretary.

THIS FORM SHOULD BE COMPLETED AND RETURNED - WITH FEE - EITHER:-

at the next Open Day -or-

post to: The Registrar
Apple-Q
P.O.Box 698
Redcliffe. QLD 4020

(PLEASE DO NOT)
(MUTILATE THIS)
(FORM .....)