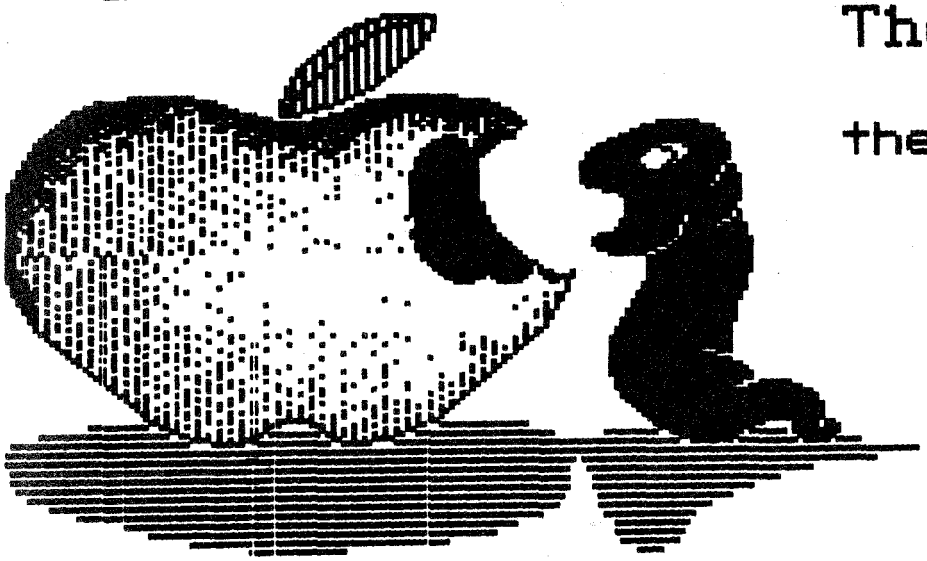
apple-bug



The Newsletter of Apple-Q Inc. the Brisbane User's Group.

September 1988 Issue

Volume 7 No. 9

Address:
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Queensland 4101.

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AUCTION OF THE YEAR!!

This Open Day we will have the Auction of the Year. If you have something to auction, fill in the form at the end of this newsletter. Extra forms will be available on the Open Day. Make sure that the form and the items to be auctioned are at the Trading Table by 12.00 p.m. This will give others a look before the auction. All items should be marked with your name and membership number.

Non-Apple-Q members will also be able to auction items this Open Day. You will be able to pick-up a form at the Trading Table on Open Day. There will be a commision of 10% (of the auctioned price) payable to Apple-Q for any item auctioned on behalf of a non-member.

- Auction starts 1.30 p.m., 18th September
- Any computer related items can be auctioned
- Free to all Apple-Q Inc. Members
- Due to space restrictions, no main frames can be brought to the meeting

$1.50

Registered by Australia Post - Publication No. QBG 3485.

[Executive Committee]

Bernie Benson	- President	Ph.(07) 345-1545
Eric Conolly	- Vice-President	Ph.(07) 261-1860
Bob Godbehere	- Secretary	Ph.(07) 808-3892
Tony Truscott	- Treasurer	Ph.(07) 266-4795
Graham Black	- Registrar	Ph.(07) 883-1525
Dale Rodgie	- Editor	Ph.(075) 38-6942
Ken Smith	- Software Librarian	Ph.(07) 345-1995
Brett Dutton	- Hardcopy Librarian	Ph.(07) 265-5112

[Bulletin Board System <BBS>]

Apple-Q Inc. 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 - Brett Dutton
Calls to the system : 12,037
Registered Users : 170 (as of 11.30 p.m. 28th August)
SYSOP stands for : SYStem OPerator
BBS stands for : Bulletin Board System

[What's When]

at the Hooper Education Centre - Kuran Street - Wavell Heights

Open Day
Sunday 18th September 1988
Hours: 9.00.am. till 4.30.pm.

Committee Meeting
Monday 19th September 1988
Starts: 7.00.pm.

Open Day
Sunday 16th October 1988
Hours: 9.00.am. till 4.30.pm.

Committee Meeting
Monday 17th October 1988
Starts: 7.00.pm.

Machine Language SIG
Time: 1.30 pm this Open Day
Where: Software Library Room
Interest: Apple II Machine Language Programming

Serious Users SIG
Time: 1.00 pm. this Open Day
Where: Room 22, Main Hooper Building
Interest: Business programs & programming on the Apple II & Macintosh

[Membership Fees]

Adults/Family:	$20	Joining Fee: $10
Pensioners:	$12	Pensioners on production of Pensioner Card
Full Time Students:	$12	Full Time Students under 21 years on production of Student Card
Corporate Membership:	$50	
Associate Membership:	$ 5	plus $5 Joining Fee (BBS only)

[.....at the discretion of the Executive Committee]

Copying fees for the Club's Public Domain Software are 50 cents per disk side, with a minimun charge of of $2.00 for 5.25" disks. The copying fee for 3.5" disks is $3.00 per disk. We cater for the][,][+, //e, //c, //GS and MAC. The copying of Commercially produced software cannot be sanctioned by APPLE-Q Inc. and members who do so risk expulsion from the group.

All contributions for the newsletter should be handed to a committee member at the Open Day, or posted to P.O. Box 6375, Gold Coast Mail Centre, Bundall, Queensland 4217. The deadline date is the committee meeting immediately following the Open Day.

[Editorial]

by Dale Rodgie

Another busy month this month. The early arrival of you Apple-Bug is due to the school holidays. The Hooper Centre staff are having a well earned rest. As you may have guessed by the front page, the auction is on this Open Day. Details are on the front page. Both the Special Interest groups will go ahead per usual this Open Day.

Please read the article at the end of this newsletter about the election of the Management Committee for the next 12 months.

Applied Engineering Products
The Trading Table can now supply Applied Engineering products. Applied Engineering make a range of cards for the Apple II's. I own a GS-RAM and recommend it. See Graham Black at the Trading Table for prices.

Help!!!
If anyone owns a "ZEUS" brand Apple compatible computer, please contact the Secretary (Bob Godbehere) on (07) 808-3892. There is a Zeus owner in North Queensland that needs your help.

Hard Drive Fund
Users of the Apple-Q BBS will know of the problems of keeping it online. One of the main reasons for it crashing is the lack of disk space to store the messages. At present the BBS is using a 5 megabyte hard drive for storage. This is far short of what the BBS needs. So we have started a "Hard Drive" fund to get the money for the drive. We are looking for donations of money to buy a 20 or 40 megabyte hard drive for the BBS. The increased disk space will allow the Sysops to add more games, public domain programs, etc. to the board. If you wish to donate, please see Graham Black or myself (Dale Rodgie) at the Open Day or call me (Graham is on holidays until just before the Open Day). My phone number is on page two of the newsletter. You can also contact me through the BBS.

Remember to display your membership card on your Apple this Open Day. There is only limited space available, so only Apple-Q members can set up their machines. People not displaying their membership card will be asked to pay the membership fee or remove their computer.

Both the Trading Table and the Software Library will close at 1.30 p.m. this Open Day. So please orginize your business around these new business hours. Also, please don't go behind the counter at the Open Day.

A small number of power boards are available, at Open Days, for a deposit of $20.00. Due to the number of missing power boards, we had to increase the deposit. I recommend that you bring your own as the few available will not last long.

[Software Library]

by Ken Smith

Great news, Apple Corporation and Apple dealer "Logical Solutions", have chosen to become supportive in real terms toward your Apple user group, Apple-Q. Inc.

"Logical Solutions" have offered to supply an Apple IIGS and disk drives for the use of the club on open days for the copying of Public Domain software, Shareware and Demo disks and as a demonstration machine for members.

If you have considered buying or trading to a IIGS and haven't the time or inclination to sit with a salesperson, or if you are just interested in what the IIGS can do, then a "hands on" demo. is now at your disposal, while the machine is not being used in the library, "just ask".

With considerable help from members and in particular "El Presendto, the Big B.", plus a few hundred hours, I have, over the last year, compiled AppleWorks templates to format our business to a degree I find satisfactory and workable. More input is needed to aim toward a perfect system but at present the system works. If any member can use or improve templates for :
A profit and loss statement, a bank reconciliation, a transport invoicing system, vehicle fleet maintenance management, cheque account database, or a depreciation schedule then please see me on open day or phone 3458862.

I am about to embark on the vagaries of the Balance sheet and the General Ledger through "BPI General Accounting" software if anyone is familiar with the above then an exchange of ideas would be constructive and appreciated.

[Apple News]

More info on GSWorks
In the August edition of Open Apple, they announced that Claris has bought StyleWare. As you remember, Claris is the company started by Apple Computer to publish programs for Apple computers. StyleWare, produced nine programs for Apple computers. The latest being GSWorks. The name of GSWorks will be changed to AppleWorks GS and it will be sold under the Claris label in Austraila. Of the other eight programs published by StyleWare, it is known that Multiscribe GS will be sold under the Claris label. However, it is not known what will become of TopDraw, Multiscribe (IIe version), DeskWorks, etc.

The Virus is comming
The article from Graham Black on viruses in last months Apple-Bug was timely. There are reports of a ProDos virus in the States. The virus is called CyberAIDS, and attaches itself to ProDos 8 System files. The virus is activated by running the system file containing the virus. To avoid it attaching to other System files, lock your files or write protect the disk.

Beat this one IBM
The new operating system for the GS will also allow you to read Macintosh and MS-DOS text files. It will be released this month. This means that the Mac users in the group now have no excuse for not writing articles for Apple-Bug.

GS Clone
The people who brought you the Laser 128, Video Technology and Central Point Software, are now designing a GS clone. The only problem with that is the fact that the sound chip used in the GS is now made by Apple. Without the chip, you will have a few software problems.

Warning....
The Star NL10 printer is claimed to be ImageWriter compatible. However, one member has had problems with the printer and AppleWorks. It seems that the printer does some wierd things when you document is full justified. This happens when you use P1, P2 or more than 10 characters per inch.

[Making Music with MIDI]

Musical Apples have been commonplace for years, but until Apple announced the Apple MIDI interface at MacWorld Expo in January, the company maintained a polite distance from what appears to be something of a shotgun marriage. Until now, Apple has left it to third parties to offer MIDI cards and connectors, software and keyboards.

Now Apple has blessed the union with MIDI hardware of its own. MIDI, or Musical Instrument Digital Interface, offers computer owners, both professional musicians and home-computer hobbyists, an industry-standard interface that allows Apple computers to communicate with MIDI-equipped keyboards, synthesizers, and drum machines. Because the standard is now accepted everywhere, all peripheral musical devices can communicate through standard 5-pin DIN-type connectors and cables. MIDI instruments adhere to a standard data structure for controlling the timbre, vibrato, duration, and other aspects of a note as well.

The MIDI connector itself is deceptively simple. It may be a card that fits into a slot in our GS's or It may also be a simple device connected to a serial port, such as Apple's own MIDI interface or Passport's MIDI Pro. The Apple product is nothing more than a box, somewhat smaller than a package of cigarettes, with an eight-pin miniconnector on one end that plugs into the Macintosh or Apple IIGS serial port. On the other end of the box are MIDI IN and MIDI OUT connectors. The interface comes with three cables and a small, nearly superfluous manual. Inside the interface is a clock chip to regulate the rate at which data flows from the computer to the instrument and back, and a simple device to isolate the two devices from one another electronically so a current surge from one cannot fry the other. This so-called opto-isolation also protects the system from ground noise.

The serial port on the IIGS and Macintosh operates at several different speeds. The MIDI-standard baud rate is 31.25K baud, which the Mac and IIGS serial ports can supply. The IIe and IIc can't handle this baud rate, however, which means that you can't use Apple's MIDI box with the IIe or IIc, even if you have proper plug adapters. The clock in the interface sets this speed. The clock requires a small amount of power that it draws from the serial port.

Some Caveats
Before you rush out to purchase a MIDI interface, though, thinking it will effortlessly connect you with the world of musical synthizers, you should be aware of one or two considerations.

When you use a MIDI device with your computer, you need software for composition, sequencing, and editing music. Such software comes in a wide array of flavours and styles.

MIDI interfaces don't do anything by themselves, even if you've got the appropriate software. They also need a MIDI synthesizer - a keyboard instrument, drum machine, or expander box - with which to communicate. Furthermore, not all electronic keyboards are MIDI-compatible.

Also, be aware that MIDI devices require power: some interfaces for the Macintosh, such as the Opcode Professional Plus, must be plugged into a handy electrical outlet to supply it. Others draw their power from the serial port.

Because drawing power from the trickle available to the Apple II serial port can be dangerous (especially if a device draws too much!), Apple does not publish power information on the port, although the Apple MIDI Interface does use it. So other MIDI interfaces that draw on that power may run into problems, and you should probably avoid them. Your best bet is to get Apple's own interface, if you have a GS.

Three kinds of Interfaces

I looked at three MIDI interface devices for this article. Other interfaces for the Macintosh also work with the Apple IIGS, but they all function in much the same way and do the same things as the products I discuss here. All three of these devices allow an Apple II to communicate with a Casio CZ-101 keyboard, a popular MIDI keyboard (recently replaced in the Casio product line by the HT-700), but they do have differences.

Apple Computer's MIDI Interface draws its power from the Apple IIGS or Macintosh serial port and is a simple, rugged, self-contained unit. It offers only one input channel and one output channel, however, so if you want to use more than one MIDI instrument from your computer, the instruments must have a throughput jack (also called MIDI-thru) so you can daisy-chain them. Another drawback is that the Apple MIDI Interface does not work with older (pre-GS) Apple II computers.

The Passport MIDI Interface is a card you can install in slot 2 of your IIGS The card offers jacks for MIDI IN, MIDI OUT, and DRUM, in addition to IN and OUT RCA jacks for using tape sync, which- given the right software-writes a signal onto a track of a multitrack tape deck that synchronizes the other tracks.

The most undesirable aspect of this card is that it faces the front of the computer, which means the MIDI jacks face the keyboard- handy for plugging in and unplugging the cables if you don't mind the lids remaining off the computer. Unfortunately, the MIDI plugs do not fit through the holes in the back the IIGS, so unless you want to take a crowbar or can opener to the back, you must at least leave the lid loose.

The Opcode Professional Plus Interface, which is marketed for the Macintosh, requires an external power supply and offers three output channels. Thus it can communicate with three different instruments at once, a useful feature if you have more than one MIDI instrument that does not have a throughput jack on the back. Although it is marketed for the Macintosh, the Professional Plus also works with the IIGS serial port. Opcode also makes the Studio Plus Two, which has two MIDI IN and six MIDI OUT connectors and front lights that let you know when you are sending and receiving. Other Macintosh MIDI devices also work with the GS - you should base your choice on features, such as this product's multiple output channels. Also pay attention to its power source - avoid Mac MIDI boxes that draw power from the serial port.

Software

Software, as it becomes available, will allow you to compose, edit, and sequence music. Because MIDI is now fashionable and Apple has lent it a seal of approval with its own MIDI product, software publishers may start rushing to claim they are MIDI-compatible.

A major caveat is that some MIDI devices may not work with some software. MIDI is really a software standard, with minimal hardware requirements, but some software may not be compatible with some MIDI interfaces. Therefore, you should probably discuss the compatibility of hardware and software with your software dealer and make sure the software you want works with the interface you have.

You might consider, too, checking with music stores rather than computer dealers for MIDI software, hardware, and information. They usually know more about MIDI.

Keyboards, Drums, Expanders

Besides the computer and its software, the most important element of the home musical-hardware complex is the instrument. Several are available, from small inexpensive keyboards that you can get at discount stores to expensive professional synthesizers with enormous sound libraries and microprocessor controllers of their own.

The first things to look for in a keyboard, of course are the MIDI jacks on the back. The keyboard must have MIDI IN, MIDI OUT and possibly MIDI THRU (which allows you to add another instrument). Keyboards without MIDI are fun, but they cannot communicate with your computer.

If you want the most from a keyboard instrument, look for full-size piano keys. Many keyboards have smaller keys. The Casio HT-700, for example, is a fairly sophisticated synthesizer, but the keys are diminutive. It sounds great, but you won't improve your playing skills by using it.

Next consider whether you want so-called velocity sensitivity. The MIDI standard includes parameters for information on how hard and fast a key is depressed (as well as how long it is held and when it is released). Velocity sensitivity gives a more human feel to the music, but it doesn't cover up your mistakes the way a keyboard without velocity sensitivity does.

Another premium keyboard option just becoming available on mid-priced keyboards is pressure sensitivity or aftertouch. This feature makes the keyboard respond to additional pressure you put on the keys after the note sounds. With the right synthesizer, a pressure-sensitive keyboard can permit you to place a little extra emphasis on a sustained note or make a synthesized saxophone growl realistically.

Expander boxes are also called synthesizer modules. They are essentially synthesizers without a keyboard, and you can play them from the computer or from another keyboard instrument. They may contain a library of "presets" and may allow you to play several different timbres (instrument sounds) in various combinations with many notes in the same voice (in other words, they can play chords or sound like an orchestra).

Drum machines are synthesizers that produce various percussion sounds and rhythmic patterns.

Yamaha, Casio, Roland, and others make keyboards and other instruments ranging in price from $250 up to many thousands of dollars. The possibilities for creating interesting music through the MIDI interface are, as Apple likes to remind us, limited only by our imaginations. Even nonmusicians can have fun playing back a freeform composition through a synthesizer and stereo speakers.

[This article is reprinted from the GS Users NewsDisk - July 1988]

[AppleWorks Patch]

Some time ago I ran across a neat patch to Appleworks which when run with Appleworks would skip the "hit spacebar and insert program disk" at the startup of the program and upon finding the clock installed would skip the "hit return if date ok" bit. it was really neat.....But I've just recieved Appleworks Ver 2.0 and aparently there has been some changes in startup program.

An up-to-date version of a program to do the patch is available All that's involved in the update is changing the two addresses to patch.

```
10 REM == AppleWorks Startup Patch ==
100 ?CHR$(4)"PR#3":HOME:?SPC(28)"APPLEWORKS STARTUP PATCH"
110 ?
111 ?"This routine patches AppleWorks to go straight to the main menu without"
112 ?"requiring you to press <space> and then <return>.  It is useful if you"
114 ?"use large capacity drives & have a clock card."
120 ?
122 ?"This patch may not work if Pinpoint or some other AppleWorks modification"
122 ? "has already been installed.  An 'Unrecognized Version' message will result.
150 VTAB15:?"Enter the Complete Pathname for the"
152 INPUT "APLWORKS.SYSTEM File: ";FI$
200 ?CHR$(4)"BLOAD"FI$",TSYS,A$2000"
300 A=PEEK(8250)
400 V=1+.1*(A=202)+.2*(A=169)+.3*(A=180)+(A=57):REM DETERMINE VERSION
500 IFNOT(V-1)THEN  ?"Unrecognized Version of AppleWorks": END
600 ?:?"Patching AppleWorks Version "V
650 V=INT (V * 10)
700 IF V = 11 THEN A1 = 13139:A2 = 13522: REM V 1.1
800 IF V = 12 THEN A1 = 13135:A2 = 13518: REM V 1.2
900 IF V = 13 THEN A1 = 13193:A2 = 13855: REM V 1.3
950 IF V = 20 THEN A1 = 14468:A2 = 14148: REM V 2.0
1000 POKE A1,44: REM  NO SPACE BAR TO CONTINUE
1010 POKE A2,208:POKE A2+1,19: REM  NO <RET> FOR DATE
1020 ?CHR$ (4)"BSAVE"FI$",TSYS,A$2000"
1030 ?"AppleWorks now patched":END
```

[Apple // Technical Notes]

EDITOR: This is the first in a series of Apple II Technical Notes (when I get time to type them in). Some of the Technical Notes are available from the Hardcopy Libary.

Apple IIGS Technical Note #26: 2.0 ROM Revision Summary

Written by: Rilla Reynolds October 1, 1987

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May be distributed freely but may not be sold.

Revisions to the new Apple IIGS ROM (part number 342-0077-B) are summarized below. Apple IIGS systems with serial numbers "E704..." and higher were shipped with the new ROM. Older systems can be upgraded at no cost by an Apple dealer. Apple IIGS /SYSTEM.DISK 2.0 or later should be used with the new ROM. While applications on older system disk releases are likely to run, it's not guaranteed, because system software enhancements are coordinated with the latest ROM. /SYSTEM.DISK 3.1 (current at this date) has a FFStopSound patch for the 2.0 ROM (not needed for 1.0 ROM).

MONITOR:

- Firmware version number returned is "$01" instead of "$00."
- New monitor command '#' installs monitor entry and memory peeker classic desk accessories (unless already installed), accessible via Control Panel. Reinstalled automatically on reset: disabled by power off only.
- Interrupts reenabled after fatal system error (for debug DAs).
- New monitor command CTRL-N clears 'm,' 'e,' and 'x' bits for native mode. (CTRL-R still switches to 8-bit, emulation mode.)
- 80-col screens maintained if break occurs and Pascal protocol in effect.

- Control Panel's "Maximum RAM Disk Size" increased to "8128K" instead of "4096K."
- RESET entry point at $00FA62 sets state register to $0C and shadow register to $08.
- Mouse clamps with positive min and negative max works (e.g., $6000 min, $8000 max).
- WAIT routine now always exits with C=1.
- Interrupts now disabled during paddle read routines.
- Shadowing of the Super Hi-Res area in Bank 1 no longer is enabled automatically.

SMARTPORT:

- PR#5, following a PR#5 with I/O error (e.g. no disk indrive), now boots as expected.
- SmartPort manipulates only Slot 6 motor on detect so the IWM can run in fast mode.

APPLEDISK 3.5:

- AppleDisk 3.5 Mac block reads/writes now work as documented.
- Extended status call returns Bit 0=1 if AppleDisk 3.5 media switched since last read, write, or format.
- New AppleDisk 3.5 status calls to get internal variable and work buffer starting addresses.

SERIAL I/O:

- Status call will not report that a character is ready if the character arrives with a parity or framing error.
- Status call works correctly with XON/XOFF.
- First character after XON is no longer trashed when buffering is not enabled.
- Parity, baud, and data format commands work with buffering (IIGS TN13 has 1.0 workaround).
- If serial mode bit 17=1, parity and framing error suppression is defeated.
- Applesoft tabbing in 80-column mode now works correctly.

ADB:

- Absolute ADB devices now supported correctly.
- ADBReset routine now delays about 160 microseconds before reading the buttons.
- ADBStatus TRUE is $FFFF instead of $0001.
- ADB fatal system error code now $0911 instead of $0400.
- All ADB error codes now include the tool number.
- SRQrmv no longer crashes when the call is made with a command pending.

SOUND:

- Interrupts no longer need to be disabled when accessing sound RAM (except for ROM 1.0 compatibility).
- Interrupts are disabled when internal bell active.
- New sound diagnostics: error codes are "$0C00001"= failed RAM data test. "$0C00002"= RAM address test, "$0C00003"= register data test; "$0C00004"= control register test.
- Fixed low-level RAM read/write bug.
- Fixed bug in FFStopSound call.
- Sound Mgr RAM patches and enhancements moved to ROM.

APPLETALK:

- Link Access Protocol interpacket gap now handles added SCC delay.
- Name Binding Protocol considers lower/upper case character as the same.
- Nonexistent protocol no longer hangs the dispatcher.

TOOL LOCATOR:

- Optimized tool dispatcher.
- ROM tools present on a memory expansion card are installed.

MEMORY MANAGER:

- RAM patches and enhancements moved to ROM.
- RAMdisk now returns "bytes transferred" count on DIB call.
- SetHandleSize makes handle temporarily unpurgable while changing handle size.
- Purge and Compact optimized for banks 0 and 1; moved from RAM to ROM.

MISCELLANEOUS TOOLS:

- RAM patches and enhancements moved to ROM:
  New SysBeep call.
  ID manager can reuse discarded ID's.
  ReadBParam and ReadBRAM error codes corrected.
  WriteBParam and WriteBRAM don't return error codes (documentation change).
  Battery RAM routines work if data bank is set to a bank other than bank data is in.
  AbsClamp fixes.
  WriteTimeHex "Bad Parameter" error code is now $0301.
  Keyboard interrupts now enable VBL interrupts.
  Firmware entry calls now return processor status in high byte instead of low byte.
  GetAddr with ref number $000E returns SerFlag address for SCC interrupts (useful if not using serial firmware).
  PackBytes and UnpackBytes return with A=0.
  Munger now works with 1-char strings and returns with A=0.

QUICKDRAW:

- RAM patches and enhancements moved to ROM:
  Changes to round drawing routines, PPToPort, GetFontLore, GetROMFont, InflateTextBuffer.
  QDStartup and QDShutdown save/restore Scanline interrupt vector.
  SetSysFont works.
  GetPort returns all four bytes of grafport.
  Pixel painting routines support QD Aux Tool Set stretching and shrinking.
  ScrollRect works when clip and vis regions are not rectangular.
  TextBounds works.
  FontFlags 1 and 2 added for pen width and color control.
  HideCursor and ShowCursor work correctly with obscured cursor.
  Current bank bytes 100..106 no longer modified by scaling and mapping calls.
  640-mode pen masks now work when portRect origin not a multiple of 8.
  FramePoly returns with A=0.
  Text underline bug fixed.
  Arcs, ovals, and roundrects can be drawn across bank boundaries.
  RectInRgn bug fixed.
  StdPixels now returns with A=0 if pen not visible.
  MapRgn now works on rectangular regions.
  PPToPort now clips correctly to the current portRect.
- New QD changes:
  Busy flag now maintained correctly by ClosePort, OffsetRgn, InsetRgn, KillPoly, FillRect, FrameOval, PaintOval, EraseOval, InvertOval, FillOval, FrameArc, PaintArc, EraseArc InvertArc, FillArc, FrameRRect, PaintRRect, EraseRRect, InvertRRect, FillRRect.
  Cursor appears in correct SHR mode, determined by MasterSCB low byte's "320/640" Bit 7.

DESK MANAGER:

- SaveScreen and RestoreScreen work.

EVENT MANAGER:

- Returns error on attempt to post an invalid event instead of crashing.
- Optimized Startup and Shutdown code.
- Auto key events are not posted in the queue unless the queue is empty.

SCHEDULER:

- Task-handling RAM patch (on /SYSTEM.DISK 1.0 and later) moved to ROM.
- Scheduler now accepts a flush function call.

SANE:

- Elems now can be called from any part of memory.
- Status call moved to ROM.
- Integer overflow during conversion reported.

INTEGER MATH:

- RAM patches moved to ROM:
  SDivide recovers from divide by zero.
  New calls: FracMul, FixDiv, FracDiv, FixRound, FracSqrt, FracCos, FracSin, FixATan2, HiWord, LoWord, Long2Fix, Fix2Long, Fix2Frac, Frac2Fix, Fix2X, Frac2X, X2Fix, X2Frac.
  Changes to FixMul, FixRatio, and SDivide.
- New changes: Optimized multiply routine.

TEXT TOOLS:

- RAM patches moved to ROM:
  TextInit "Illegal device error" now in 16-bit mode instead of 8.
  RAM patches moved to ROM for Writing and ErrorWriting routines.

[AppleWorks Files]

Structure of AppleWorks Word Processing File

An AppleWorks AWP file consists of three main pieces. The first of which is a 300-byte header. Among other unknown things, it contains the tab-stop index. Most of it is unused (null toward the end). Following the header comes the good stuff. The text structure of an AWP is not as bizarre as I though it was. In fact, it is quite simple and easy to work with. To prove this, I have a very short BASIC program which will display an AppleWorks word- processing file with astounding formatting ability.

<u>The Formatting Record</u>
After the 300 bytes of header, you start processing the AWP file by reading in one word (a byte pair). This begins one of two internal record types in the AWP file. Each line of text on the screen in AppleWorks has an associate text record.

First Byte X	Second Byte Y
[00]	[00]

If Byte Y is greater than or equal to $D0, then this byte pair represents a text formatting option (like New Page, or Proportional-1 printer font, etc). In this case, Byte X is used for special information, usually a numeric argument to the formatting option. Example, if Byte Y is the "Skip Lines" formatting command, Byte X will contain the number of lines that should be skipped. (I don't have a listing of the formatting codes right now, but I will soon)

A formatting record contains two bytes (X and Y) always. If Byte X and Byte Y both contain $FF, then this signifies the last record in the AWP file, and you can stop processing it. If Byte X is $00 and Byte Y contains $D0, then this signifies a blank text line on the display (a null text record). The byte following Byte Y would then be the start of a new record in the AWP file.

<u>The Text Record</u>

If Byte Y is anything other than $00, then the AWP file structure is invalid because $00 indicates the second record type within the file: the text record. In this case, Byte X contains the number of bytes to add to the third byte (Byte Z) which would point to the next record in the file.

Example:

```
      Record Header Bytes          - - String - -
     X       Y     Z      L
   [$07]  [$00]  [$05]  [$84]  ["T"] ["E"] ["S"] ["T"]
```

A text record contains four bytes: X and Y, and two other special bytes followed by a string of text that contains 79 characters or less (what ever can fit across the Apple's 80 column screen) The above record describes a one-liner within an AWP file:

```
Screen edge -->|     TEST
               ^^^^^
Five spaces ----'''''
```

Since Y=00, then this a text record. The byte at Z tells you how many space characters actually prefix the text string. This is space-efficient for text which has a wide indention at the beginning. A zero would indicate that the text in this record is flush left with no spaces before it. In the above example, there are five spaces to be shown before the word

"TEST".

The lower 7 bits of Byte L tells you how many characters are in this text record. The most significant bit is a flag which tells you if the record ends a paragraph (the person hit <cr> to terminate this record, though a <cr> is not part of the text string). If bit 7 is on, it's a paragraph end. If it's clear, this text is word-wrapped to the next record. If our example, there are four text bytes, which follow the end of a paragraph (L = $84).

After the fourth byte (L) comes the actual text. All characters are positive ASCII. If any character is less than $20, a control character, it is an "in-line" text formatting code. For example, ^B turns bold facing on until another ^B is hit, or until the end of a paragraph. ^L works the same way, and it signifies underlining. ^P tells you to print the current page number here. In AppleWorks, these characters are just shown in your document as a single caret.

Now, that Byte X of a text record is a count byte which tells you how many bytes of data are between Byte L and the next record in the AWP file. This makes it easy to traverse down through the document.

Sample

The following BASIC program will prompt you for an AppleWorks word processing file. It will BLOAD the first part of it into main memory between $2000 and $7000, and will then start to process it. It shows you where a printer format record is placed, and what the code number is. After a while, you might be able to guess which codes perform certain functions. This is not a serious program, but it does show you how to read the AppleWorks AWP file for decent printing, or routing the output elsewhere (to modem??). Don't try it with any AWP file which fully fills the $5000 byte buffer.

```
100 D$ =  CHR$ (4):P = 8192:E = 28672
110  DIM OP$(47): FOR I = 0 TO 46: READ OP$(I): NEXT
120  DIM IC$(11): FOR I = 1 TO 11: READ IC$(I): NEXT :IC$(0) =  CHR$ (29)
130  INPUT "AppleWorks AWP File: ";F$:L$ = "--------"
140  PRINT "Getting file: "F$: PRINT D$"BLOAD "F$",TAWP,B5,A"P",E"E
150  PRINT D$"PR#3": PRINT : HOME : PRINT "File: "F$
160  FOR I = P TO P + 79: PRINT  CHR$ ( PEEK (I));: NEXT : PRINT "="
170  POKE 34,2: VTAB 23: FOR I = 1 TO 10: PRINT L$;: NEXT
180  PRINT "(c) 1986 Morgan Davis";: VTAB 2: POKE 35,22:P = P + 295
190 :
200  PRINT
210  IF P = E THEN  PRINT "** END OF BUFFER **": END
220 LN = LN + 1:C = 0: GOSUB 310:X =  PEEK (P):Y =  PEEK (P + 1):P = P + 2
230  IF X = Y AND X = 255 THEN  POKE 34,0: POKE 35,24: VTAB 23: END
240  IF Y THEN I = Y - 208: ON  NOT I GOTO 290: PRINT L$OP$(I): GOTO 210
250  PRINT  SPC(  PEEK (P)):L =  PEEK (P + 1)
260  FOR P = P + 2 TO (L - 128 * (L > 128)) + (P - 1):C =  PEEK (P)
270  IF C < 32 THEN  GOSUB 310:C = 0
280  PRINT  CHR$ (C);: NEXT : NORMAL
290  PRINT  CHR$ (127 * (L > 127)): GOTO 210
300 :
310 CH =  PEEK (1403):CV =  PEEK (37): POKE 35,24: VTAB 23: PRINT
320  NORMAL : POKE 1403,42: PRINT "Line "LN"  "IC$(C);: CALL  - 868
330  IF C / 2 <  >  INT (C / 2) THEN  INVERSE
340  POKE 1403,CH: VTAB CV + 1: POKE 35,22: RETURN
350 :
360  DATA ""
370  DATA "209","210","211","212","213","214","215"
380  DATA "Platen Width","Left Margin","Right Margin"
390  DATA "Characters Per Inch","Proportional-1","Proportional-2"
400  DATA "Indent","Justify","Unjustify","Centered","Page Length"
410  DATA "Top Margin","Bottom Margin","Lines Per Inch"
420  DATA "Single Space","Double Space","Triple Space"
430  DATA "New Page","Group Begin","Group End"
440  DATA "Page Header","Page Footer","Skip Lines","Page Number"
450  DATA "Pause Each Page","Pause Here","Set a Marker"
460  DATA "243"
470  DATA "End of Page"
480  DATA "245"
490  DATA "End of Page (mid paragraph)"
500  DATA "247","248","249","250","251","252","253","254"
510 :
520  DATA "Boldface Begin","Boldface End"
530  DATA "Superscript Begin","Superscript End"
540  DATA "Subscript Begin","Subscript End"
550  DATA "Underline Begin","Underline End"
560  DATA "Print Page Number","Enter Keyboard"
570  DATA "Sticky Space"
```

[Elections of Management]

by Bernie Benson (our fearless leader)

The month of August brings with it the end of the financial year for your club and in accordance with the rules of the club all the members of the Management Committee are required to retire from office. The retirees are eligible upon nomination for re-election and I believe that this is necessary to maintain some form of continuity of purpose within the club.

As our responsibilities and other committments change it becomes obvious that we are not always in a position to continue serving on particular committees and it is also the reverse that we become available to make the committment.

It is also noted that a number of the present committee have indicated their inability to serve on the committee during the coming year and I would suggest that you consider your own position and your ability to fill one of the positions. The fact that someone has already been nominated or is standing for re-election should not deter you from accepting a nomination.

The following is a short summary of each of the positions of the management committee and you are reminded that each of the positions requires that the member attend the monthly open days and assist with the general running, administration and promotion of the club. It is also necessary for members to attend the meetings on the Monday evening following the open day.

President:
To act as Chairman for all meetings and as such the person should be fully aware of the rules of the group and also the rules of debate to be able to control situations which may arise. To foster a favourable climate for the growth of the club.

Vince Crosdale proposed for election.

Vice- President:
To act on behalf of any other officer in their absence and to organise demonstrations, workshops and special interest groups to maintain a sence of direction within the group.

John Finch proposed for election.

Secretary:
To record minutes of meetings and attend to all incoming and outgoing correspondence. To organise fund raising ventures to ensure a continued flow of funds.

Bob Godbehere standing for re-election.

Treasurer:
Maintain records to reflect the true financial position of the club and to exercise control over all income and expenditure of the club and to offer advise on the availability or otherwise of funds necessary for club persuits.

Bernie Benson proposed for election.

Registrar:
Maintain the club register of members and keep control over the acceptance of new applications and renewals. Monthly provision of mailing labels for the clubs newsletter. It is necessary that the member have the necessary computer equipment to fulfil these duties.

Graham Black standing for re-election.

Editor:
Organise the production of the groups publication to enable distribution to members within the time limits. Liaise with printers to ensure timely publication. Establish and maintain contact with outside sources to obtain suitable material.

Dale Rodgie standing for re-election.

Hardcopy Librarian:
Maintain the database of library books and their present whereabouts to ensure the security of the books. Display a selection of books at each meeting and generally endeavour to meet the requirements of members. Catalogue all new books and magazines and where appropriate write reviews for the newsletter.

Brett Dutton standing for re-election.

Software Librarian:
Maintain library of programs in a manner suitable for the safe keeping of the groups assets. Test programs and if suitable add to existing library. Update catalogue of programs to ensure easy access to members. Copy disks for members on open days and in satisfaction of orders between meetings. Write reviews where appropriate for the newsletter.

Position Vacant.

Cut Here- - - -

Apple-Q Inc.
The Brisbane Users Group

AUCTION FORM

Name ..... MBR # .....

List of items to Auction:

Item	Reserve Price
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.....	$.....
.....	$.....
.....	$.....
.....	$.....
.....	$.....
.....	$.....
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.....	$.....
.....	$.....

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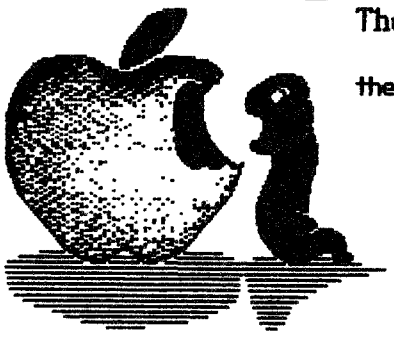

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