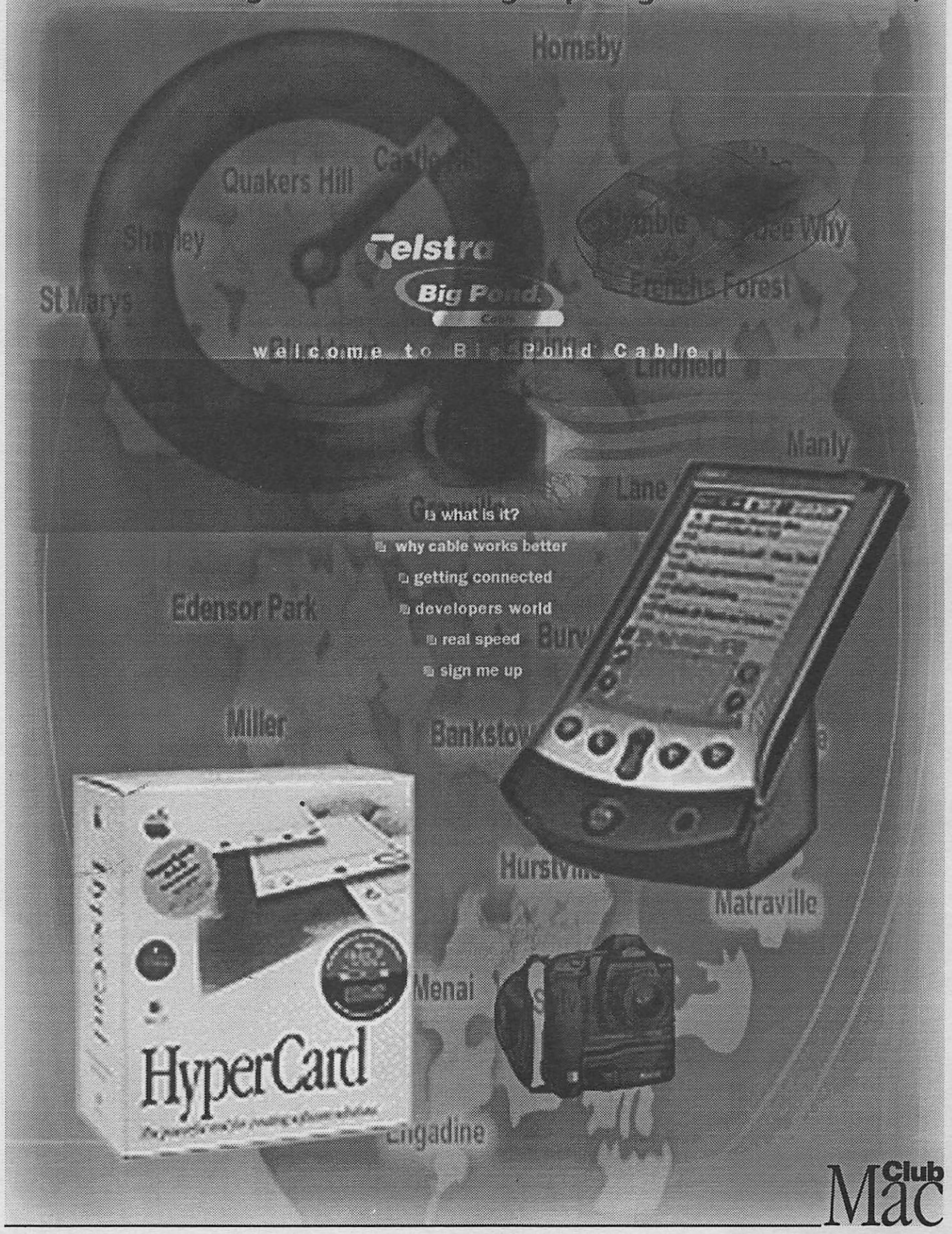
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May, 1999

# MACinations

Australia's leading Macintosh user group magazine

$3




Club Mac



# From the President

For many years I've kept my systems back on **Word 5.1a** and **Excel 4**. In part because the successive upgrades sucked resources - they were bigger and slower, stuffed with features I didn't want or use. At the back of my mind was the potential threat from worms and virus-like hacking attempts utilising the in-built programming language that came with later versions.

Dealing with the "Macro Virus" has been a daily problem for system administrators in the businesses that have adopted **Microsoft's** "productivity suites".

Recently I gave in and started to introduce **Word 98** and **Excel98**. Ever faster chips in **Apple's Power PCs** has overcome the resource sucking featuritis and some of the features are easy to get used to. I particularly like the simultaneous spell checking and grammar checking as I type in **Word 98**. As I write this the little red squiggles are picking up my typos and the green squiggles are indicating my less than perfect attempts at grammar.

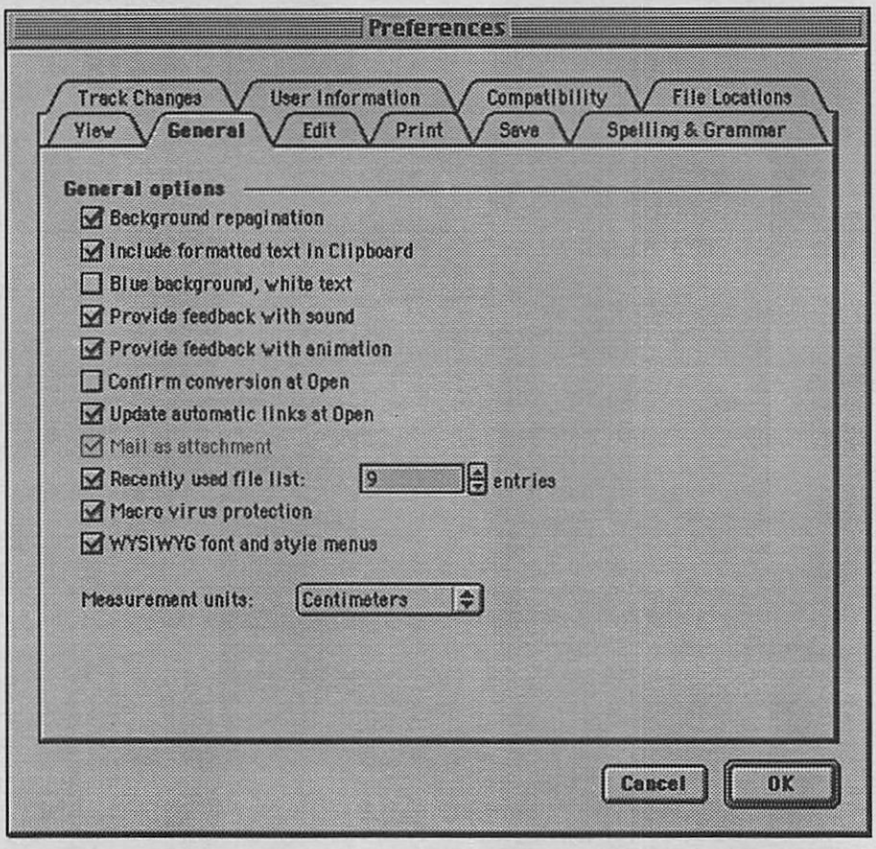
But the downside is still there. The recent outbreak of the **"Melissa"** virus which swept through the PC world choking e-mail servers and either bringing down whole networks or at least causing the administrators to stop or reduce some services while they dealt with the virus shows how costly a simple macro virus can be. Over 300 companies reported infections, and at least 100,000 PCs were affected according to early reports.

**Melissa** works its chaos when a user opens an infected **Word 8** or **Word 9** document, by sending an infected message to the first 50 e-mail addresses in a **Microsoft Outlook Exchange** address book. The e-mail, with the subject *"Important Message From {user's name}. "Here is the document that you asked for,"* reads, *"Don't show anyone else ;-)."* Even those who don't use **Outlook** will contract the virus— it also infiltrates the **Word** document template "Normal.dot", which is the default template for every new document the user creates. Thus the user unwittingly sends the virus to anyone receiving their **Word** documents.

Aside from overloading e-mail servers, **Melissa** is relatively benign. Unfortunately later virus writers won't show the same restraint. **Microsoft** enabled this whole fiasco by making the **Visual Basic** programming language an integral part of its **Office** suite, and putting totally inadequate security into the system. It's only going to get worse - apparently the next version will include the ability to directly execute HTML documents - so just opening a HTML document in **Word** in the future may execute some nasty code buried in the HTML - you won't even need to open an attachment to get infected.

Luckily for us, the **Macintosh** was largely unaffected this time as the inner workings of the virus involved altering particular files present on PCs, but not Macs. Having a Mac is your first line of defence, luckily most virus writers use PCs. In the last month I've received several e-mails with the **Happy99.exe** virus attached. It's not a problem on a Mac, but would be potentially nasty on a PC.

We shouldn't be complacent, a good virus checking program is vital if you receive documents from an external source (trusted and known to you, or otherwise). The virus checking authors were quickly on the case this time, and solutions were available within hours of **Melissa's** discovery. That doesn't help of course if you didn't know about it until too late




It really makes me want to revert to **Word 5.1a** that didn't have the addition of **Visual Basic** and its attendant worries.

If you use **Word98** on a Mac you should disable macros NOW: go to the menu option Tools | Preferences | General (tab), towards the bottom look for "Macro virus protection" and put a check in the box.

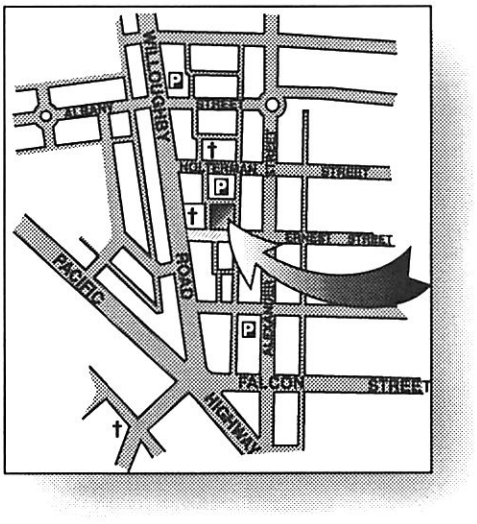
*Andrew Pavey, President*

# May's Club Mac Meeting Details

In May Club Mac meets in the **Johnson Hall** (Level 2) of the **Crows Nest Centre**, 2 Ernest Place, Crows Nest, from **6:30 pm to 9:00 pm** on the second **Wednesday** of the month, **May 12th** *(NOTE Back to our old room & time!)*. The venue is adjacent to the multi-level car park in Holterman Street and behind the Baptist Church in Willoughby Road.

Every month the meeting starts with a Q&A session and there are always nibblies and tea or coffee at the half-way break.This month **Richard Clarke** of Guardian Data will cover the history of the CDR (writeable CD) drives and where the technology is going, including DVD and mini disk technology

Please note that, because of booking difficulties, there will be some variation in the starting time and location of the July and August meetings during 1999. Watch for more details.




## Special Interest Groups (SIGs)

- **Q&A Forum**
  Meets in the Campbell Room, Level 2, Crows Nest Centre, 6:30 to 8:30pm, Thursdays, eight days after the regular Club Mac meeting.
- **Database SIG**
  **(largely** FileMaker Pro**)**
  Also meets in the Campbell Room, also 6:30 to 8:30pm, but on the 4th Wednesday of the month.
- **Omnis SIG**
  Meets at Unit 11/87 Reserve Rd, Artarmon, Sydney. Contact Reg Paling (telephone 9905 4405) or
  **www.spelean.com.au/OMNIS/meeting.html**
  for more information.

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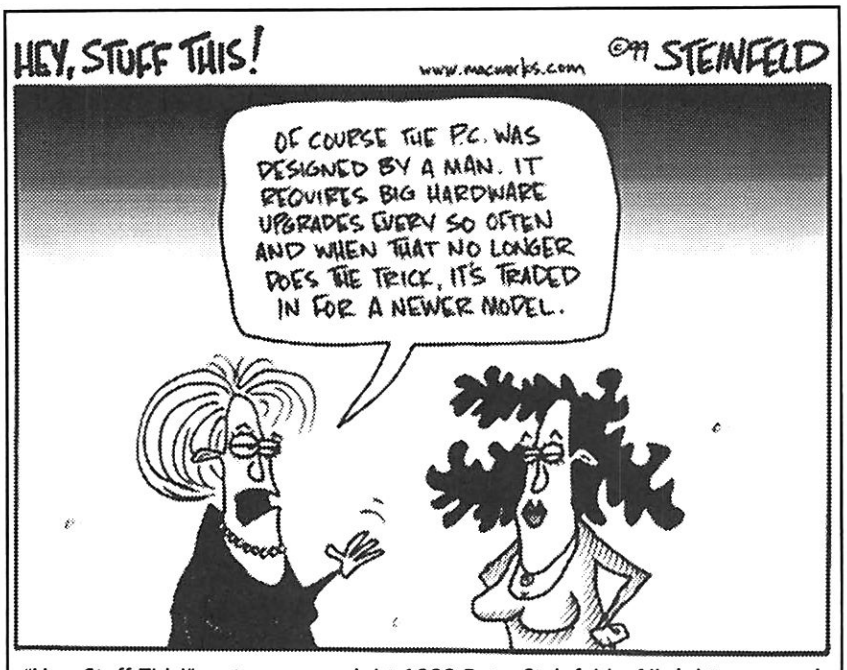
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Nine lines operating at up to 28,800 baud
**Fidonet Node:** 3:712/406
**Internet Domain:** @clubmac.org.au

# From the Editor

This month we have a report on the April meeting, articles on using HyperCard in the school environment, using cable modems in the real world, a few tips on using Navigator (& browsers generally) and how to build a RAID disk array. There is information on Palm™ Desktop 2.1 (available on the BBS), QuickTime 4 and recent Freeware & Update releases. Once again we have some articles from Mouse Tracks, the magazine of PMUG (Portland Macintosh Users Group). Plus regular columns.

By this time the ClubMac BBQ at Bicentennial Park will have happened, if you would like to write about it or send some photos, all contributions will be welcomed.

*Bruce Madden*




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(Elected by Club membership in accordance with Constitution)

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## Club Mac Help Desk

## (02) 9475 0448

This is both a voice and a Fax service but is unmanned. Please leave a message and someone will deal with your problem as soon as possible. You can also contact the Help Desk at **<help@clubmac.org.au>**. This service is free, but we are **all** volunteers. When you call or fax, give essential information: **Given name and surname; membership number; full STD number** and **brief details of the problem** or **what is required.** If you don't, you may never hear back from us!

Some individual members have agreed to be resource people for particular areas but please restrict your contact to 6:00–10:00pm on weekdays and 10:00am–10:00pm on weekends. **Membership ,BBS, Telefinder** – Darryl Chrisp (02) 9363 2198; **Networks, desktop publishing** – Rose Marshall (02) 4284 1342; **Networks** – Daniel Mitterdorfer (02) 9498 3945; **Databases** – Hilton Brown (02) 9929 7296.

Any difficulties should be reported to the Administrator at (02) 9363 2198.

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# April Meeting

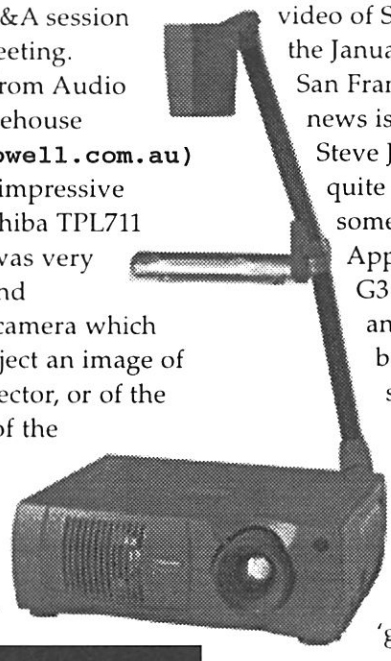




There was no Q&A session at the April meeting.

**Walter Smith** from Audio Visual Virtual Warehouse **(www.bellandhowell.com.au)**, demo'd the very impressive features of the Toshiba TPL711 Data Projector. It was very bright and clear, and includes a digital camera which can be used to project an image of a book on the projector, or of the audience or even of the presenter!

We then used another of the projector's features to show a video of Steve Jobs addressing the January MacWorld Expo in San Francisco. Although the news is getting a bit old the Steve Jobs presentation was quite impressive. We saw some recent and new Apple ads, the intro of the G3 Blue and White range and the Mac OS Server booting up 50 iMacs showing simultaneous video clips. There were also demos of Firewire and some speed comparisons with Intel 450MHz boxes, which the 'good guys' won!

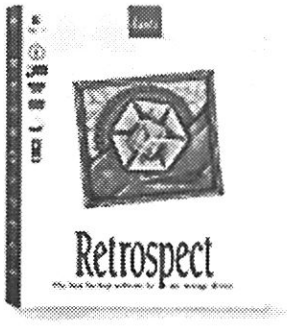


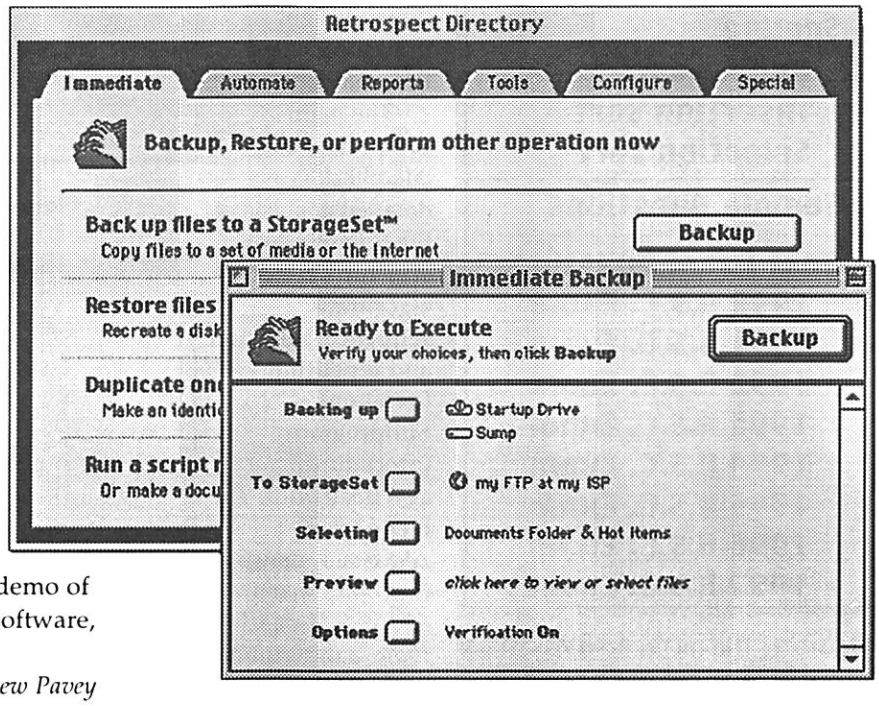
**The new Toshiba TLP-711 true XGA (1024 x 768) LCD projector** is designed to take your presentations to a higher level. Now you can make clear, high resolution presentations from your laptop computer or workstation, even in a fully lit room. This new Toshiba projector is substantially brighter and smaller than all competitive models.

This new model includes a new smoothing chip technology, which allows clear high resolution display from a workstation such as SUN or SGI with no distortion, even at 1280 x 1024 resolution.

Easy to use features such as a wireless remote control, with PC mouse control, and built-in laser pointer in the remote, and quick release legs for easy and fast set-up have all been built-in for your convenience and ease of use.






After the break, **Daniel Hanna** did a demo of *Retrospect v4.1*, the premium backup software, and we discussed backup strategies.

*Andrew Pavey*

# Using HyperCard In Teaching

*A number of articles in MACinations over the past few months prompted me to write this article. The November 1998 MACinations looked at the issue of why we should still be using HyperCard while the December 1998 issue noted the high percentage of Club Mac members who are teachers. In this article, I show how I've used HyperCard to create educational software of use to both teachers and students. © 1999 Frank Bugeja*

StackMenu

- Information
- Algorithms
  - Top-down design
  - Pseudocode
  - Flowcharts
- Sequence
- Selection
  - If - then
  - If - then - else
  - If - then - else if
  - Case - endcase
- Repetition
  - While - endwhile
  - Repeat - Until
- Subprograms
- Arrays
- Searching
  - Linear search
  - Binary search
- Sorting
  - Bubble sort
  - Insertion sort
  - Selection sort
- Sample Questions
- Past Exam Questions
  - 1990 H.S.C. Exam
  - 1991 H.S.C. Exam
  - 1992 H.S.C. Exam
  - 1993 H.S.C. Exam
  - 1994 H.S.C. Exam
  - 1995 H.S.C. Exam
  - 1996 H.S.C. Exam
  - 1997 H.S.C. Exam

**Figure 1:** The menu from AlgoStack

If you are a senior computing studies teacher, you are well aware that the teaching of algorithms is part of all senior computer studies courses in New South Wales, more so in the 2/3 Unit Common and 3 Unit courses. Teachers find the teaching of this topic somewhat difficult and there is, as well, little resource material around.

In 1992, I began writing a software solution to this problem and since the first release of the resulting program, it has been extended and updated on an annual basis. The standalone program, called AlgoStack, was created in HyperCard but does not require HyperCard to run.

The structure of AlgoStack is seen in the menu taken from the program *(figure 1)*.

The introductory component of AlgoStack is definition of terms: algorithms, top-down design, pseudocode and flowcharts.

The main component of AlgoStack is a detailed analysis of the three control structures used in algorithms: **sequence, selection** and **repetition** (iteration). **Subprograms** (procedures) are also dealt with. The menu from AlgoStack shows the topics that are covered. For each topic, a description of that control structure is given, using flowcharts and pseudocode; and examples are given to illustrate each control structure. Again, for each control structure, questions are given for students to answer for which the flowchart and pseudocode solution is given and, where applicable, a Pascal program solution is provided. The Pascal program can be copied from AlgoStack and pasted into a Pascal program. The questions asked range from relatively easily, such as "Enter a number and state whether the number is positive, negative or zero" (if-then-else if); to difficult, such as "Write a program where the user tries to guess a number (between 1 and 100) generated by the computer. While

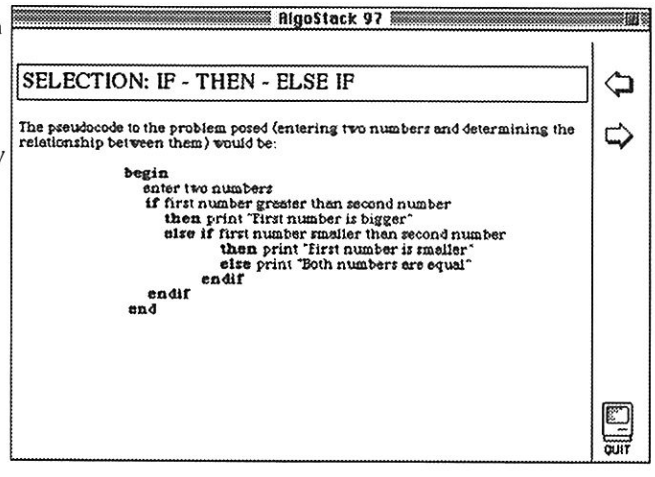
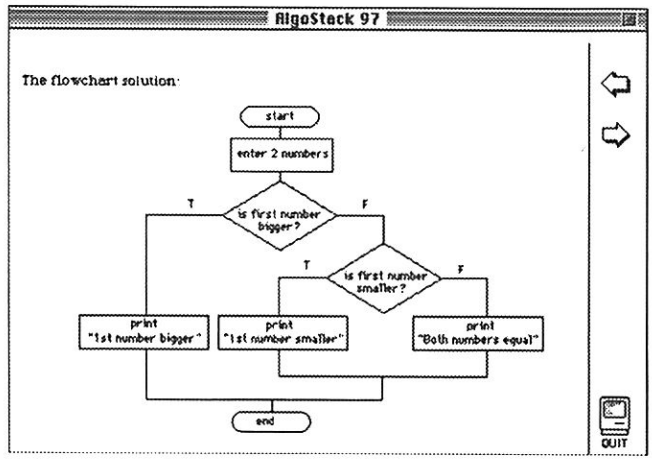



**Figure 2:** Above & **Figure 3:** Below



the user's guess is incorrect, an error message ("Number is higher" or "Number is lower") is printed and the user is asked to re-enter a number. The loop is terminated when the player correctly guesses the number generated by the computer" (while-endwhile).

The diagrams *(Figures 2&3)* are taken from Selection: if-then-else if and show the basic structure of topics in this section.

**Arrays** are studied in the 2 and 3 Unit courses; and a section on arrays has been included in AlgoStack. Arrays are defined and reasons given for their use. A number of sample arrays are given, as shown in the following example *(Figure 4)*, which is based on displaying the maximum and minimum value from an array of ten entered numbers. A Pascal program is included for this problem.

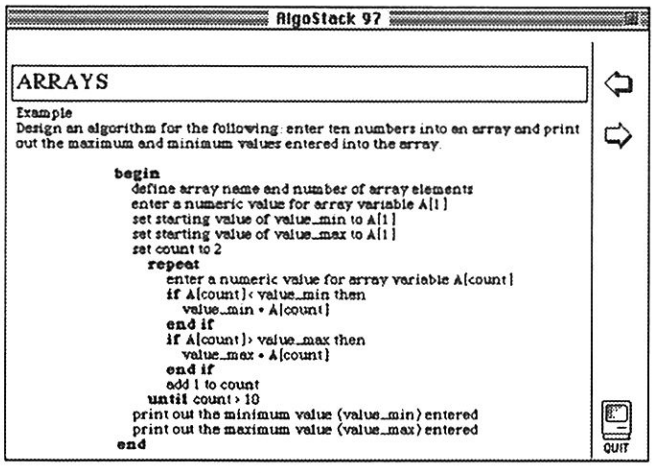



**Figure 4:** Arrays

In response to a request from one teacher, a new section was been added to AlgoStack in 1997, of relevance to students doing the 2/3 Unit Common Course: **searching** and **sorting**. There are no questions for students to answer in this section (except one question in bubble sorting) as the aim is to provide information on the searching and sorting techniques studied. As such, the sections on searching and sorting have been made as detailed as possible. The following two cards *(Figures*

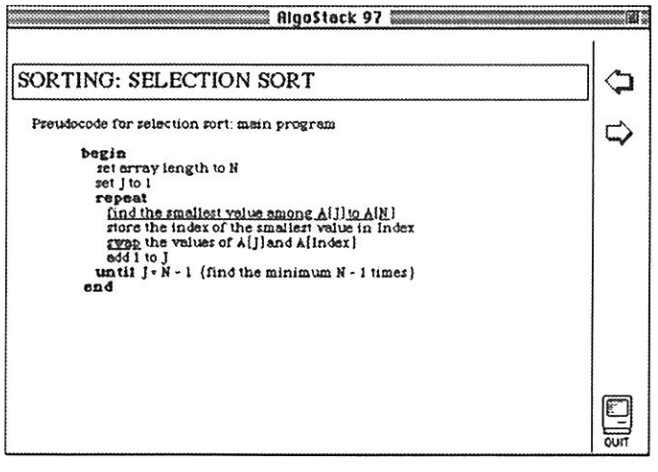



**Figure 5**

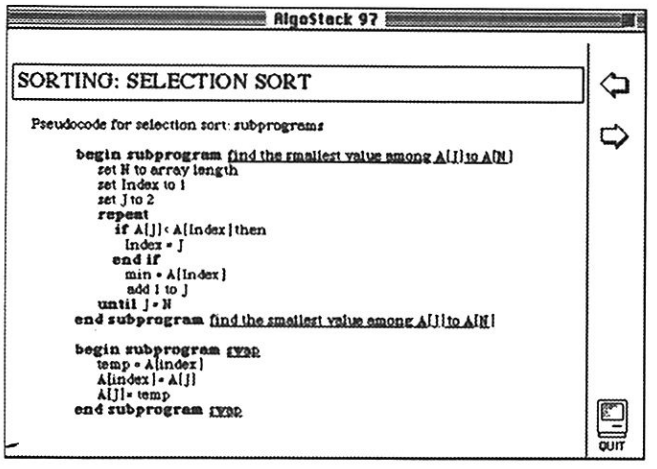



**Figure 6**

*5&6)* are taken from the selection sort topic:

A **Sample Questions** section is also included. One sample question and its pseudocode solution are given below *(Figures 7&8)*. Questions section consist of a number of problems for students to answer. These start off as very simple problems but become progressively more complex. Flowchart and pseudocode solutions are included.

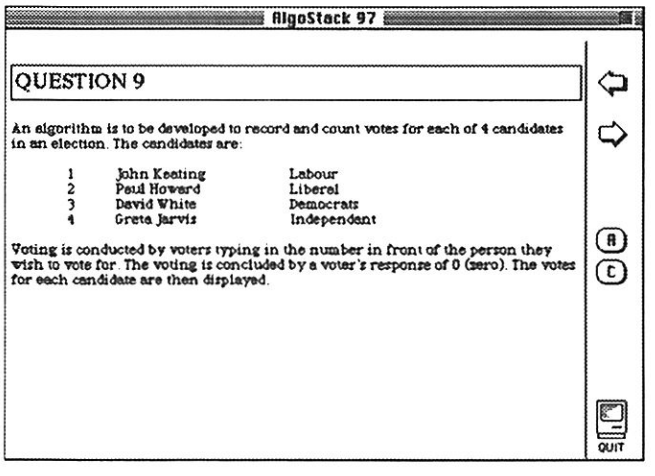



**Figure 7**

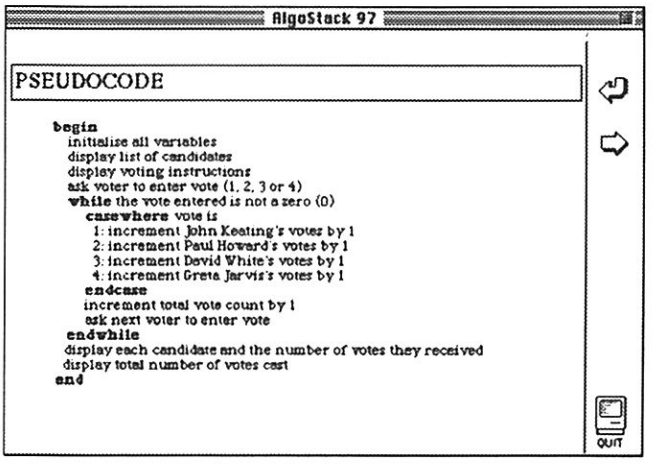



**Figure 8**

Ever since the 2 Unit Common Course HSC Paper was introduced in 1990, there has been a compulsory algorithm question. This section from AlgoStack covers the compulsory algorithm question from all HSC exams since 1990. The samples below are taken from the 1997 HSC 2/3 Common Paper. The question in this paper was a two-part question. The first part concerned the creation of an algorithm to turn on an automatic watering system between 9 pm and 4am; and the second part concerned the turning on of the same automatic watering system between the same hours but only if the soil moisture level was less than 40%. The next two cards show the pseudocode and flowchart solutions to the second part of the question. Where possible, Pascal programs have been included; and are found for questions from the 1990, 1992, 1993, 1994 and 1996 HSC exam papers.

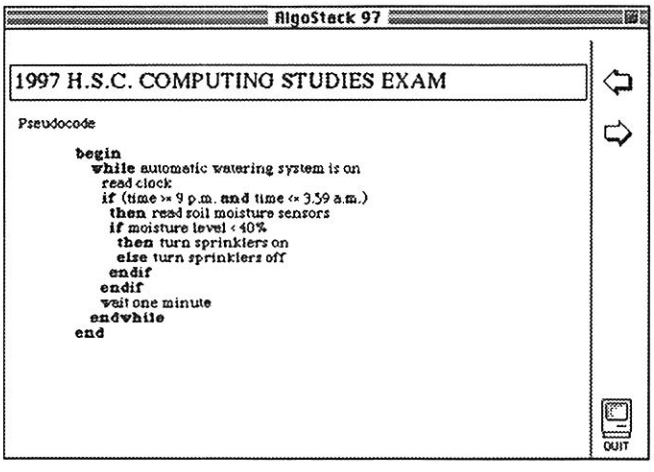
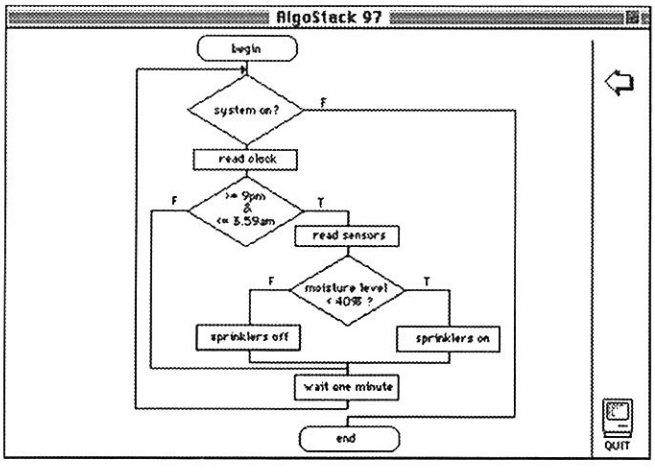



**Figure 9:** Above & **Figure 10:** Below




Previous to writing AlgoStack, I wrote **PascalStack**. The Pascal programming language was used as the coding language in AlgoStack because of its similarity to pseudocode. The ability to code an algorithm is important as it provides verification of a student's own algorithm: a coded program allows students to see if their algorithm works. This is very noticeable if students are able to code the voting problem previously referred to. Topics found in PascalStack include:

- Pascal program structure
- simple Pascal programs
- input in Pascal programs
- decisions in Pascal (if-then, if-then-else, if-then-else if, case)
- repetition (while-endwhile, repeat-until, for-do)
- procedures and functions
- arrays
- counters and counting
- generating random numbers
- screen formatting
- sets
- errors in Pascal

AlgoStack is updated on an annual basis to include the algorithm question from the 2/3 Unit Common Paper). The latest issue does contain the question from the 1998 Computing Studies HSC. As previously stated, there were major additions in 1997: the section on arrays was extended and two new sections were included: searching and sorting. However, during the 1998-1999 Christmas holidays, AlgoStack had a major overhaul. These included:

- card resizing. AlgoStack began its life on a Macintosh Plus, when screen size was only 9 inches. AlgoStack was re-written for 13 inch screens. A card in AlgoStack is now the size of my PowerMac 5500 ("Black Mac") screen.
- Nassi - Schneiderman diagrams are now included to show a third algorithm method. Even though students cannot use Nassi - Schneiderman diagrams to answer questions asked in the H.S.C., syllabus documents recommend that students have exposure to coding methods other than pseudocode and flowcharts. A sample card showing Nassi - Schneiderman diagrams is given below.

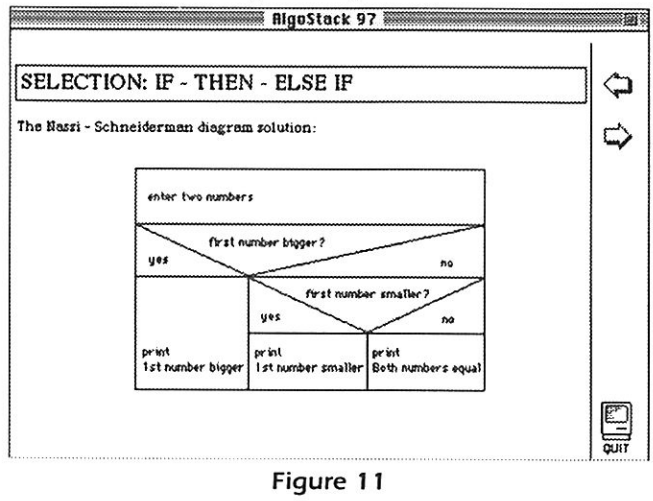



**Figure 11**

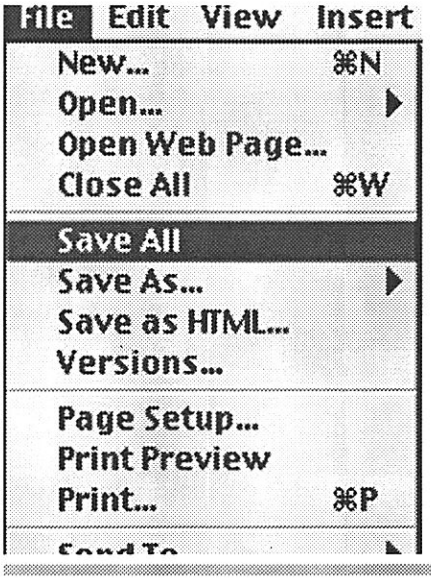
- The Sample Questions section has been increased from 10 to 20 questions.

I am pleased with the current state of AlgoStack and it will be put to good use among our senior computing studies students at Mount Carmel High School (Varroville) this year. HyperCard has made the AlgoStack project easy to create and very easy to modify. Feel free to contact me on fbugeja@mania.com.au to find out how the program can be used by teachers and students. ■

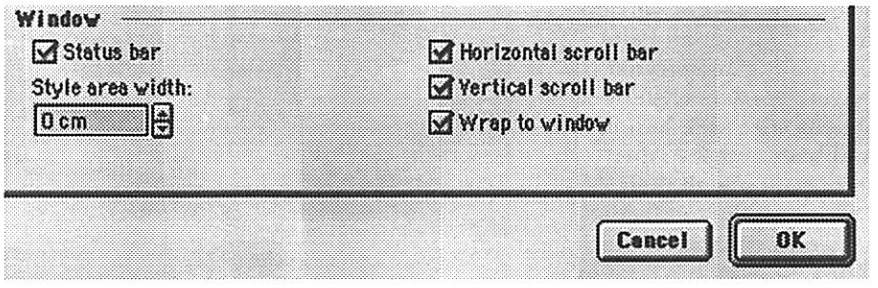
# Tips and Tricks #1

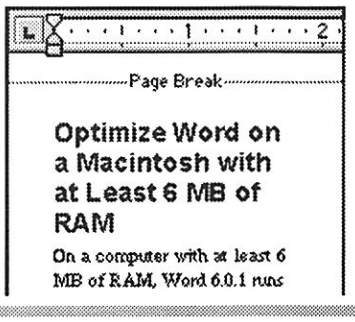
## Microsoft Word98

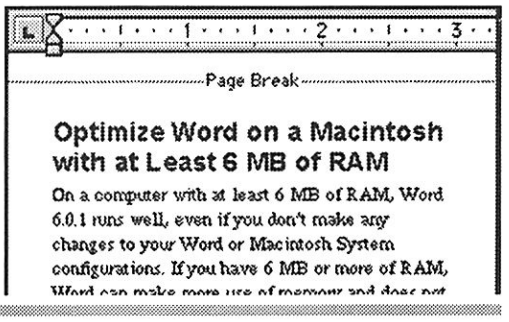
To close all the open windows in Microsoft Word 98 and Excel 98 just hold down the **Shift** key and select '**Close All**' from the **File** menu. Holding down the **Shift** key also changes '**Save**' to '**Save All**' in the **File** menu.




To compare the contents of two documents side by side in Word you need to set a preference so the text wraps within the window, rather than displaying the normal length lines. From the **Tools** menu, select **Options** and then the **View** tab and then click the '**Wrap to Window**' checkbox. This only affects the screen display. - if you subsequently print your documents they'll print as normal sized pages. *(more tips P. 23)*





# Computers Cheap

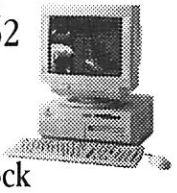
Unit 2, 58 King Street Annerley.4103

e-mail: G.Orme@fox.uq.net.au



Phone: 0411 510462

Greg Orme



Some items now in stock

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PCI DOS cards $120 each

Centris 610 with 14" monitor $180 each

LC475 with 14" monitor $270 each

420Mb HD SCSI double height $110 each

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Do you need help with:

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- purchasing software or hardware
- connecting to the Internet
- setting up an internal network or
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# Palm MacPac Version 2

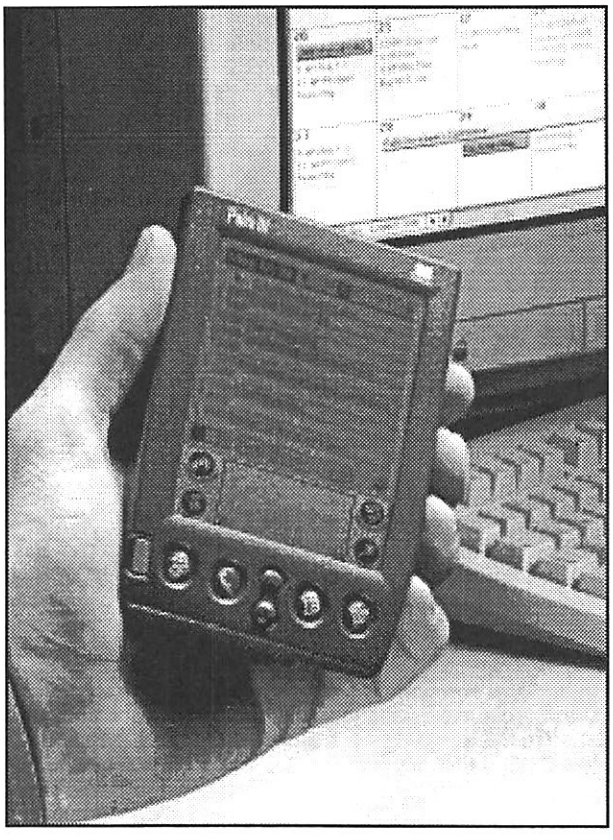
*Palm™ MacPac version 2 is available for free on the BBS, it can be used as a replacement for ClarisOrganizer (you don't need a Palm Organizer) here are a few answers to questions you may be asking while deciding whether try it out. Visit* **www.palm.com.au** *for more information.*

## Palm MacPac Version 2: Frequently Asked Questions

***What is the Palm™ MacPac version 2?***
The Palm MacPac version 2 is the solution for all Palm Computing® connected organizer users wishing to synchronise their handheld and have access to their information with their Macintosh. Palm MacPac version 2 consists of the Palm™ Desktop 2.1, Palm's new desktop PIM (personal information management) package based on the award-winning Claris Organizer 2.0version 2 software, new HotSync® software, and a standard serial port adapter.

***What are the new features of the Palm MacPac version 2?***
New features introduced with the Palm MacPac version 2 include:

- Fast and powerful desktop Personal Information Management (PIM) software
- Native HotSync software developed specifically for the Macintosh
- Memory efficiency: all Palm MacPac software runs in less than 6MB
- Uses familiar Macintosh user interface
- Supports drag-and-drop installation of handheld applications and files
- Supports drag-and-drop installation of third-party synchronisation conduits
- Allows links between application data (e.g. "Lunch w/ David" event can easily link to David's contact info.)
- AppleScript support
- Customisable list views for contacts, notes and tasks
- Powerful printing options, including support for colour printing
- Synchronisation support for additional fields in Palm Desktop including a secondary address, birthday, and website fields.



***What are the system requirements for the new Palm MacPac?***
Customers wishing to use the Palm MacPac version 2 must have the following:

- PowerPC-based Macintosh (including Apple iMac and G3 computers)
- Standard serial port (computers with USB ports must have a third-party USB-to-serial adapter)
- 20MB free hard drive space
- 6MB free RAM

***Will the Palm MacPac version 2 allow me to synchronise with any Palm™ connected organizer?***
Yes. The Palm MacPac will allow you to synchronise your Macintosh to all Palm Computing handhelds, including the Palm V™, Palm III™ series, PalmPilot™ series and Pilot series connected organizers.

***Will the Palm MacPac version 2 work with handhelds from IBM (WorkPad), Symbol, and Franklin-Covey?***
The Palm MacPac version 2 will synchronise data with all Palm Computing platform handhelds that use the same handheld applications (AddressBook, DateBook, ToDo, Memo) as Palm Computing connected organizers from 3Com®.

***I need to use my Palm handheld with my USB-equipped iMac/G3. How do I do this?***
Customers wishing to use their Palm® handheld with a USB-equipped Macintosh need to purchase a third-party USB serial adapter.

***Will the Palm MacPac work with Apple's new G3-based Macintosh systems?***
The new Palm MacPac will run on any Apple Macintosh or compatible PowerPC-based computers, including the new G3 systems.

***Will the Palm MacPac version 2 work with a 68000-based (non-PowerPC) Macintosh?***
The new Palm MacPac version 2 will only support PowerPC-based systems, however the new HotSync Manager does support both "68K" and PowerPC processors. This will allow third-party developers to provide a solution for older Macintosh systems.

***What is the difference between Palm™ Desktop software for Macintosh and for Windows?***
The Palm Desktop v2.1 software is a very different product than the Palm Desktop v3.0 software for Windows. Both provide similar overall functionality, but are based on two very different products. As such, there are some features that are unique to each platform:

***Can Macintosh users use the same handheld applications that Windows users can use?***

Yes. Both Macintosh and Windows users can use applications written for Palm Computing platform handhelds. Many archive files available on the web that are compressed using the "ZIP" format can be decompressed on any Macintosh using Stuffit Expander, a shareware utility readily available on the World Wide Web. There are some applications that do require Windows desktop components, and if similar Mac OS components are not available, these applications will not function properly. Make sure to read the README file associated with any application you wish to use with your Palm Computing organizer.

***Will the new Palm MacPac support e-mail functionality?***
Yes. The Palm MacPac includes a basic third-party e-mail solution by Actual Software that will allow users to synchronise their mail between Palm Mail and QUALCOMM's Eudora e-mail product (Lite and Pro). Actual Software can be contacted for more details at www.actualsoft.com. Please note that Palm Computing does not provide support for this third-party software.

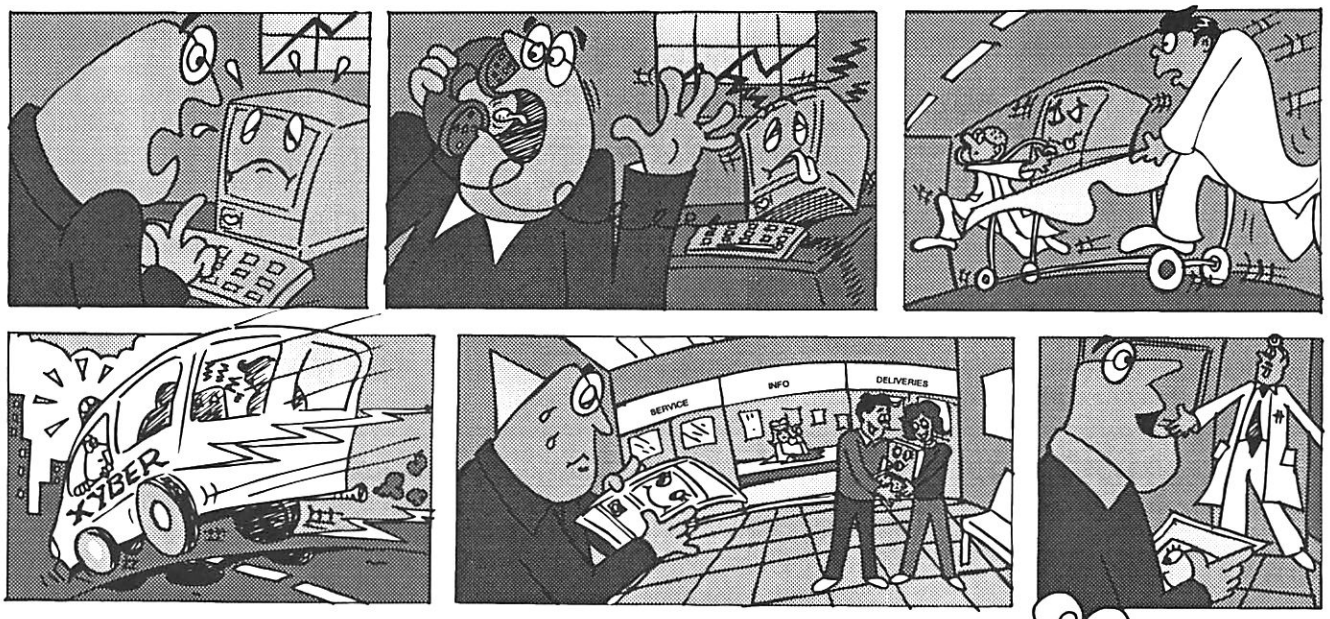


***Will the new Palm MacPac version 2 support the Expense application?***
Yes. Palm has included both the basic (free) and advanced ($US5/user upgrade fee) versions of Shana Corporation's new Palm Expense Creator solution. Shana Corporation can be contacted for more details at **www.shana.com.** Please note that Palm Computing does not provide support for this third-party software.

***Can I synchronise with both a Macintosh and a PC?***
Yes. All Palm Computing platform handhelds support cross-platform data synchronisation between multiple computers, including two (or more) Macintosh systems, two or more Windows systems as well as between a PC and a Macintosh.

***Can I remotely synchronise my Palm Computing® platform handheld with my Macintosh?***
The HotSync Manager software in the new Palm MacPac version 2 allows you to perform HotSync operations via a modem (optional; sold separately) with your remote Macintosh.

***Will Network HotSync® software be supported with the new Palm MacPac version 2?***
No. The Network HotSync feature is limited to the Windows version of Palm Desktop v3.0.x. However, Macintosh users can synchronise with their dedicated, remote Macintosh by performing a modem HotSync operation (requires two modems sold separately: one for the Palm handheld, such as the Palm Modem® peripheral, and one for the desktop Macintosh.)


**We'll "Fix it Better".**
Remember when you were a child? When you hurt yourself, you ran to your mum and she "kissed it better". Well, there must have been some magic in that kiss because it actually made you feel better.

The magic was love and care. The knowledge that your mum would always look after you. Well, at Xyber we have a thing about Macs. We love caring for them. So when your mac hurts and has a sad face, send him to us. He'll love you for it.



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# Winds of Change

## HARDWARE AND MORE

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## *It's dead Jim!*

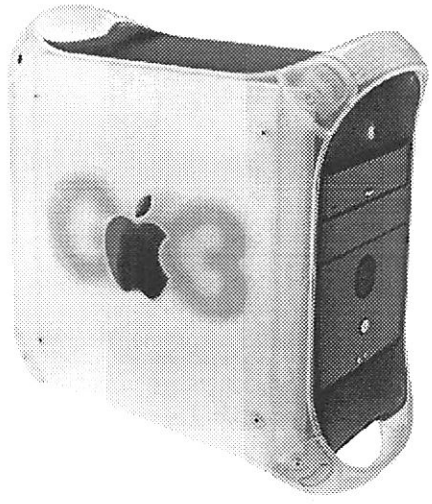
My computer just froze, and then would not reboot. The new Blue & White G3 went down in the middle of a game of Short Circuit .

At first I thought it had confused the PRAM (that's the RAM, protected by your battery when you shut down your machine, that stores the time, date, and printer settings.) However, I was sadly mistaken. I opened up the machine and pressed the reset button to clear the PRAM; still nothing.

As I tell my customers, "when you're trying to troubleshoot a problem, return your machine back to factory specifications and disconnect all non-factory external/internal devices." For me that meant removing the extra video card, 10-GIG hard drive, 64 meg of RAM and the USB Zip drive and hub.

Tried to restart and still no chime. The next step was to reseat the video card and to see if the machine would start up with the hard drive disconnected and the CD-ROM in. Surprise! — the CD-ROM tray would not even open when the button was pressed.

Being a consultant does not mean you know everything, so it was time to let the Apple service people have a whack at it. After all that's what warranties are for. I took it into Prewitt Consulting, told my sad story and left my new Blue & White



G3. Got a call to come pick it up the next day. Patrick (Prewitt's tech) said he had to reseat the processor — the only thing I had not tried (and something I had not thought could come loose). It's back home now with everything reinstalled and working perfectly.

Computers are a good thing in most of our lives, but they can be the biggest pain that you ever didn't want. Most folks go happily through life with their computers working on this and that: checking e-mail, balancing the cheque book, writing that story that's going to be the next best seller. Then real life comes along and gets in the way.

One day you sit down at the computer and hit the power key and get a flashing floppy with a question mark in it. This means that your computer cannot find a valid System folder and possibly can't find a hard drive. At this stage you have to think about what kind of backup you have done.

Most of the time if your hard drive is going to die there is no warning, it just does it. In about 50 percent of the cases most of your data can be recovered easily. In the other 50 percent we bury the thing in the back yard. In the last four months I have lost two 4-GIG hard drives. The first one to die gave no notice; it just screamed to a halt one night and no recovery was possible. I took it apart and one of the read/write heads had smashed into the platter, creating a large groove in the disk.

This kind of crash is impossible to recover from by the average person. If you have thousands of dollars to spare you can send it into one of the specialised companies that take your drive apart in a cleanroom and hand position new heads to read the data that is left.

To avoid this expense, back up your data and place that backup in a safe place. Never leave your backup sitting next to your computer. In case of fire or theft, the last thing you want is to lose both at the same time. By the way, I recovered the data from the second drive and it's waiting to be used as a sample at a future PMUG hard-drive class.

*By Charles DeVore.*

## Hints and Tips

*From PMUG'S BBS, The Electric Sheep*
*Compiled by Wendy Gleason*

### Too Many System Folders

**Q.** When I run Norton Disk Doc 4.01 it finds major problems because it says I have too many system folders. I do have a System Extensions (Disabled) folder in my system folder as well as a system folder in my disk tools folder and one with fonts in a greeting card application. Do I ignore this or what?

*Jill Khovy*

**A.** If you have system folders IN ADDITION to your 'real' System Folder, then YOU MUST get rid of them, PRONTO! You will eventually come to major grief if you have more than ONE system Folder on a Partition (or ANY Volume). In other words, if you don't have any partitions on your hard drive, you should only have ONE System Folder. And only ONE System Folder in any one Partition.

*Tom Jones*

### E-mail with HTML

**Q.** E-mail that I receive from several correspondents has an attachment called: body.htm. When downloaded and read, it is a lot of computer language, plus the exact same text as was contained in the e-mail. This doubles the size of the message received. Is there an explanation?

*Judy Goldmann*

**A.** It means that some folks have set up their e-mail program to send both HTML and text files; they need to turn off the HTML under their preferences.

*Charles DeVore*

# Special offers and discounts for members

This is the regular monthly reminder that Club Mac has negotiated advertising deals for all of its members with a number of advertisers.

Each of the advertisers listed below now offers special discounts to Club Mac members. Details are given in each advertisement. You will also find these advertisers listed on Club Mac's Web site at <http://www.clubmac.org.au> and, where appropriate, there will be a link to their own site. Please support these advertisers with your own orders for hardware, software and peripherals – after all, they support your Club!

If you are a business person whose business involves Macintosh-related goods or services and would like to join in this scheme, contact the Club's Marketing Officer at GPO Box 4523, Sydney, 2001 or by e-mail at <administrator@clubmac.org.au> for more details.

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# Speed Thrills – Cable Modems

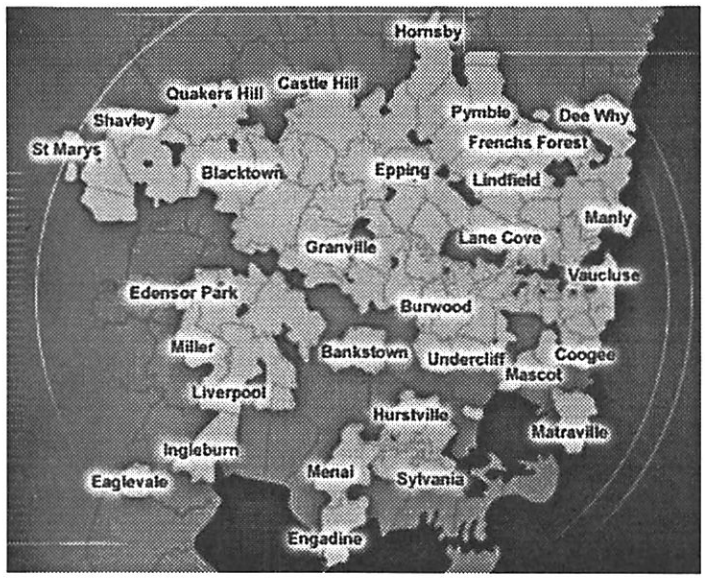
## Cable Networks and Modems

Cable Networks began in the USA over thirty years ago to provide TV access to locations that had difficulty in receiving TV signals transmitted by normal transmission towers.

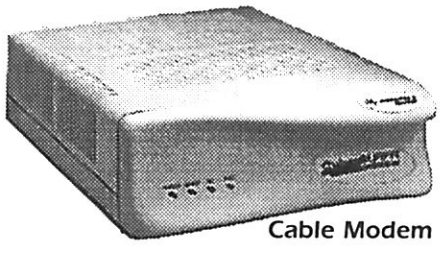
Cable Networks in the USA often use fibre-optic cabling directly into your home or office. In Australia Telstra uses fibre-optic cable for part of the network but the cable in your street uses co-axial cabling which, although superior to 'copper wire' telephone cabling, does not provide the same throughput as fibre-optic cable.

Cable networks were initially designed to deliver TV signals to subscribers and are not optimised to receive data from subscribers, so the data rate at which signals are sent from your computer is considerably slower than they are received. The Telstra cable system carries digital signals as well as analogue video signals (ie cable TV) at up to 30 Mbit/s transmitted over a 6 Mhz channel to groups of subscribers and at 768 Kbit/s over a 600 KHz channel back from the same group of subscribers. Note the "groups" in that sentence! Basically you are sharing access with your neighbours. Motorola, who make the cable modem, suggest an upper limit of 10 Mbit/s for an individual user, and Telstra's figures (see table below) suggest that a more practical speed is 4 Mbit/s for individual downloads.

In practice the difference in upload and download rates is not noticeable as the upstream rate is much higher than you'd get with an analogue modem anyway and your main upload of data is probably going to be requests for web pages. The difference is, however, used as an excuse for Telstra to not provide fixed IP addresses. Instead, IP addresses of cable subscribers may change at any time as they are dynamically assigned by the system, so you cannot practically use your own computer as a webserver.




You connect to the Telstra cable using a device called a 'cable modem'. It is not actually a "modem" per se, rather a digital converter, but the common name is "modem" because it performs a similar function to an analogue modem. Telstra says *"the Cable Modem includes a Radio Frequency tuner to find the right channel in the*



Cable Modem

*80 channel broadband cable network, and, to convert that channel into digital information, an Ethernet bridge functionality which has the potential to allow more than one computer at each household to connect to the Cable Modem, and network management functionality which allows faults to be quickly identified and fixed.".*

Access to the internet via cable modem is potentially available to more than 2 million homes in Australia following the huge rollout by Telstra in the last few years. Telstra doesn't divulge its cable modem subscriber numbers but I've read speculation that it's only about 7000 at the moment. Telstra provides a simple search on it's web page to check if your suburb is covered **<http://bigpond.com/cable/Cable.Asp?ContentID=10>**. This is only the beginning, as some suburbs are only partly cabled. See map for Sydney coverage.

Demonstrations are available in Dick Smith stores at 37 George St, Parramatta, 125 York St, Sydney, and at Harris Technology, 275 Alfred St, North Sydney.

## Installation

Telstra's contractors will install a co-axial cable from the ugly cables hanging on your telephone pole (or in some places from the underground equivalent) to a junction box in your home or office. Then they lay co-axial cable to whatever outlet points you select. Your computer internet access and Foxtel cable TV service, if you have it installed, will all be routed through this co-axial cable. The cable TV and internet access use identical wall outlets, so you can move your computer to where your TV is and still plug the cable modem in. Obviously you can't use both at the same time from the same outlet. The set top box for cable TV selects the analogue signal transmitted over the cable and outputs it to your TV, whereas the cable modem selects the digital data and outputs it to the ethernet port on your computer, but all the signals travel over the same cable.

A cable modem works in a similar manner to a standard modem in that it takes a signal

from the computer and converts it for transmission over the cable network, and vice-versa. There are two major differences between a cable modem and other modem/ISDN devices. The first is that a cable modem attaches to your computer through the Ethernet port, if you have a fairly recent Mac, or an Ethernet Network Interface Card (which you may need to buy and install if you have an older Mac). The second and more significant difference is that the bandwidth available to cable modems is far in excess of that of a dial-up modem or ISDN.

If you want more than one computer to access the cable at the same time, you can pay for more than one account and get the benefit of separate e-mail addresses (at $10 per user per month). Alternatively, you can share your account by connecting the cable modem to the uplink port on your ethernet hub and by using either Vicom Soft Router Plus or IPNetRouter software, you can effectively make the one account available on all the computers on the network. This is quite convenient for web browsing, but there are some practical difficulties in how you setup your e-mail software so it all works correctly. This will be the subject of a future article!

## Speed

The real-world speed of a Cable Modem is probably more than 60 times that of a 33.6k modem, about 30 times that of a one of the new 56k modems and about 15 times that of a two channel 128k ISDN connection.

Telstra quotes the following speeds on their web page.

**Download Speed**

| File Size | 28.8k | 56k | 64k | Cable |
|---|---|---|---|---|
| 150kB | 42sec | 21sec | 19sec | 0.42sec |
| 8Mb | 42min | 18min | 17min | 22sec |
| 32Mb | 2hr:28 | 1hr:16 | 1hr:6 | 1min:28 |

Just because the cable network is working at Ethernet speeds doesn't mean you won't suffer the same problems of Internet performance as any other Internet

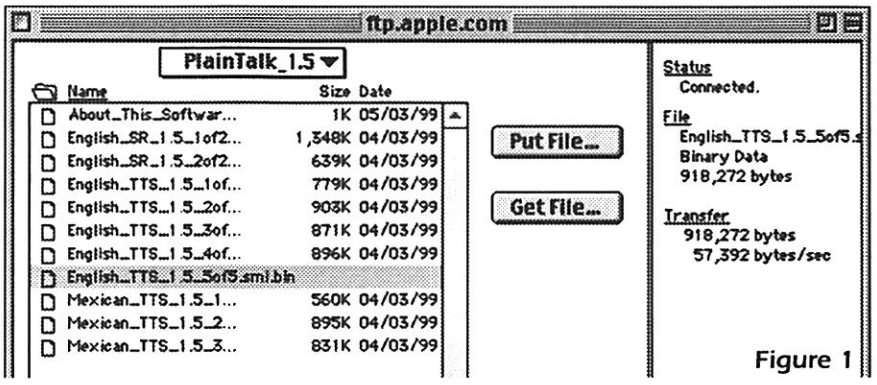


Figure 1

Service Provider (ISP). Although performance to services on the cable network itself can be amazingly fast, access to 'the outside world' will be slowed down by the performance of other connections along the way, and the speed of the host computer you are connecting to, which may have hundreds or thousands of other users connected to it, or it could even be connected to the Internet itself over a slow connection like a dial-up modem at 33.6k!

*Figure 1* shows a typical Fetch session, downloading from Apple's site in the USA. 57kb/sec is pretty fast! If the file you want to download is already in the Telstra proxy server's cache, download speeds can be very high, a fact exploited by the salesmen doing the demos at Dick Smith. To check the real world speed ask them to download a file you've already downloaded on an analogue modem, something unlikely to be popular and hence in the Telstra cache.

## Cost

Cost comparisons with other services are difficult, because each has different characteristics. A cable account is a permanent connection, so should it be compared with a permanent connection on other services or a dial on demand connection?

For a heavy home user or a small business working from home, a cable account is hard to beat, since the installation cost of $29.95 is obviously heavily subsidised. For a business use in a commercial building, or even in a block of flats, the costs become higher, because Telstra wants $6000.00 to "backbone" the entire building (although this cost can potentially be shared amongst the tenants). Likewise if you are a heavy user of e-mail, a cable account is better since e-mail transmission is free (there is a 10MB file attachment limit though!).

If you are prepared to put up with the slow download speeds, and are a sufficiently savvy user to be able to configure your own firewall and domain Name Server, then the Big Pond Direct modem account with $500 setup fee and $0.19/MB downloaded. is similar in annual cost.

The table *on page 16* is based on published prices. I haven't "shopped around" for the lowest possible ISP charges, but have used a service I'm familiar with for the dial-up charges.

I've assumed 90MB of web page and file download traffic (since a cable account charges for both up and download), and 10MB of e-mail traffic in a month. For the dial-up service I've assumed 4 calls per day to simulate the equivalent of a permanent connection *(Comcen has a 4 hour limit on call length)*.

All file uploads and downloads are metered and are counted against your "free" allowance, *(except e-mail at the moment)*, so it is important to set the proxy settings in your browser correctly. When first connecting you get the option of downloading a pre-configured copy of Internet Explorer. I declined this because it was an older version than I already had installed. There is one important difference between Internet

**Cable/Modem/ISDN Cost Comparison**

| Connection Type | Cable Modem | Dial-up Modem comcen.com.au | Big Pond Direct Permanent Modem | Permanent ISDN comcen.com.au | Dial-up ISDN comcen.com.au |
|---|---|---|---|---|---|
| | 4MBps | 33.6Kbps | 33.6Kbps | 64Kbps | 64Kbps |
| **Set-up Costs** | | | | | |
| Modem cost | $505.00* | $200.00 | $200.00 | $649.00 | $649.00 |
| Extra phone line | $0.00 | $176.00 | $176.00 | $0.00 | $0.00 |
| Set-up/Installation | $29.95 | $20.00 | $500.00 | $345.00 | $345.00 |
| Total set-up costs | $534.95 | $406.00 | $876.00 | $994.00 | $994.00 |
| **Monthly Costs** | | | | | |
| ISP fee | $65.00** | $38.00 | $20.00† | $500.00 | $16.00◊◊ |
| Call charges | $0.00 | $30.00 | $5.00◊ | $275.00†† | $70.00††† |
| Total per month | $65.00 | $68.00 | $25.00 | $775.00 | $86.00 |
| Annual Costs | $780.00 | $816.00 | $300.00 | $9300.00 | $1032.00 |
| 1st Year Costs | $1184.95 | $1222.00 | $1176.00 | $10294.00 | $2026.00 |

* Includes $10.00 delivery fee.

** for first 100MB/month, $0.35/MB thereafter. Higher usage plans available ranging up to 500MB/month for $170.00 and $0.28/MB thereafter see table below.

† Big Pond Direct charges $0.19/MB downloaded, nothing for uploads, e-mail included in total, with a monthly minimum of $20.00.

†† ISDN call charges 20c for 3min plus 2c/min thereafter or a capped plan for $275.00/month

††† OnRamp 2 Light Call Plan minimum is $60 per month (includes $20 of local data calls). I've assumed approx $30 of call charges per month. So monthly cost is $70.00.

◊ It may be possible to keep a local call open for a month, but in reality there will be system crashes requiring reboots, and possible other uses of the modem which force a re-connection.

◊◊ ISP charge is $4.00/hr. 100MB equates to about 4 hours.

Prices shown are drawn from various services and involve some guestimates for number of dial-ups, hours online etc. but attempt to reflect the usage patterns of a heavy user.

Explorer and Netscape Navigator/Communicator. Netscape (up to v 4.5) doesn't allow entry of wild card characters in the proxy settings this means if you are going to be using Netscape to access or download files from other Big Pond Cable customers (in the IP address range 24.192.*.*), you need to find out their current IP address and enter it explicitly in the proxy settings, otherwise the traffic will be metered by the proxy server and included as part of your monthly usage.

Another way to reduce your metered usage is to turn off the setting in your web browser which automatically downloads images *(see Preferences panel below)*. Images can represent more than 90% of the data transmitted by a web page if it is heavily loaded with graphics, adverts, fancy backgrounds etc. You can easily display the graphics on a particular page by selecting a menu item (**Show Images** under the **View** menu in *Netscape Communicator*).

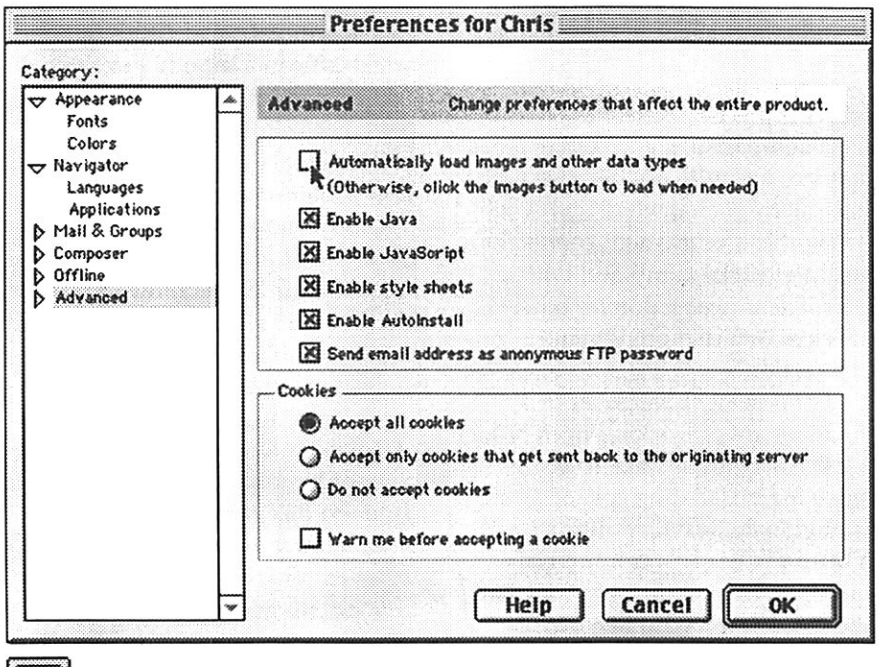
Telstra offers a variety of "Plans" dependant on your usage.

You can change pricing plans at the end of each month. *(see Monthly Charges box below)*

Telstra provide web page access to your account information, so you can check at any time how much you've used this month, or any day this month, up to yesterday. The current day's usage is not shown.

**Monthly Charges**

| Plan | CABLE 100 | CABLE 200 | CABLE 350 | CABLE 500 |
|---|---|---|---|---|
| Fee | $65.00 | $89.00 | $130.00 | $170.00 |
| Mb data transfer allowance | 100 Mb | 200 Mb | 350 Mb | 500 Mb |
| Additional Mb rate | 35c/Mb | 33c/Mb | 31c/Mb | 28c/Mb |
| Web hosting included | 5Mb | 5Mb | 10 Mb | 10 Mb |




## Web Space

Telstra offers two types of Big Pond Cable web sites:

A Web Personal Site gives you the ability to build your own site of up to 5 Mb in size, with up to 100 Mb data served per month. The URL becomes **`http://www.users.bigpond.net.au/your-site-name`**. Only a bit over 200 customers appear to have taken up this offer.

CABLE 350 or CABLE 500 customers can use Web Express to host their web site. Web Express offers a site of up to 10 Mb in size, with up to 300 Mb data served per month.

Telstra provides links to some simple "how to design a web page" web pages, which include only references to PC software, pity, when there's some really great Mac software like PageMill or Dreamweaver available.

## Reliability

In theory, the account provides 24 hour permanent access. In practice it's not that reliable. I keep my computer on 24 hours a day, so, in theory my account should be always active and my IP address shouldn't change. But sufficiently often to be annoying the Big Pond software will inform me that I've lost my connection and I should




reconnect. It doesn't happen every day, but it's not as reliable as I expected. There's no cost involved, unlike an analogue modem where you need to incur the cost of a phone call when you reconnect. Often but not always, the same IP address is used.

Another problem reported by members Sean Macnamara and Andrew Beavis is a delay of more than a minute while the Mac finds the DHCP server if the Launchpad is set to connect on boot and the Mac is running on System 8.5+.

In addition Andrew Beavis has reported that frequent crashes may be experienced if "Load only when needed" is checked in the TCP/IP Control Panel's Options.

## Software and Computer Requirements

Software is provided on a CD, with the traditional easy Mac setup – just double click the icon and away you go. You need to have the cable modem connected to the cable outlet and your computer, or hub, and TCP/IP control panel set to Ethernet, before you install the software.

You need a Power PC (preferred) or 68040 processor, OS 7.5.3 or later, Open Transport v1.1 or later, at least 8MB RAM (12MB preferred), at least 12MB disk space (40 MB preferred), a CD-ROM (preferred) or 3.5" floppy and an Ethernet card. The cable modem comes with a 10 Base-T cable. If you have a Quadra or Centris with the older style Ethernet port you'll need one of the AAUI adapters.

Alex Hartman (former Club Mac Vice-President) was responsible for the Launchpad software used to connect to the cable. It allows you to specify whether the computer logs on




automatically at re-boot, and whether it should automatically launch your web browser and e-mail clients.

The software is accessible via a little icon on the far left of the menu bar, which when clicked on expands to a small panel which launches the appropriate application for access to Big Pond's home page, your e-mail, news groups and web search. There are also facilities for password change, access to the account usage pages, setup options, help and a simple one click button to connect or disconnect *(see above)*.

I found little difficulty setting up or using this software. It's conveniently available when you need it and doesn't get in the way when you don't.

Telstra also provides a Troubleshooting Guide which covers the basic questions and most of the error codes, although most entries end with "if you are unable to resolve the problem make a note of the error code and contact the Customer Service Centre". I've done this a couple of times and they've been friendly and helpful. The Service Centre is available on a Freecall 1800 060 391, Monday to Friday 8am to midnight, and 10am to 6:30pm weekends and public holidays.

## Quibbles

Telstra's fairly PC and Microsoft centric, so it's not surprising that PC type instructions dominate the Installation Guide. I was confused by continual reference to the "Ethernet Card Reference" which was supposed to be in the Big Pond Cable pack. It wasn't. I presume this is because I didn't order a PC Ethernet card from Telstra, but the instructions presume I did. Telstra seems to expect PC users to not have an Ethernet card and go out of their way to make it easier for PC users to buy the card from Telstra. To be fair most Macs these days have an Ethernet connection, but older Macintosh owners are ignored by Telstra. Oh well, it's not so bad, you can get an Ethernet card for most Macs from your local Apple dealer. That said, Macintosh users are well catered for in the instructions.

## Conclusions

Aside from the network reliability, I've found the cable remarkably easy to use and largely hassle free. The speed of downloads for graphics rich web pages is nothing short of phenomenal (when the link at the other end is fast enough). The costs are relatively high compared to an analogue modem, but if you're prepared to pay for 24 hour access and the speed, then cable's the way to go!

*By Andrew Pavey*

# March Software Releases

*Note: Not all of these files are available on the BBS. If you need a file which is not on the BBS, please send an e-mail to daryl.chrisp@clubmac.org.au with details.*
*Some files (especially commercial files and upgrades) require a serial number or money before they can be downloaded so no guarantees are given regarding the ability to provide any file listed.*
***F** = Freeware & **U** = Updates*

**AOL Instant Messenger (AIM)** - instant chat-notification utility between online users, 2.01617 [F]

**Apple MRJ** - Mac OS Runtime for Java, for PowerMacs & OS 7.6.1 or better - 8.0M 2.1.1 [F]

**April Fools'** - a collection of prank files to put on a friend's Mac to drive 'em nuts 1.0 [F]

**Atomik** - Ircle AppleScript provides automatic channel management & enhancements - 1.4M 2.0 [F]

**Back-Drop** - easier solution to set the background picture in OS 8.5 by a simple drag & drop 22k 8.5 [F]

**Beatnik Player** - Netscape sound plug-in to play many of the common sound formats - 1.0M 2.0 [F]

**Bookmark Booster** - a collection of bookmarks of Mac centric sites - 224k 2.5 [F]

**BrainJacker** - 3D object matching game to test spatial and perception skills - 2.0M 1.1 [F]

**CFD "cache file delete"** - quickly delete cache files/ command line option 1.4 [F]

**CMScript** - allows any AppleScript to be applied or executed in contextual menus - 153k 1.3.3 [F]

**Darwin Sounds** - improved sounds for MacOS and the Darwin opensource project 2.0 [F]

**DialAssist Set** - Location Manager module helps manage remote dialing options - 40k 1.0 [F]

**HAL9000 Desktop Simulator** - makes the desktop look like the SpaceOdyssey HAL9000 1.2 [F]

**glyphX** - OpenSource Darwin GUI project seed; icon generics, info for participation - 305k 0.1 [F]

**ICQJava** - allows the Java version of ICQ to be used on the Mac, requires MRJ 2.1.1 - 23k 1.0.1 [F]

**KeyStrokes** - on-screen keyboard for those not able to use the normal keyboard - 152k 1.2 [F]

**Mactell G3 Powerjolt Control** - adjusts cpu, bus, cache speeds and size for any G3 - 461k 3.0.1 [F]

**MacTX** - Memotech MTX512 emulator - 167k 0.9 [F]

**MacZip** - zips and unzips archives in a format compatible with PCs & other platforms - 374k 1.0.3 [F]

**DragPeek** - view the contents of image files as you drag them around your desktop - 88k 1.1 [F]

**Geo3D** - 3D Metafile (3DMF) viewer with many features - 260k 1.3 [F]

**Mpecker Drop Decoder** - converts any MPEG audio file into an AIFF - 262k 1.5 [F]

**MultiSpec** - for analysing Earth observational multispectral satellite image data - 1.5M [F]

**NetCD** - audio CD player downloads & displays info about the playing CD from the net - 1.3M 1.6.5 [F]

**NSPrefs** - migrates old Netscape prefs from v4.0.3 or less to the new 4.5 version - 11k 1.0 [F]

**PandoCalendar** - places a small, totally customisable calendar on your desktop - 845k 4.4 [F]

**peoplebook** - simple contact manager: dialing, import, flexible sorting & more features - 459k 2.1.6 [F]

**Popup Manager** - helps better manage popup windows in OS 8.x - 24k 2.0 [F]

**Profile Name Changer** - changes internal name of ICC profile, helpful for ColorSync 2.6 - 19k 1.0 [F]

**PowerLogix G3 Cache Control** - auto sets optimum setting for cache speeds on any G3 equipped Mac- 26k 1.5 [F]

**Reveal Creator** - cmm reveals which application created a file in question - 44k 1.0 [F]

**SCSIProbe** - lists and mounts volumes on SCSI chains, updated by Adaptec - 54k 5.1.1 [F]

**Sherlock Menu** - installs a top menu to access Sherlock from any application - 49k 1.5.2 [F]

**Sokoban** - puzzle game requiring logical thinking and puzzle-solving skills - 203k 2.4.2 [F]

**SoundApp** - plays or converts about all existing sound file formats like MP3 - 738k 2.6.1 [F]

**Spritz** - tool for creating interactive QuickTime 3 wired sprite movies in OS 8.5 - 1.1M 1.0.1 [F]

**Steve's Free Desktop Pictures** - sets of quality outdoor scenes & picture rotating script update [F]

**Sweeper** - helps automate entering &searching of contests and sweepstakes on the net - 591k 1.5.1 [F]

**Talking Moose** - a classic program where a moose pops up with random funny saying - 611k 2.0.1 [F]

**Text Cleaner lite** - cleans & prepares text files based on specified options - 1.1M 1.51 [F]

**Virtual SSI** - MacPerl 5 droplet parses HTML files like SSI - 13k 0.1 [F]

**VisualWorks NC** - powerful Smalltalk development environment (not listed elsewhere on site) 3.0a [F]

**Web Finder LE** - Sherlock-like search tool for OS 7.5 or better - 1.7M 4.0.2 [F]

**Whisper** - developer open source general purpose Mac/Win32 C++ application framework - 2.4M 1.0 [F]

**YA-NewsWatcher** - excellent usenet newsreader for OS 8.5, use v3.1.8 for others - 1.4M 4.2.1 [F]

**Aladdin Spring Cleaning** - bug fixes for the uninstaller & cleaning utility - 1.9M 3.0.1 [U]

**AppGuard Pro** - 4D plugin for creating trialware & registration interfaces for custom apps 3.0.2 [U]

**Apple Drive Setup** - drive utility to update driver, initialise or test (for system 7.6 or later) - 487k 1.7.2 [U]

**Apple FireWire** - drivers for FireWire (IEEE 1394) support - 1.2M 2.0 [U]

**Apple LaserWriter** - laser printer driver for OS 8.5 , use 8.6 driver for all other systems - 3.0M 8.6.1 [U]

**Apple Modem Updater** - for iMac & PowerBook G3 modems (only new scripts since 1.2.1) - 862k 1.3.5 [U]

**Apple Remote install for OS 8.5.x** - network installs using Apple Network Assistant 1.0 [U]

**Apple Ultra2 SCSI card** - firmware for single channel Ultra2 LVD SCSI card in Blue G3s 1.1 [U]

**Asante PC Card** - ethernet driver for the 10Base-T card - 858k 1.0 [U]

**ASD DiskGuard** - start-up and folder security software, fix for OS 8.5.1, iMac & blue G3 1.8.5 [U]

**Audio Xtra** - Director Xtra to record

and play sounds directly to and from the drive - 445k 3.1.2 [U]

**Aurora Fuse** - video capture card drivers: fix for blue G3, playback stutter & more - 573k 1.8 [U]

**Beale ScreenShot** - screen capture utility offering more than the built-in system - 429k 2.5.8 [U]

**Blue Label** - $20 emulator runs DOS, Windows, UNIX software, update for bug fixes - 291k update2 [U]

**Bungie Myth II** - fixes for the popular strategy combat game - 1.3M 1.2.1 [U]

**CADintosh** - 2D CAD program for technical and architectural drawings - 2.3M 3.5 [U]

**ComicBase** - comic book reference and collection management software - 233k 4.0.1 [U]

**CompassProfile** - ColorSync 2.6 fix for the ICC profiling creation software - 637k 2.0.3 [U]

**Consultant PalmPilot Conduit** - Palm synchronise tool for the info manager - 154k 1.1 [U]

**Corel PHOTO-PAINT** - image/photo editing, painting, and font and media management. 8.0.2 [U]

**CrystalMaker** - crystal and molecular structure visualisation software - 1.5M 3.1.2 [U]

**DCSMaker** - assemble 1bit TIFF files into DCS EPS files for output to any PS device - 1.0M 2.6 [U]

**Extensis PhotoTools** - special effects for Photoshop & ImageReady, new online help system 3.0.3 [U]

**Extensis QX-Tools** - productivity tools for QuarkXPress 4.0, new online help system 4.0.2 [U]

**FAXstf Pro 5.0.3 ScriptsPack** - AppleScripts for pre or post processing of faxes - 672k 1.0 [U]

**FineArt 3D** - plugin for QuickDraw 3D apps to create elegant pen & ink illustrations - 1.2M 1.1 [U]

**Foundation** - 4th Dimension shell to help aid in application development - 1.8M 2.0.1 [U]

**Freeway** - wysiwyg html editor with typographic control & layout design - 863k 2.0.2 [U]

**FWB CD-ROM ToolKit device support** - support files for new CD-ROM drives - 31k update [U]

**GlobalVillage PC Card/PowerPort** - Y2K and other fixes for all their PowerBook modems - 2.7M 3.0.6 [U]

**GPSy** - links Macs to GPS receivers: sophisticated mapping, logging, and data transfer - 1.7M 3.25r2 [U]

**Griffin iPort** - driver for the iMac video, serial, LocalTalk adapter card - 52k 1.4 [U]

**Intech Hard Disk SpeedTools** - universal drive & removable media management software - 672k 1.5.7 [U]

**Interex USB Scrolling Mouse** - driver for the USB mouse - 239k 1.0.4 [U]

**Intuit Quicken** - for Basic &Deluxe versions (reposted again for the 3rd time) 98R5 [U]

**JustMail** - access e-mail from anywhere on the net in your browser, no client needed - 97k 1.0.6 [U]

**Kensington MouseWorks** - for their mice &trackballs, adds USB product support - 1.5M 5.2 [U]

**Lasso Java Adapter Module** - fix for Lasso crashing using MRJ 2.1 & Java e-mail - 219k 3.0r2 [U]

**Living Trust Maker** - to create your own legal trust documents - 734k 2.0.6 [U]

**Lotus Notes/Domino** - client for their communication system, R5.0b2 is the latest beta 4.5.7a [U]

**MacGPS Pro** - Garmin GPS receiver software for linking and mapping on a Mac 2.6 [U]

**MacTicker** - puts a stock ticker on the desktop to view dynamic stock market info - 490k 1.1.3 [U]

**MailBurst** - for EIMS &SIMS: multiple domains, wild cards, auto replies and more 2.1 [U]

**Markzware FlightCheck** - scans QuarkXPress, PageMaker, FreeHand files for problems - 1.2M 3.52 [U]

**Maxum Rumpus** - high-performance FTP server software, regular and pro versions available 1.3.1 [U]

**Media 100 qx** - professional broadcast-quality video system 5.1 [U]

**Medical Billing Circle** - medical billing and scheduling software 6.4 [U]

**MFworks** - formerly MapFactory, Geographic Information System (GIS) map processing - 690k 2.5.3 [U]

**Microsoft PowerPoint 4-8 translator** - converts PowerPoint 4 files to 98 - 405k 8.0.1 [U]

**miroMOTION DC30plus** - driver for the video-audio capture &production card - 1.1M 1.2 [U]

**Motu Digital Performer** - integrated digital audio recording midi sequencer (repost bug fix) - 2.9M 2.51 [U]

**Optigold ISP** - cross-platform business management software to run all aspects of an ISP 1.8.5 [U]

**PlayerPRO** - music editor, sequencer, synthesiser, tracker, sampler, also freeware version - 822k 5.1 [U]

**Postage $aver** - prepares & sorts mailing lists for postal bulk mail (snail mail) - 311k 4.2.4 [U]

**QuickHelp** - developer tool for cross platform online help &documentation solution - 1.1M 4.5.11 [U]

**Radius EditDV** - drivers to work with blue G3s built-in Firewire ports - 695k 1.6 [U]

**Remote Mail** - Mac web server plugin allows users remote e-mail access via any browser - 1.5M 1.0.1 [U]

**Retro AS-1** - software-based analog sound synthesiser - 4.2M 1.3.1 [U]

**Sawmill** - server log analysis tool with intuitive browser configurable graphical interface - 775k 4.0.4 [U]

**ScanTastic** - scanner software: auto imaging options for optimal scans, new iMac support 4.5.4 [U]

**ScriptThing** - stage and screen script special purpose word processor - 1.9M 1.5.1 [U]

**Smart XT** - QuarkXPress XTension outputs DCS files at full resolution - 78k 4.1.2 [U]

**Steinberg Cubase VST** - integrates audio & MIDI for a complete recording studio solution 4.0r3 [U]

**SurfJet Agent** - intelligent search agent uses neural network technique to learn over time - 1.5M 1.1 [U]

**Symantec NAV (Norton AntiVirus) virus defs** - virus definition update files April [U]

**Tcl/Tk** - portable scripting environment: supports string processing & pattern matching - 3.5M 8.0.5 [U]

**Valentina** - developer scriptable database engine claims to be faster than anything else - 366k 1.1.1 [U]

**VillageTronic MP850-750** - 3D Glide driver 1.0 (nextGen) for the video/3D cards - 670k updates [U]

**Web Help Desk** - Lasso/FileMaker based online Help Desk support system 1.2 [U]

**WillMaker** - write or update your will with this legal software - 2.7M 6.0.7 [U]

**X-Plane** - OpenGL-based stunning authentic flight simulator with many different planes - 5.0M 4.7c [U]

**X-Plane Classic** - stunning authentic flight simulator featuring many different planes - 7.1M 4.0 [U]

**XTension** - software to control home automation & security device 2.2.1 [U]

# Why and How I Made a RAID

*Why and how I made a RAID reproduced with kind permission from the author, Michael Flaminio.*
*This article first appeared on the Internet Web site for Insanely Great Mac* **<http://www.insanely-great.com/>** *and is one of a series written with the intention of demystifying SCSI, RAIDs and storage options.*
*Other Articles include:*

- *SCSI Demystified - IDE and various forms of SCSI compared*
- *Different Types of SCSI Hard Drives - Different hard drives for SCSI Macs*
- *Drives and heat - Proper hard drive heat dissipation*
- *Advantages of Teflon - Why Teflon cables are ideal for use with high speed data.*
- *RAID Demystified - What a RAID is and what it is used for*
- *Tests - The hard numbers on using drives on different SCSI buses*
- *RAID in the Real World - How regular users can utilise a RAID*
- *Get your own RAID - If this sounds like something you would like to do, IGM can get you some deals.*

## Introduction

This RAID project has been a work in progress for over three months. In making this RAID, I've researched the best possible solution to put together a disk array for my Mac. Rather than buying a box off the shelf, I chose to buy the parts separately and build it myself. With the help of a number of vendors and web sites, I've created quite the disk array for my Mac.

When I first started looking at RAIDs, I vaguely knew what was involved in setting up a disk array and the technology behind it. This whole project was rather daunting, and it couldn't have been done without the help of a number of people in the Mac community.

## In the Beginning - Why?

SCSI performance effects practically everything you do on your Mac. From loading apps to saving files, the speed of your disk system makes a world of difference. Over the past three months I've researching the pros and cons of putting together a RAID for my Mac. I've wanted to do this for a while, however the price and trouble involved has held me back. Finally about three weeks ago I bit the bullet and decided to put something together.

The costs involved in moving over to Ultra-Wide can be expensive. For best performance, I would only want to connect UW devices to my UW bus. There really is no sense in connecting slow SCSI devices to a bus that can go so much faster. This of course would involve getting new UW drives along with a new PCI card. So, my first step was to decide on getting a new SCSI card and new hard drives. However the question remained whether or not I would realistically gain anything from using a RAID. I don't use my machine for extraordinary things where high performance would really be necessary. The occasional video capture is the only thing that really would warrant a RAID. I would also like to have speed when working with audio, images and the occasional game. But, the questions remained whether or not my life would be changed from using a RAID.

## World of SCSI

So why upgrade? First, a crash course in disk interfaces.

Most PCs, some Macs and most new G3 PowerMacs are shipping with IDE interface. IDE can transfer data at rates of up to 4 MB/sec. However, when connected by a bridge to a local bus, IDE can go up to 13 MB/sec. I believe these higher speeds deal with UltraDMA, which requires matching drives and controllers.

I think of SCSI in the terms of four tiers:

- Regular SCSI-1, which transfers up to 5 MB/sec,
- Fast SCSI, which transfers up to 10 MB/sec, and
- Ultra-Wide SCSI, which transfers up to 40 MB/sec.
- Ultra2 SCSI technology pushes bus speeds up to 80 MB/sec.

There are variations of these technologies which each yield different speeds. For this review, most SCSI Macs uses one or a combination of the first three.

Depending on what Mac you have, your interfaces will differ. For example in my 8500, I have Fast SCSI on my internal bus and SCSI-1 on my external SCSI bus. So, my internal devices are capable of transfer up to 10 MB/sec on the internal bus, while my external bus is capable of transferring only 5 MB/sec.

With the bus speeds in mind, now comes the actual hard drives. The hard drives used in the SCSI system make up the second half of disk access speeds. For this review, I have divided hard drives into four basic flavours based on the RPM speeds of the drive. The common hard drives available to buy today run at 4500 RPM, 5400 RPM, 7200 RPM or 10,000 RPMs. Admittedly I skimped out here and bought into 7200 A/V drives instead of 10,000 RPM drives. I guess the line has to be drawn somewhere. Along with the drive speed, ensure the correct interface is installed on the drive. For example, you can use a 7200-RPM drive on a Fast SCSI bus with the correct interface, just as you can use a 4500-RPM drive on an UW bus.

This leads into the next critical part of working with SCSI. If you were to put a 10,000-RPM drive on to a Fast SCSI bus, you would not fully utilise the drive's speed. The drive will be faster than a 4500-RPM drive, however it will be limited by the bus speed. Conversely, if you put a 4500-RPM drive on an UW bus, the drive can not perform past its abilities. So the bottom line is, to make an UW SCSI setup on your Mac, you need two parts. You need an UW SCSI card and a hard drive with an Ultra-Wide interface – preferably running at 7200 RPM or faster.

In my research, I've found a lot of support for Seagate and their Cheetah drives. While Seagate drives typically edge out Quantum drives in performance, I've personally

experienced good performance from Quantum drives, so that's what I stick with. I don't really hold any deep feelings for either company, so I went on a cost/performance basis.

## The Project

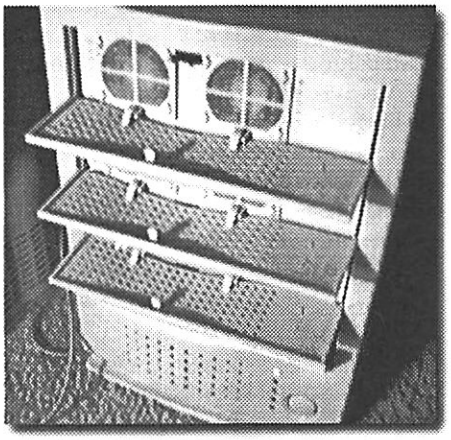
As I said, the RAID project was deep in my mind for a number of months. I was working with video more and more, and while I did not want to invest into a capture card (waiting on Iomega I guess) I decided to move my Mac over to an Ultra-Wide disk system. I have been hearing good things about the Initio Miles card, so I decided to pick one up along with three Atlas II drives. My plan was to put all three drives into my Mac and I would have this cool all UW Mac system. I even offered to sell off my old drives to help fund my madness. That was the plan anyway.

I was kind of proud of my self, and dropped Mike Breeden a note at Accelerate Your Mac **<www.xlr8 yourmac.com/>**. Occasionally I traded e-mail with Mike talking about my RAID ideas. In actuality, his site really fuelled my ambition to try this on my own rather than buy a complete RAID package. After I ordered the SCSI card and drives, I was surfing through his site and read up on his RAID reviews. Mike is working on an "ultimate Mac" where he is attempting to build the best Mac system possible. The RAID Mike built, uses a setup from MacGurus **<www.macgurus.com/>** which has a case that channelled quite a bit of air over the drives. This is when I started to think about heat. Basically, I was planning to pancake these drives on top of each other while doing some pretty intensive disk work. They were going to put off quite a bit of heat inside of my Mac. I made a note to call MacGurus first thing Monday morning.

### Too Much Heat

Over the weekend, I took thermometer and put it in my Mac just to see how hot a single 7200-RPM drive ran. To my surprise, it was actually hot to the touch. I mean hot potato hot. In the space around the drive, the temperature was within the operating environment of the drive, however the drive itself as very hot. Quantum lists the drive tolerance at 130 degrees. I used a regular medical thermometer, and it was off the scale at 120 degrees. I suspected the drive was actually running much hotter than 120 degrees since it jumped off the scale in a couple seconds. I then I decided I had a heat problem.

I priced a number of single and

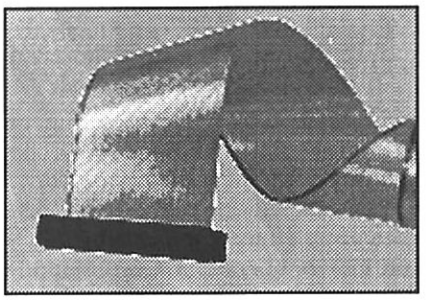


multiple hard disk enclosures from different vendors. The case MacGurus sold definitely took care of the cooling problem. The case has two exhaust fans on the back — one by the power supply and other for the drives. You can also replace the four bezels on the case with a vented bezel with two little fans. With my four-drive enclosure, I can have four sets of two little fans blowing in and then two big fans blowing out. The result is a pretty good wind tunnel over my drives. For the real cautious, you can put a temperature gage into one of the bezels which will tell you the temperature inside the case. As a bonus, the fans have a fine screen over them to filter out dust and other nasty stuff. After running the case for about a month, the screens were full of dust. The case even runs in a room where a large HEPA air filter runs 24/7. So not only does the case keep the drives cool, but also helps to filter out unfriendly dust.

## Cooking with Teflon

I had a long talk with the people at MacGurus about heat, Teflon and airflow. We were not talking about cooking, but rather how to create the best environment for an Ultra-Wide SCSI set up. I had a SCSI card and drives on the way, but suddenly nowhere to mount them. It is possible to purchase enclosures for two, four, and eight external drive cases. The cases themselves are not too expensive, however I found that costs do not end with drives, cards and a case. MacGurus live by SCSI cables made by Granite Digital **<www.scsipro.com/>**. They're very expensive, however they are really the best you can buy. At least I would hope so for the price tag. An internal ribbon to support four UW devices retails for $US148.99. Once the drives were connected, I also needed an external cable to connect the box to my SCSI card. An external Teflon cable ran me $US188.99. That's almost $US340 in just cables. As we say, this is where we separate the men from the boys.

What's so great about Teflon? Once you pick up one of these cables, you'll, "feel the quality." These cables have 30u" gold contacts and connectors and the external cable is very well insulated. On a SCSI chain, the length of the chain makes all the world of a difference. I once saw someone with a six foot SCSI cable coiled in ball on top of



their power strips. They were actually wondering why they were having problems. A long cable is basically a giant antenna looking for interference from other cables and florescent lights. Once you start chaining devices together, your can end up with a lot of cable hanging out there. With Teflon, you can have a little more breathing room with your cables. What that means is where you normally have to be extra careful with your cables, you can get a way with an extra foot or so without running into problems.

What also makes the Teflon cables special is they have 90 ohms impedance and .095db per meter max signal attenuation. What this means, to non-electrical engineers, is the Teflon creates an idea carrier for speedy data. Add this with the solid connectors and you have a pretty sweet SCSI chain. After spending a small fortune on cables, I couldn't forget an active terminator. Termination can make or break a

SCSI chain, and I didn't want to skimp out here. Granite Digital has a pretty nifty diagnostic terminator for $US98.99.

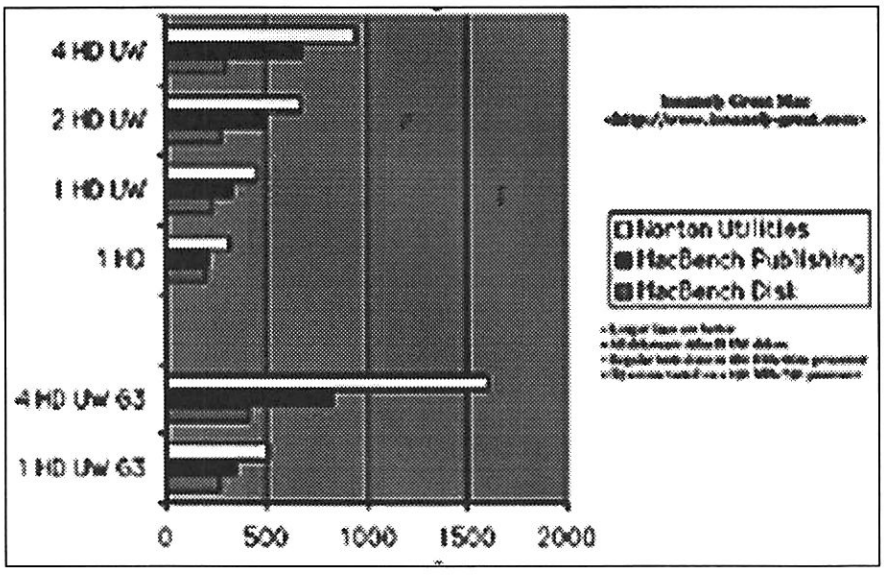
## The RAID

There's nothing geekier than building your own RAID. First however a crash course in RAIDs. Simply put, a RAID is when you take two or more hard drives and combine them using software or hardware. Your Mac will use the disks as if they were a single hard drive. A RAID can be used to increase performance, reliability, or do both. There are different types of RAIDs, each of which are ideal for different situations. I'll cover two common types of RAIDs in this review. Striping, or RAID 0, is when two or more hard drives (up to 16 disks per volume over one or more SCSI buses) are linked together. This is ideal for improving performance for disk intensive applications. In RAID 0, if you were to take two 2.2 GB hard drives, you would have approx. 4.4 GB of available storage. I used RAID 0 for this review. The second type of RAID is mirroring, or RAID 1. Mirror RAIDs use two disks at a time to create a redundant copy of your data. If one of the two disks goes down, the computer will continue to operate on the remaining disk which has a mirror copy of your data. There are other types of RAIDs, however these are the two types supported by Conely and FWB. Other than software RAIDs, there are also hardware driven RAIDs. Hardware RAIDs are considerably more expensive and are pretty unrealistic for end users.

So when it was all said and done, I had four 2.2 GB Atlas II drives, an UW SCSI card, a kick ass enclosure, and the best cables money can buy. It was time to build my RAID. It took a couple hours just because I was careful handling the internal SCSI ribbon. The Teflon cabling is much more rigid than standard copper cable. Care had to be taken not to bend or twist the ribbon too much.

## The Tests

A couple notes on the tests. I did benchmarks using MacBench and then Norton Utilities for confirmation. FWB RAID required the drives to have FWB drivers installed so I chose not to use FWB tests. I found Conely's SoftRAID 2 **<www.conley.com/sfrsr.htm>** to give significant boost in performance over FWB. As much as 30% at times, so I just stuck with SoftRAID. [Check out Accelerate Your Mac for tests involving different RAID software packages **<www.xlr8yourmac.com/scsi.html>**.] Scores were based on publishing tests which showed much more dynamic results that I felt reflected real-world use. The stock machine used for the tests was a PM 8500/180 with 160 MB of RAM. For the G3 tests, a Newer Technology **<www.newertech.com>** MAXPowr 250/125 daughter card was used. The SCSI card I used was the Initio Miles **<www.initio.com>** UW card. Once again, stop by Accelerate Your Mac for comparisons of the different SCSI card out for the Mac **<www.xlr8yourmac.com/ULTIMATE_MAC/SCSI_CARDS/index7.html>**.




After all the drives were screwed in and everything was hooked up, I installed the Initio card into my Mac and loaded the software. The whole process was nothing to get worked up about — just a little patience and reading. I ran some tests, and I was pretty impressed with what I found. I tested a single Atlas II drive in my Mac's internal Fast SCSI bus, and compared the same drive while connected to the UW bus. The single drive came out with a 35% jump in performance. I then hooked two drives together and did a stripped (RAID 0) array. When I hooked two drives together, the array scored 25-30% higher than the single UW disk scores. I knew how fast RAIDs were, but I was actually kind of surprised when I saw it for myself. Curious, I added the other two drives to the array for a total of four disks. When I hooked all the drives up, the RAID was now performing over 100% faster than the single UW drive. When I ran the scores against the Atlas II drive running on the Fast SCSI bus, the 4 drive RAID scored just over 300% faster with publishing tests.

So then what about a G3 Mac? I ran the tests using a G3 250 MHz processor, and found an increase of about 20% across the board. Just for kicks, I compared a single Atlas II drive on a Fast SCSI bus running on a 604e 180 MHz processor to a 4-disk array on the G3. The results were a difference of over 400% in publishing scores. *(below)*

## Practicality

So, adding an Ultra-Wide card and some drives can get a disk system to work a bit faster. I'm using my RAID for three things. First, I've set up three volumes for capturing video, audio, and miscellaneous multimedia work. I've also created a number of 700-MB volumes for CD-R work and general storage. Then I created a volume for high-end applications such as Photoshop. I'm also using a RAID volume for games, however that's more for storage than high-speed access. I did notice difference in performance with Photoshop. Other than a stop watch however, it's difficult to quantify the results. I found Photoshop to boot about 10 seconds or so faster off of the RAID, however

I noticed larger improvements in general operations. Using the RAID to run disk intensive application is where the setup can really be utilised on a daily basis. RAIDs are also widely used on networks where large amounts of data are requested simultaneously from multiple users.

When you are using a RAID to store valuable data, it is important to consider data reliability. The basis of a RAID is your data is divided across multiple disks. So, in a sense if you have a four-disk array, you are four times as likely to have data loss if a drive goes down. So, what ever you decide to put on a RAID, it is even more so important to back it up. On an application volume like I have, data rarely changes. As an easy back up solution, I just have my application volume backed up onto CD-R. When I add another application to the drive, I just write another session to the CD. For data that changes often, a tape drive would be ideal, or you could use a fixed disk to back up the data as it changes. One solution is to make a full back up of the RAIDs and then use Speed Doubler's Smart Copy (or similar) to keep back-ups current on a fixed disk.

If data safety is your number one concern, this is where a RAID can also come into play. A RAID could set up as a mirror (RAID 1) to make a redundant copy of your data as it changes. For an example, a couple years ago I was brought in to work on a server on which the hard drive went down. The server had been running unattended for several months, and because the former administrator set up a mirror RAID, the server continued working off of the remaining drive.

## Conclusions

I'm very happy with the setup I built. The case is solid and the parts I put into it are of excellent quality. While it is a rather expensive investment, and there is any number of ways to cut corners If you wanted to build your own RAID, I suspect you could go a less expensive route with no problems. It is a big investment, and if I had to do it all over again I would honestly have to consider whether to do it myself or buy package including everything. Prices for packages from two outlets were obtained at the time of writing:

Initio Miles PCI SCSI Card w/cables & SoftRaid2 Viking II 2.2gb UltraWide Drives - $US525

Initio Miles PCI SCSI Card w/cables & SoftRaid2 Viking II 2.2gb UltraWide Drives External in Dual Bay Array Enclosure w/shielded UltraWide SCSI Cables - $US645

While building your own RAID can be expensive, buying a ready-made RAID can be even more expensive. Also when you buy a RAID off the shelf, you don't know what's being put into the box. Whether you want to build your own, or have someone else do it for you, find someone knowledgeable who can help you out.

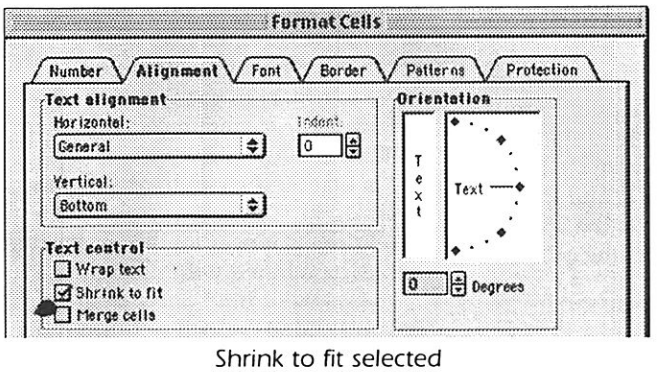
Aside from a processor upgrade, a RAID is the best way to add new performance to your Mac. Prices for SCSI drives and cards are dropping, and this can be an ideal time to upgrade your SCSI or IDE Mac.

*Michael Flaminio Copyright © 1995-98*

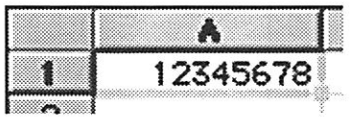
From P. 9 Tips and Tricks

# Microsoft Excel 98

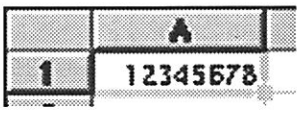
If you find you're always juggling column widths to be able to see all your data or to fit the data in a confined space there are two useful Excel 98 commands. From the **Format** menu select **Cells**, then the **Alignment** tab and check the **'Shrink to Fit'** box. Entries in the current column will now be sized smaller to fit in whatever width you set the column at.




Shrink to fit selected

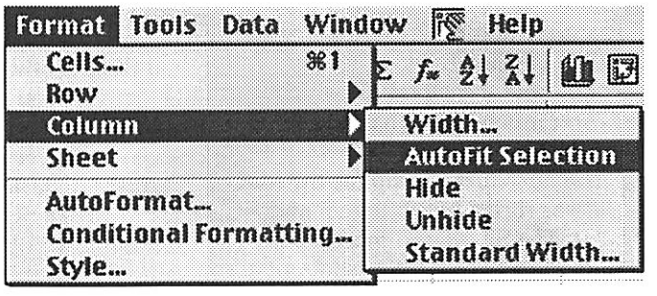



Pre Shrink to fit

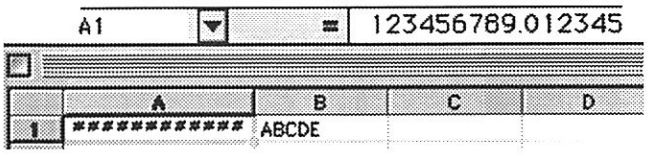



Post Shrink to fit

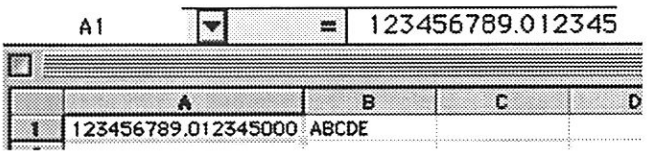
To see all the data in a column (if Shrink to Fit isn't in operation) use the **Format>Column>AutoFit Selection**.




Format Column AutoFit Selection




Pre AutoFit size




Post AutoFit size

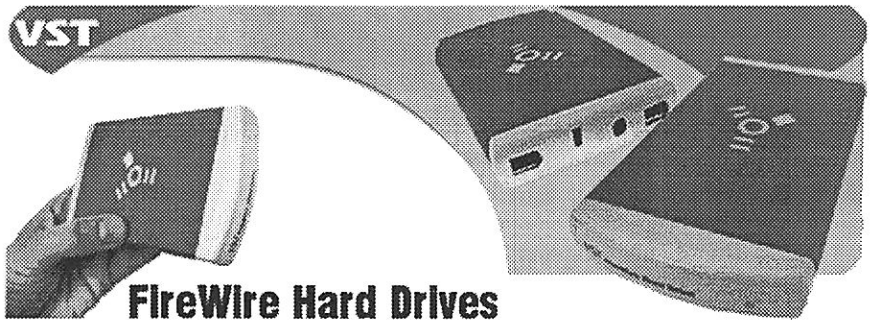
# IEEE 1384 or FireWire

## is it for you?

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*Last November MACinations ran an article by Robert Naccarella looking forward to FireWire and USB, now they are reality. This article looks at what is available now.*

To FireWire or not to FireWire, that is the question. Ron and I thought we would talk about I/O (input/output) this time, because there are a couple of new things out there. New things like IEEE 1384 (FireWire) and USB. However, just to make these new things a little clearer, we will summarise with the older I/O options.




FireWire Hard Drives

### SERIAL:

Serial was the first Mac I/O. How many of you knew that the first Macs did not have SCSI? The serial ports on all Macs are capable of 230.4Kbps (kilobits per second) on a LocalTalk network. There are ways to make serial ports on Macs faster, but let's stick with the LocalTalk speed of 230.4Kbps for now.

### SCSI:

In 1986 Apple introduced the Mac Plus. This was the first Mac with SCSI (small computer system interface), however the Mac Plus' implementation of SCSI was only a subset of SCSI (or SCSI 1 as it is now known). The Mac Plus' SCSI topped out at a whopping 2,104Kbps, or about 0.25MBps (megabytes per second, note the capital B) which was still much faster than the serial hard drives on the first Macs.

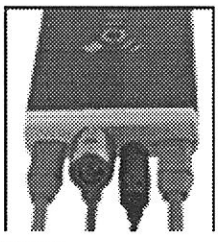
The next speed jump for the Mac SCSI was in 1987 with the SE and Mac II. The SE offered maximum transfer rates of 5,248Kbps (about 0.65MBps) and the Mac II offered transfer rates of 11,200Kbps or about 1.35MBps. The IIci bumped the SCSI speed up to 2MBps and the Quadra computers raised that clear up to 3.2MBps.

As far as I/O speed goes, the first Macs that really pushed the 5MBps that true-SCSI (SCSI-1) was capable of were the Power Macs, most of which had a Fast SCSI-2 (10MBps) internal drive and a SCSI-2 external (5MBps). Some of the first Power Macs only had SCSI-2. By comparison, the newest B/W G3s (the blue and white ones) have a different internal bus for the hard drive, ultra ATA, which is about as fast as the faster SCSIs. By the way, FireWire is also included on the new B/W G3s.

SCSI is the current high-speed I/O for most computers now, but it has limitations. For example, how many of you have installed SCSI devices? And how many of you have had SCSI conflicts? Probably almost as many of you as have installed multiple devices on a SCSI chain. SCSI can be very picky.

Just for starters, each SCSI device has to have a SCSI ID. If you accidentally put two devices on the same ID bad things happen. You might not even be able to start your Mac. Also, there are very strict rules regarding cable length, and the faster SCSI type that you run the more expensive and shorter the cables need to be. Plus you can only put seven devices on the SCSI chain.

### FIREWIRE:



To start off, FireWire is fast. It is currently capable of 400Mbps (small b) which is about 50MBps. and should be 800 to 1000Mbps soon (maybe this year). As you might guess the faster speed is something that people are looking forward to, but that is not the only thing that FireWire has going for it.

FireWire uses a six-connector wire that makes it more flexible and less expensive than SCSI. You can run up to 63 devices on it with a maximum distance between devices of 4.5 meters (15 feet). FireWire is also easy to plug in (no screws on the cables ends, just plug and go) and unlike SCSI, FireWire is hot swapable (this means that you don't have to restart to use FireWire devices. The system recognises them automatically).

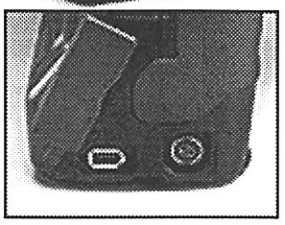
Is that SCSI chain hard to fit on your desk? No need to worry with FireWire, its longer and more-flexible cables, combined with the ability to both daisy chain and branch out through a hub, make for many more topology options. And even better, FireWire can supply up to 60 watts of power to its devices (you won't need a power cable going to that FireWire

**SCSI SPEEDS**

**SCSI (SCSI-1) is capable of a maximum throughput of 5MBPS**
**SCSI-2 is capable of a maximum throughput of 5MBPS or 10MBPS in WIDE mode**
**FAST SCSI-2 is capable of a maximum throughput of 10MBPS and 20MBPS in WIDE mode**
**SCSI-3 or ULTRA SCSI is capable of 20MBPS with ULTRA WIDE topping out at 40MBPS**
**SCSI-4 or ULTRA2 SCSI is capable of 40MBPS and ULTRA2 WIDE at a screaming fast 80MBPS**
regular or narrow SCSI is 8-bit wide SCSI is 16-bit.
These are maximum burst rates, not sustained transfer rates

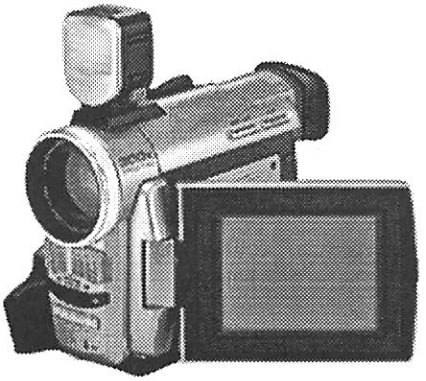
hard drive; the new FireWire hard drives are very small because of this).





Digital camera with FireWire socket (left)

There are not a lot of devices to hook up to FireWire yet, but they are coming. Right now a lot of the high-end cam-corders already have direct FireWire output. This is wonderful for those wanting to do video because the hardest part of doing digital video is capturing it at fast enough speeds. You need very fast hard drives and also very fast processors to compress the video. However, with a FireWire port you can output directly in digital — very cool.



There are even uses for FireWire if you don't own a computer. For example, two cam-corders can send video between each other over the FireWire port without a computer. So, to sum up, FireWire is very fast and getting faster, much easier to use than SCSI, and much more versatile.

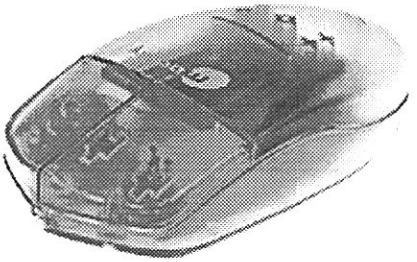
Now let's switch to a little different set of I/O, ADB and USB.

## ADB:

Before the iMac and the B/W G3s all Macs had ADB (after the 128, 512 and Mac Plus that is). ADB (Apple Desktop Bus) is capable of 10kbps (this was fast enough to a 2400-baud modem, keyboards, mice and some graphic tablets). ADB is not hot swapable (just ask anyone who has blown-up the ADB controller and had to replace the motherboard on their Mac). ADB is powered and you can chain multiple devices. However the speed limitations in ADB have pretty much made it only good enough for input such as keyboards and mice. The Wintel world didn't have anything like ADB. There are several different connections for keyboards and mice and they are mostly only for one type of device.

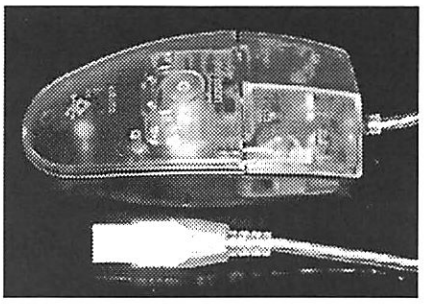
## USB:

This brings us to USB (Universal Serial Bus). USB was developed by Microsoft and Intel to replace all the different keyboard and mouse inputs. In the last couple of years a lot of Wintel motherboards came with USB, but its use has not really been that widespread, until the iMac that is. In the last several months since the iMac was introduced there has been an explosion of new USB devices, and now that Windows 98



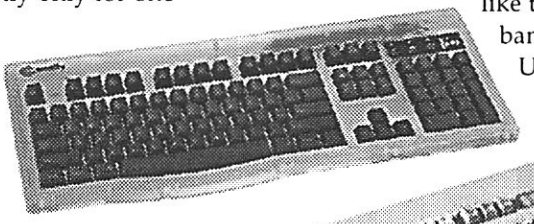
has been released with USB support there is no reason for USB not to replace all the slower I/O standards out there.

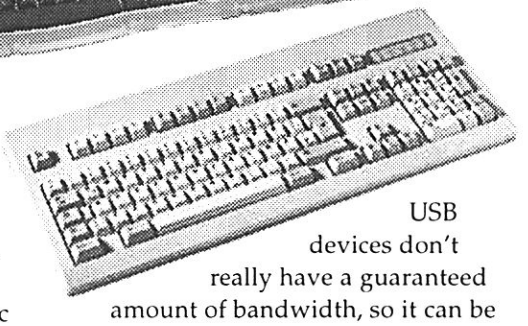
USB is hot swapable and can support up to 127 devices (although with that many devices you would run out of bandwidth if you tried to use all of them). It is capable of supplying small amounts of power



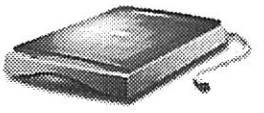
(although you need powered hubs for multiple devices and some devices will not work without a powered hub.)

USB has a bandwidth of 12Mbps (there is that lower case b again). This is fast enough for keyboards, mice, analog modems, slower scanners, CD-ROM burners graphic tablets, and even slow hard drives. There are some limitations to USB, like the limit on bandwidth. Unlike FireWire,

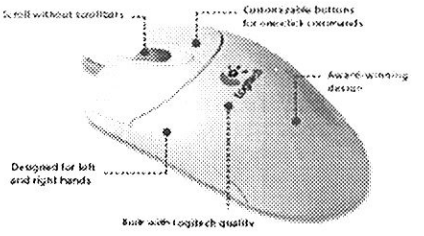




USB devices don't really have a guaranteed amount of bandwidth, so it can be important which order that you connect the



devices and the overall demand on the available bandwidth that all the devices are making. The 127-device limit on USB is not something useable in real life.



I think that covers some of the basics of I/O. We hope that all of you learned a little something about your computer, and I/O.

*by David Gix & Ron Valarida*



# Web Weavers' Corner

©1999 Raymond Yu <ryu@tpgi.com.au>

## Proxy and Cache

*"So you know something about proxy?"*

*"Yeah, it speeds up the download by getting the web page directly from the proxy on your hard disk."*

*"I've heard about that; But I sometimes wonder if I'm getting the latest information. I mean, if the browser always uses the proxy on my computer, the web page could be days old."*

This is a conversation I overheard (yes, I eavesdrop) while travelling on the train one morning.

These statements are not wrong. But, as I am sure you would have realised, the terminology is just not quite right. Instead of 'proxy' they should be talking about 'cache'.

Maybe I am just fastidious about the terminology, however, misuse of terminology is often the cause much confusion and misunderstanding.

You may not want to be a tech-head, but as a fellow web surfer or someone who is just interested in knowing about the web (presumably that is why you are reading this), getting some of the basic terminology right is important.

You can surf without knowing about the inner working of the web. You can also turn on a light without knowing anything about the electrical wiring in your home, but some understanding of the electrical system would put you at ease when one day the light refused to turn on. It may even allow you to fix the problem: it could be as simple as resetting the circuit breaker.

So let us take a quick look at this thing called a 'proxy' and a 'cache'.

Both a proxy and a cache function to increase the speed. This is perhaps the reason why it is easy to get the two things confused.

### What is a 'Proxy'?

Broadly speaking 'proxy' in the context of web browsing refers simply to a computer that houses the contents of another computer. The computer in question is typically a server. This is why it is commonly called a 'proxy server'.

### Most major ISPs use proxy servers.

Proxy servers have two main purposes:

#### 1. Improve Performance

Proxy servers can dramatically improve the performance of web browsing.

The proxy server works like this. Whenever you make a request for a web page, the proxy first sees whether it has a copy of the various elements (eg. the various image files) of the web page you are requesting. If it has, it will download it to you directly. Otherwise, it will request those elements from the specified server and download it to you, as well as saving a copy on the proxy server.

If you ever need to download the page again in the future, the proxy server will no longer need to download the page from the original server. Indeed, subsequent surfers who want to access the same page would also benefit from the fact that the page is already stored on the ISP server.

This makes for great speed improvement especially where the connection between the proxy server and the rest of the 'net is slow.

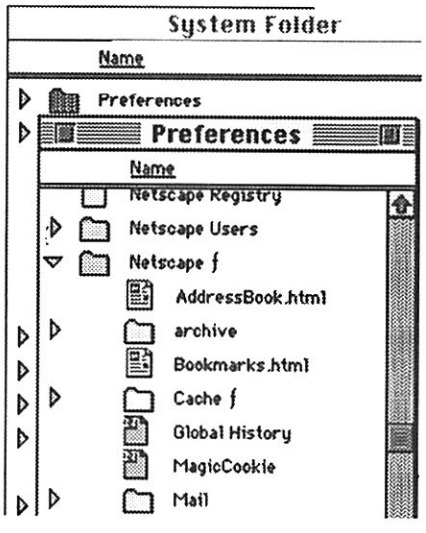
#### 2. Filter Requests

In addition to the performance boost, proxy servers can also be used like a filter. For example, a company (and some countries) might use a proxy server to prevent its employees (or citizens) from accessing certain Web sites.

### What is a 'Cache'?

Unlike a proxy, the cache lives in your computer (in the context of web browsing anyway, because a cache is a generic term referring to some storage area that holds frequently used data).

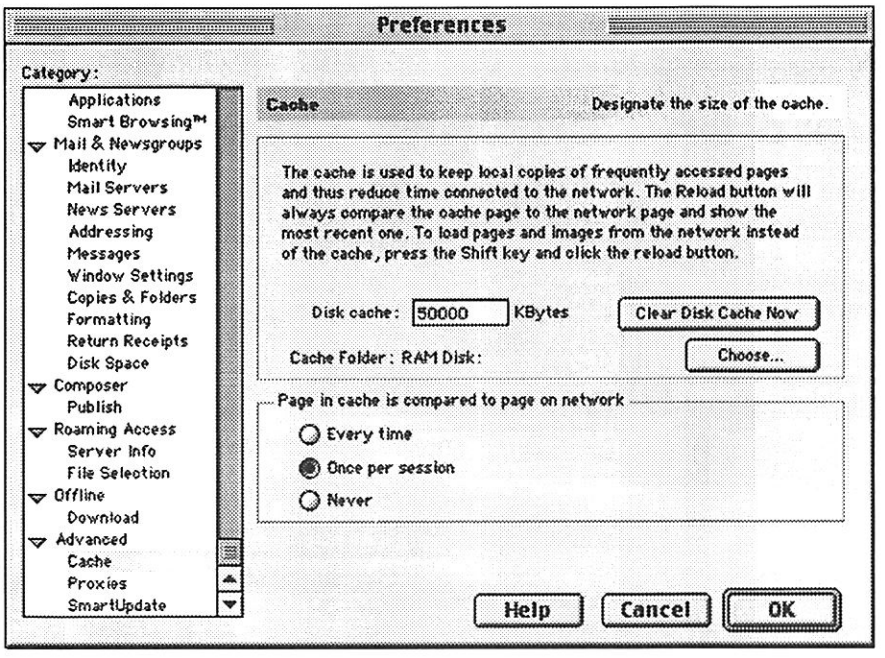
So far as web browsing is concerned, the cache usually lives on your hard disk. I say usually because it is possible to set up a Ram Disk and designate that as your cache. This point is looked at later.




The default location of your cache folder inside the Preferences folder

In terms of function it is not that different to a proxy server. Its primary advantage is to speed up the download by keeping a local copy of the frequently used web page elements. The main difference are:

- Cache stores the files on your computer, whereas the proxy server stores the files on your ISP servers;
- Cache only stores files that you have accessed when web surfing, whereas the proxy server stores files that are frequently accessed by other users of the ISP. If you have not accessed a page before, or recently, the web files will not be on your computer; but it




Netscape Navigator Preferences:
**Choose** your Cache Folder here & **Clear Disk Cache**

may be on your ISP proxy server if someone else has requested those files recently.

## Wouldn't the web page get outdated?

In theory no. However, we are sometimes (although very rare) stuck with the same old page.

Whenever you request a page, the proxy server should check with the originating server whether the web page has been updated since the page was last downloaded to the proxy server. If the web page has been updated, the new version will be downloaded and sent to the surfer. Otherwise, the copy stored on the proxy server will be used.

Ideally the same thing should happen with cache on your computer too. But in an imperfect world this often is not the case. The browser will usually use the cache version where the cache was saved recently.

Sometimes, this could get annoying where the browser keeps on using the cache version where you want to get a new updated version from the web. There are two solutions. First, click the 'Reload' button. Then, if that fails to work clear the cache.

## Caching and Security

For the security conscious (or those with secrets to hide), caching can present a security risk. This is because cache stores the web page you have been viewing on the hard disk.

So if you have been viewing a 'Top Secret: For Your Eyes Only' document on your browser, a copy would also be saved on the hard disk, and anyone can go into the hard drive to retrieve that copy!

However, this is just scare-mongering. In practice, the danger is really minimal to the majority of web surfers. After all, how often do you view a 'Top Secret' document online?

Further, documents that are secured with the Secure Sockets Layer (SSL), such as those requesting credit card information, are not saved on the cached by default.

And, supposedly, network administrators can tag documents they don't want to be stored on the user's hard disk so that they vanish completely once they are no longer on the screen.

## Speed Technique... Using Ram Disk to Boost Web Surfing Speed

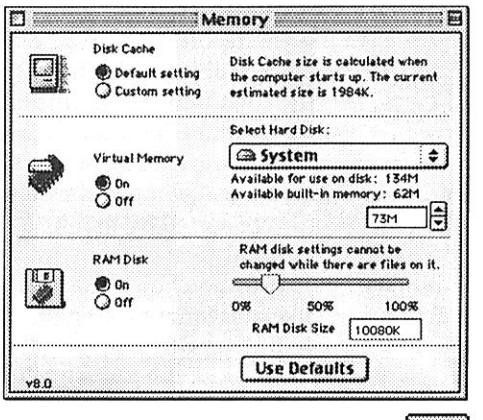
By default the web browser stores the cached files on the hard disk. On the Macintosh the cache is located in a folder named 'Netscape f' in the Preferences folder inside the System folder.

Because retrieving things from RAM is always faster than from the hard disk, surfing speed could be boosted where the cache is stored on the computer's RAM. This said, in my experience, the speed improvement is not as significant as I expected it to be.

This can easily be done by setting up a RAM disk and changing the location where the browser stores the cache to the RAM disk. This technique is really only practical for those with more than 32Mb of RAM. With the Mac OS these days (ie. System 8.5) taking up in excess of 15Mb of RAM and the browser taking up another 8Mb or so, and not to mention other internet applications that you may wish to run at the same time, there is just not much room left.

A drawback with the RAM disk approach is that the data stored in the cache would be deleted on Shut Down. This means in your next surfing session, the whole web page would need to be download again instead of relying on the one stored in the cache. Although this can be a good thing in terms of security!

**Below:** Setting up a RAM Disk





# FileMaker Pro Corner

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## Carried Forward and Brought Forward

Have you ever wanted to be able to create a report in which the current running total is shown at the bottom of each page (as in **Figure 1**) and that same total also shown at the top of the next page (as in **Figure 2**)? This is not an uncommon requirement, particularly in the bookkeeping and stockkeeping worlds.

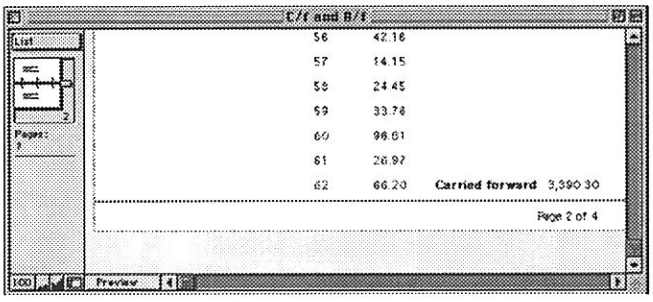



**Figure 1:** A "Carried Forward" running total up to the current record

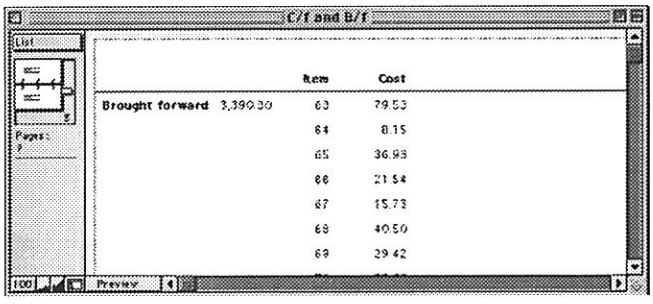



**Figure 2:** A "Brought Forward" running total up to the previous record

Remembering that each line in these reports is a record, with fields common to each line, how do we get particular records to show the running total up to and including the previous record? How do we arrange for the running totals to show only for specific records, i.e., those which occur at the bottom of each page of the report? How do we get the words **Carried forward** and **Brought forward** to appear only on certain records, i.e., those which occur at the bottom and top respectively of each page of the report?

### Finding Running Totals

In this example, the records consist of **Items** and their **Costs**. We need to be able to determine the total cost of all Items, and the running total of **Cost** up to the current record as well as up to the preceding record. The necessary field definitions are shown in **Figure 3**. The field **Item** is automatically indexed by FileMaker Pro when the records are sorted by that field.

To define the **Total Cost** of all items, we use the **Summary** field type and choose the **Total** summary function from the subsequent list of available options. Likewise, we do the same for the field **Carried Forward**, except that we also check the **Running Total** box, as

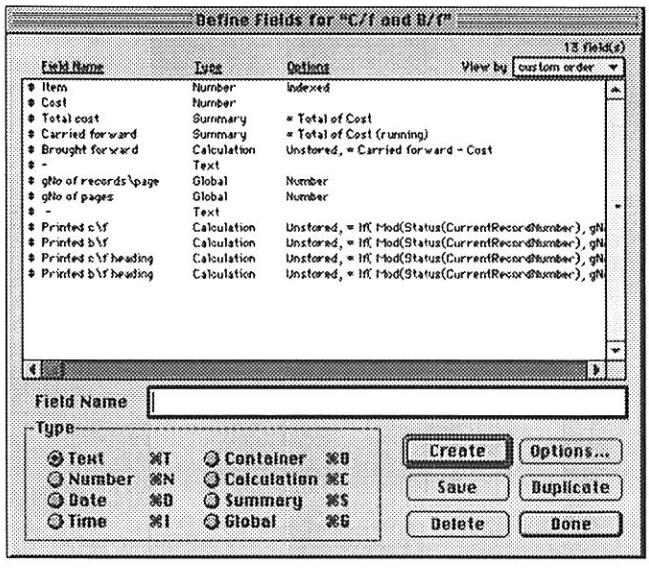



**Figure 3:** Definitions of fields required

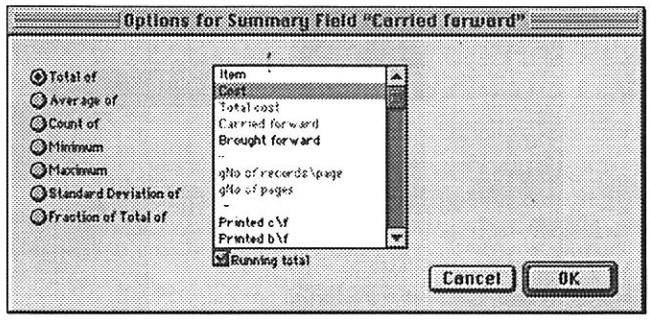



**Figure 4:** The settings for the definition of the field "Carried Forward"

shown in **Figure 4**.

Now for the field **Brought Forward**. This is the running total of the field **Cost** for all records up to the one before the current one in the list or report. However its definition must apply to all records. We'll get the correct answer if we determine the running total for all records up to the current record, and then subtract the value of **Cost** in the current record. That is, **Brought Forward** is equal to **Carried Forward** minus **Cost**.

Our report layout can now be set up, as shown in **Figure 5**. The **Body** part contains the fields **Brought**

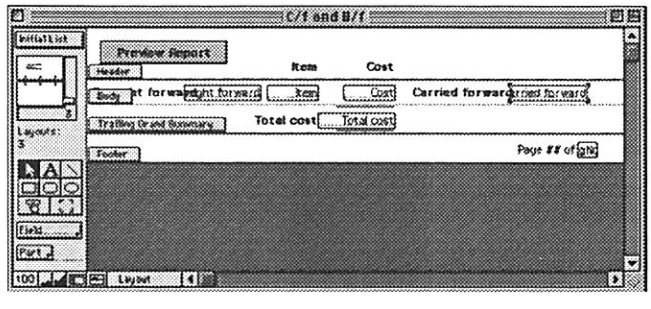



**Figure 5:** The initial layout used for the list report

**Forward**, **Item**, **Cost** and **Carried Forward**. The **Trailing Grand Summary** part contains the field **Total Cost**.

If we now sort our records by **Item** and switch to **Preview Mode**, we get the report shown in **Figure 6** ... not quite what we want when we compare this figure with **Figure 1** and **Figure 2**! The problem is that there is a lot of repeated information which is unnecessary. Let's look at how to remove the clutter.

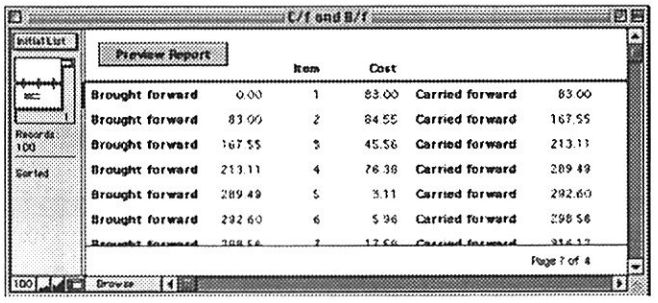



**Figure 6:** *The report created using the initial layout*

## Hiding Unwanted Fields

The problem with our database at this point is that the report shows values in all text and summary fields for all records. What we would like to do is to cause fields to be hidden in records where they are not relevant. For example, the words **Carried forward** should only appear on the last record at the bottom of each page. Maybe we can define a calculation field which will achieve the desired result ... let's see!

To be able to know which records will occur at the bottom of each page, we need to define two new fields which are common to all records and therefore of type **Global**. These fields will contain the values of the number of records per page of the report, and the number of pages in the report.

The number of records per page can be determined by trial and error later, being a function of your page setup, header and footer sizes, printer type, and the like. The number of pages can be determined by creating your report, switching to **Preview Mode**, going to the last page, and determining the value of the FileMaker function called **Status(CurrentPageNumber)**.

Now we can determine which records which will be at the bottom of each page. They will each have to meet the criterion that their **Record Number** is a multiple of the number of records per page. That is, if the **Record Number** is divided by the number of records per page, the remainder will be zero. Also, we don't want "Carried forward" to appear on the last page of the report, so we need to add this additional criterion.

If a record satisfies these two criteria, the words "Carried forward" should appear. If the record doesn't satisfy the two criteria, the field should be blank. We can put the above into FileMaker lingo by defining a field called **Printed c/f heading** which is a **Calculation** field with a result of type **Text** and given by the formula:

```
If ( Mod (Status (CurrentRecordNumber),
gNo of records\page) = 0 and Status
(CurrentPageNumber) < No of pages,
"Carried forward", "")
```

Similarly, we want the words **Brought forward** to appear only on the first record on each page but not on the first page. This can be achieved using FileMaker functions to define the field **Printed b/f heading** as a **Calculation** field with a result of type **Text** as follows:

```
If ( Mod (Status (CurrentRecordNumber),
gNo of records\page) = 1 and Status
(CurrentRecordNumber) > 1, "Brought
forward", "")
```

We still need to hide most of the numerical values of the running totals. In the case of the field (rather than the text) **Carried forward**, the criteria are the same as for the field **Printed c/f heading**, so the formula is:

```
If ( Mod (Status (CurrentRecordNumber),
gNo of records\page) = 0 and Status
(CurrentPageNumber) < No of pages,
Carried forward, "")
```

and, in the case of the field (rather than the text) **Brought forward**, the criteria are the same as for the field **Printed b/f heading**, so the formula is:

```
If ( Mod (Status (CurrentRecordNumber),
gNo of records\page) = 1 and Status
(CurrentRecordNumber) > 1, Brought
forward, "")
```

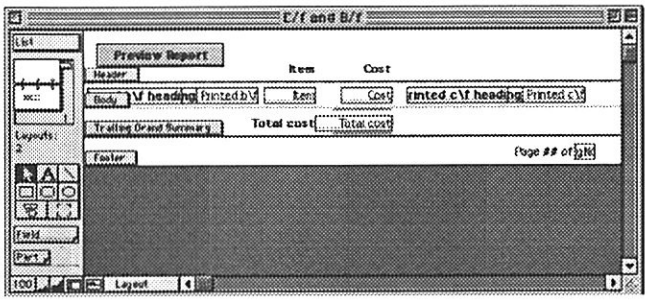



**Figure 7:** *The final layout used for the list report, using alternative fields*

We can now revise our report layout by replacing the previous fields with these calculation fields. The resulting layout is shown in **Figure 7.**

## Scripting the Report Generation

We can write a script to automate the steps involved in generating our report. We'll need to be able to define the correct number of records per page for our calculations to work properly. To do this we'll need another layout, **Records/pg**, as shown in **Figure 8**.

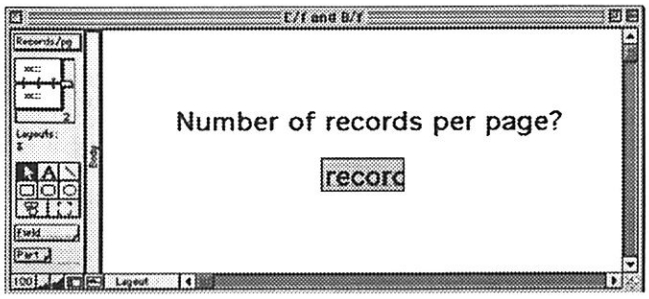



**Figure 8:** *The extra layout used for defining the number of records per page*

```
    Script / Options        Script Parameters
1   Enter Browse Mode
2   Go to Layout            Records/pg
3   Beep
4   Show Message            Buttons:
                            "OK","",""
                            Data:
                            At the next screen, enter
                            the number of records per
                            printed page and then click
                            the "Continue" button ...
5   Pause/Resume Script
6   Go to Layout            List
7   Find All
8   Sort                    Sort Order:
    Restore sort order      Item (ascending)
    No dialogue
9   Enter Preview Mode
10  Go to Record/Request/Page
                            Last
11  Set Field               gNo of pages
                            Calculation:
                            Status(CurrentPageNumber)
12  Go to Record/Request/Page
                            First
13  Pause/Resume Script
14  Enter Browse Mode
```

### Now for the steps in the script:

Steps 1 to 5 allow for the specification of the number of records per page. The number can be established on a trial-and-error basis. Just run this script and enter a number that you think might be correct. Check the subsequent location of the unhidden headings and run the script again, making suitable adjustments to the number of records per page until the report is correct.

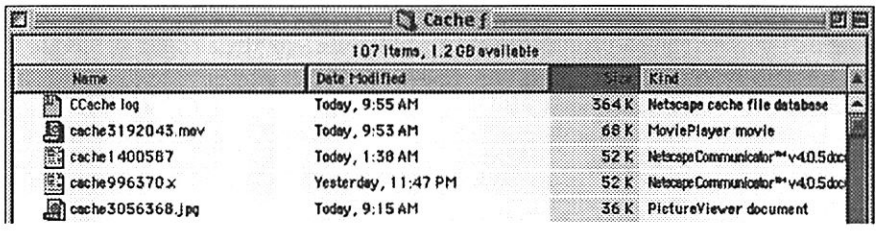
Steps 6 to 8 sort all records. Steps 9 to 11 determine the number of pages in the report. Steps 12 and 13 allow the final report to be viewed in the format originally intended. Run the script and you'll marvel at the wonders of FileMaker!

Anyone wishing to obtain a copy of the FileMaker Pro file referred to in this article is welcome to request it from me at **<hilton.brown@clubmac.org.au>** - I'll be happy to send it by return e-mail.

# Tips and Tricks #2

## Working with Netscape

One of the unexplained mysteries in life is why browsers like *Netscape* go to the trouble of renaming files they've downloaded and stored locally in the **Cache** folder. So if you go looking for a favourite graphic or movie, you'll find files helpfully titled **cache2975985.jpg**. Really annoying if you want to keep a copy of a particular graphic or movie etc.

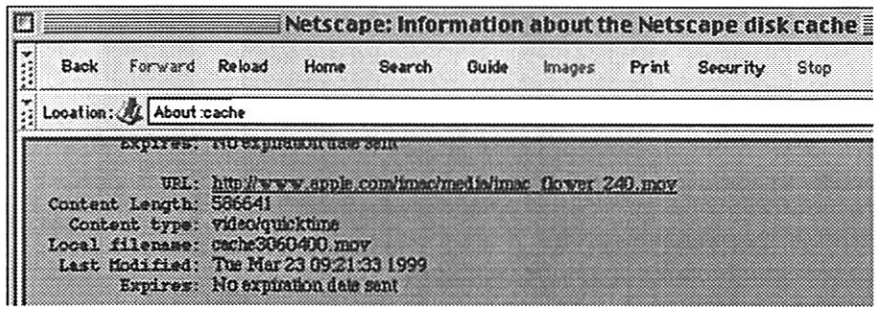



There is a solution, type **About:cache** in Netscape's **Location** field to view a list of all the files in your **Cache** folder. The list includes the original URL, file type and size, last modified date, and the name it's masquerading under in the **Cache** folder.

Since *Quicktime* doesn't allow you to click on a movie in a browser window and save it elsewhere on your hard disk, you can use this tip to locate the new name for your movie and then go to the **Cache** folder (it's in the **System folder | Preferences | Netscape** (or Netscape Users) folder), find it and option drag to copy it out to your desktop. Don't forget to give it a more descriptive name.

*Andrew Pavey*

*More tips on page 34*



# Apple Releases QuickTime 4

Apple Computer, Inc. have released the public beta of QuickTime 4, its industry-leading multimedia software, for both the Macintosh and Windows platforms. QuickTime 4 features 'streaming' of live and stored video and audio over the Internet, and is the first Internet streaming solution to use non-proprietary industry-standard RTP and RTSP protocols for streaming over the Internet. In addition, Apple announced that it has begun licensing its open Internet Streaming Server software under an Open Source model. The public beta software also includes an all new QuickTime Player that offers easy access to QuickTime content, and significant enhancements to the QuickTime PictureViewer application and QuickTime Web Browser Plug-in.




"We are embracing the non-proprietary open server model for Internet streaming, and even giving away great server software under our Open Source licensing model," said Steve Jobs, Apple's interim CEO. "From this day forward, content providers, ISPs and network managers will have a choice—they will not be forced to pay a server tax to Real Networks for their proprietary server software."

**QuickTime 4**'s new Internet streaming capabilities allow users to play live and stored video and audio using a variety of compressors and decompressors, enabling them to experience high-quality playback even over 28.8Kbps modems. Key features in QuickTime 4 include:

- QuickTime Player, providing intuitive user controls, a stunning new look and feel, and one-click access to Internet content. QuickTime Player also features audio controls for balance, volume, bass, and treble;
- QuickTime PictureViewer, delivering still image support for a wide range of formats including BMP, GIF, JPEG, PICT, PNG, SGI, TIFF, Adobe Photoshop, and FlashPix;
- QuickTime Web Browser Plug-in, enabling Microsoft Internet Explorer, Netscape Navigator and America Online web browsers to display QuickTime-based media directly inside web pages;
- Compression technologies, allowing content providers to optimise the playback of their content for dial-up Internet access, CD-ROM and DVD-ROM. These include MPEG-1 layer 3 (MP3), Sorenson Video, QDesign Music, Qualcomm PureVoice, H.261, GSM and DVI;
- Network protocol support for Internet Engineering Task Force (IETF) streaming standards, RTP, RTSP, SDP, FTP and HTTP;
- Support for video and animation formats, such as AVI, DV, Macromedia Flash, OpenDML, GIF and FLC;
- QuickTime for Java allowing Java applets to interface with QuickTime's entire API;
- New small, intelligent installer to speed the download process, especially for QuickTime 4 users with low bandwidth Internet connections. By enabling users to download only the parts of QuickTime they immediately need and offering automatic updates, customers get the fastest possible access to QuickTime content.

**QuickTime 4 Pro** includes all the features of QuickTime 4 while unlocking the software's advanced authoring and playback capabilities, including:

- Multi-format editing, allowing users to integrate video and audio from anywhere, in any QuickTime supported format, including streaming;
- Advanced export capabilities, enabling users to manipulate still images and convert them to standard publishing formats, such as Adobe Photoshop, TIFF, BMP, PICT, PNG and JPEG;
- Ability to create slide shows that integrate pictures and sound; New Lens Flare and Zoom filters to further enhance movies and images;
- Easy preparation of QuickTime movies for streaming distribution.

## Availability, Pricing and System Requirements

Macintosh and Windows users can immediately download a free version of QuickTime 4 public beta software from Apple's QuickTime web site **(www.apple.com/quicktime)**. The advanced playback and editing capabilities of QuickTime 4 Pro are available to users for U.S. $29.99. QuickTime 3 Pro customers are automatically upgraded to QuickTime 4 Pro free of charge upon downloading the QuickTime 4 public beta software.

System requirements for Mac OS-based systems are: 68020, 68030, 68040 or PowerPC processor; at least 8MB of RAM recommended for 68020, 68030 or 68040 processor-based systems and at least 16MB of RAM recommended for PowerPC processor-based systems; and MAC OS 7.1 or later. PowerPC processor required for streaming.

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# MACcess Report

compiled by Colin Lee <colin.lee@clubmac.org.au>

*By the time you read this, Mac OS update 8.6 should released or not far away. From what I've read, most of the improvements are under the bonnet, but word is, it's quite a bit faster and more stable, at least on later Macs. It'll be a free download from the Net. Also, the latest professional level and new consumer level PowerBooks should be close. As always, I wonder what the Australian price point will be. In this month's column, we look at fixing jagged text from screen shots, Virtual Memory problems and which Mac OS is best for which model Mac. We kick off with Z Term and G3's. Happy maccing, Col.*

To: all
From: Ken MacDonald
Subject: **Local Telephone Connection**
My second son has a text only connection to the Local University and needs a piece of shareware... or to make that connection previously, Z Term was used on the old LC520 to do this. But since I have upgrade to a G3 that no longer works - Is there a piece of shareware that can be downloaded from ClubMac that will enable the local connection?

To: Ken MacDonald
From: Alan Dow
Subject: **Re: Local Telephone Connection**
I have used Z-Term (v0.9) with G3 Powerbook. As I am online at present I have no way of checking this, but from memory I think the only problem was the port speed. Z-Term preferences only allow for 57600 maximum speed, but most modems now run at least 128K. Suggest you play with modem INIT strings and/or Z-Term connection speed preferences. Hope this helps.

To: all
From: Shaun Cashman
Subject: **Conversion**
Can anybody help me with this seemingly simple problem? When I capture a screen using shift-Command-3 and this print it out, the text comes out looking very jagged. Is there any simple way of converting this into something more printable?

To: Shaun Cashman
From: Sean McNamara
Subject: **Re: Conversion**
Hi Shaun. Depends on whether you need colour/greyscale info at all, or not. The simplest way is to set your monitor to B/W before doing the screen shot. That will make the screen shot B/W, and it won't be printed using a line screen (on postscript printers) or dithering (on quickdraw printers). It's the line screen/dithering which is probably causing the fuzzy edges. Hope this is of use

To: Shaun Cashman
From: Bruce Madden
Subject: **Re: conversion**
I convert to either CMYK or GreyScale and increase the resolution in PhotoShop and 'Save As' TIFF. eg. For MACinations it is GreyScale 150dpi at S/S. You may want to play around with contrasts and density while you're at it.

To: All
From: Rae Luckie
Subject: **USB or not USB**
I've had lots of information relating to problems with USB models when you have lots of SCSI equipment (scanner, Zip Jazz drives and other HDs). One person said 'you throw all the peripherals away and start again'. I'm not in a position to do that. I also have a lot of floppies I like to use at times.

Can someone please direct me to find out exactly what has to be done to a 'USB' G3 to use old equipment and whether getting an old model is preferable? As I'm 'getting on' I expect this to be my last major computer purchase so I want to make the right decision. I tried to stir up some debate re the Dell comparison but...

*(I think who ever said 'throw your peripherals away' was being irresponsible. More and more adapters and connectors are coming on the market all them time, Cheers, CL)*

To: Rae Luckie
From: Kim Kohen
Subject: **Re: USB or not USB**
Order a SCSI card for your G3 and then hunt the Internet for the latest drivers for your peripherals. The biggest problems people have had is that the SCSI cards that are being shipped sometimes don't 'see' the attached device because it's not on the bus they're expecting. The latest drivers are designed to remedy this

To: David Jaffray
From: David Fulcher
Subject: **Re: Palm III Organiser**
I have had enormous problems with the Palm Desktop organiser. Although I don't have a Palm, I have used Claris Organiser for years, and upgraded regularly. Instant Organiser started to crash my system regularly, and I had to delete it. I was looking to its reincarnation (now "free") to fill the gap. The first attempt at installation, crashed my drive and marked my first ever Apple to go back for service to replace the drive. I thought it might be a download glitch, so I tried again at installing it (with or without extensions off) and had numerous crashes with every attempt at operation. This is a G3 running 8.1. So...I really can't buy a Palm until I can run the desktop side. And I'm still in the market for a good Organiser which will remind me of appointments. Any thoughts??

To: David Fulcher
From: Simon Craig
Subject: **Re: Palm III Organiser**
This is sad! I have a 7200/120 and a G3 Series Powerbook both running OS8.1 and the Palm software works flawlessly on both of them. I have had no program errors and no crashed at all. I wonder what it is?

To: David Fulcher
From: Andrew Pavey
Subject: **Re: Palm III Organiser**
I have the palm software running on G3's with both System 8.5.1 and System 8.1 with no problems. I'd suggest reinstalling your System software.

*(I read on the Net there can be a problem with Microsoft programs interfering with Palm Desktop (aka Organiser) when quitting a MS application. Apparently MS programs, 'clean up the entire menu bar' when quitting, rather than just cleaning up their own bit of the menu bar. This can cause problems on some machines, but I don't think this is David's problem. Cheers, Col)*

To: All
From: Peter Thorburn
Subject: **Virtual PC**

I thought from previous reading that this required its own hard disk partition but the manual doesn't seem to mention this in "Getting Started". Does it matter?

To: Peter Thorburn
From: Andrew Beavis
Subject: **Re: Virtual PC**
No, the C drive is just a file.

To: Peter Thorburn
From: Andrew Pavey
Subject: **Re: Virtual PC**
No, you can use effectively a large file on your hard drive. The size is set during the install process. Note you can make this drive size larger, but it's a bit of a pain to do it later. Some PC software insists on being installed on the C: drive so you have to. If what you want to install on the PC is happy on another drive you can simple designate a folder on your Mac as drive E: or F: etc

To: Colin Lee
From: Shaun Cashman
Subject: **Re: memory problems in 8.5.1**
CL> If you only have VM set to 13 megs on a 96 meg real RAM set up, it is effectively off. For VM to work, it needs to be set to the amount of real RAM you have, plus whatever amount extra you require. Apple recommends Real RAM plus 1, which in your case would mean setting VM to 96 + 1 = 97.

SC> Thanks Colin. I set my VM to 90 (that's all I could spare, my HD is chock'o'block) and my RAM hungry system seems to be satisfied. I am getting a lot of type 1 & 2 error now but that's another story.

To: Shaun Cashman
From: Colin Lee
Subject: **Re: memory problems in 8.5.1**
Thanks Colin. I set my VM to 90 (that's all I could spare, my HD is chock'o'block) and my RAM hungry system seems to be satisfied. I am getting a lot of type 1 & 2 error now but that's another story.

To: Colin Lee
From: Shaun Cashman
Subject: **Re: memory problems in 8.5.1**
I still think you need to set it to at least 97 for it work effectively, if at all. VM uses hard disk space not RAM, so you should have enough room on your disk, unless it is too full already, which means deleting stuff. Good rule of thumb is 15-20% free.

To: Simon Craig
From: Andrew Beavis
Subject: **Re: Matching OSs to Macs**
TP> I have searched in vain for a list of which Operating Systems are optimal for particular Mac models. There is a delightfully informative utility available on this BBS called GURU that tells me all sorts of stuff I never knew about all sorts of Mac models (probably *all* of them) but it doesn't answer my question.

AB> that sort of info is not really in a database anywhere. However I can give you a guide.

I use 7.1 + Sys update 3 on 68030 or older machines. I augment this with, MacTCP, Windowshade, PC Exchange & MacPPP to get required Net features etc.

I use 7.6.1 on 68040 and old PowerMacs (6100, 7100, 5200,6200 etc)

I use 8.1 on fast Macs if DTP users need Acrobat compatibility

I use 8.5.1 on all modern Macs (PCI 200mhz or greater)

So there is overlap here: Netscape 4.07 needs 7.6.1 or greater.

7.1 is good on 040 machines with no CD drive.

7200 PCI macs can handle 8.5.1 a lot better than 8.1, so sometimes I may put 8.5.1 on them although 7.6.1 is more logical.

To: Tom Pardy
From: Andrew Pavey
Subject: **Re: Matching OSs to Macs**
I generally use 7.6.1 on LCIII and LC475/630/Quadra 700 type Macs, and 8.5.1 on anything newer. 8.5.1 is definitely faster than 8.0/8.1

To: Tom Pardy
From: Sean McNamara
Subject: **Re: Matching OSs to Macs**
TP> I am not too sure of Apple Spec's accuracy, even though it comes from Apple. For instance, I have a PowerMac 7300/200 (which I am using as a type this) running OS 8.0. According to the database, OS 8.5 is not available to me on this machine. Yet I know of 7300 owners who are using OS 8.5. Do you think someone should tell them they are doing the impossible?

SMc> Tom, that section isn't really meant as an exhaustive list of which OSes can run on each machine - I think it's main function originally was to list which Systems were shipped with the machine during it's lifetime as current Apple product. Apple Spec actually began life as an internal support document put together by a staff member from any and all available documentation they could get their hands on. It's not comprehensive in that it doesn't list every machine configuration ever available all around the world (for example, it doesn't list CD-less Perfoma 580s, even though they're quite common out here. It's only a guide - although I find it a very good one :)

To: Tom Pardy
From: Andrew Beavis
Subject: **Re: Matching OSs to Macs**
TP> Thanks too, Andrew, for your guide. Generally I have been following much the same set-up. You didn't list any of the PowerBooks in your guide. Any comments on them? At the moment I am running my PB160 on System 7.5.3 (which doesn't seem to fit your guide, it being an 030 processor) but it seems to be happy with it.

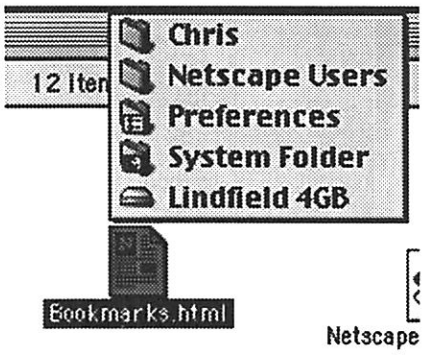
AB> Yes it does. Sort PowerBooks according to their processor. So on your machine I would run OS 7.1 update3 and add features I needed plus Netscape 3 if you have enough memory. I am sure 7.5.3/7.5.5 works but 7.1 is faster. If you really need 7.5.3 then that's fine as well. On an 040 or PPC 603e PowerBook I would run OS 7.6.1, provided I had access to a CD ROM that boots an Apple system CD. A 1400+g3 card or G3 powerbook can run 8.5.1 OK.

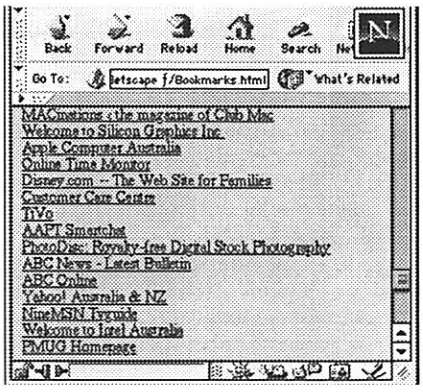
To: All
From: Ray Robinson
Subject: **RGB monitors.**
Can anyone tell me if a RGB monitor is a Trinitron monitor? It seems to me the RGB 14" Apple monitor is not as clear as some 14" trinitron monitors I've seen. They seem better than the Colour Plus models which aren't Trinitron but not as clear as say the trinitron in a LC 575 for example.

To: Ray Robinson
From: Matthew Godden
Subject: **Re: RGB monitors.**
I'm not sure which one you mean however the way to tell is to look at the screen when it is completely white. You should see a very fine line across the screen about 1/3 of the way from the top/bottom. If you see this line then it is an aperture grill monitor (Trinitron is a Sony brandname like Biro or Band-aid)

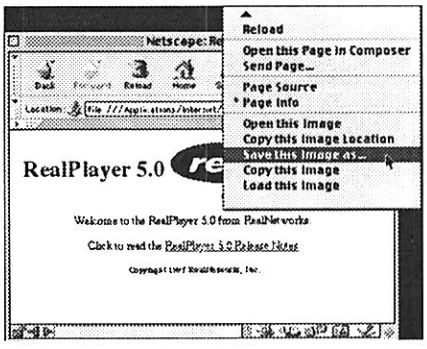
From P30 Tips and Tricks #2

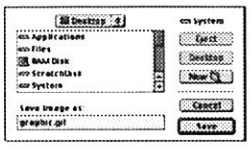
Setting your **bookmarks.html** file as your home page means you can see all your bookmarks easily and just click on a link and you're there! Use the **Edit | Preferences | Navigator menu items** to get to the correct tab and then click the button **"Choose local file"** and navigate your way to the **Netscape** folder in the **Preferences** folder in the **System folder**.




To copy just a graphic in a browser you can click on it and hold the mouse button down. A popup menu allows you to save the graphic (and even includes it's original name as a default - *right*).



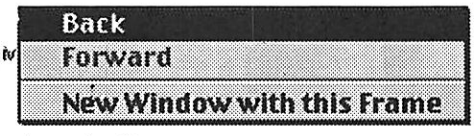
To copy a web page you can use the **Save As** command in the **File** menu. If you want to preserve the HTML you should make sure you pick **Source** from the popup menu at the bottom of the **Save** dialogue. In framed pages, click in the pane you want, hold the mouse button down and select the item **"New Window with this Frame"**. I usually copy the file name in the location bar at the top before selecting **Save As**, then paste the file name into the dialogue to save having to remember it an retype it.

*Andrew Pavey*

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- MacInTouch
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- Version Tracker - find the latest versions of software
- The Ultimate Macintosh - (Aus mirror) heaps of Mac links.




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Complete this form and send it, together with the appropriate fee, to
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# Dunk's Doodles



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## 666 - E

I have always been a very careful person - at least for an early adopter of computer technology.

For years I have ensured that my computers have been well and truly covered for any eventuality.

I have had a good household contents policy on which all my hardware and software is specifically covered. I ensure that I have good security on my house.

I backed up all my data files and those for which I don't have permanent archives each day. Yes children I really did - three generations at least were held. Good old Zip disks.

I also scanned all incoming files for viruses using that magnificent little freeware program DISINFECTANT from Professor Nordstsdt in the USA Not being a user of HyperCard it didn't worry me that Disinfectant didn't scan for HyperCard viruses, although I did worry a little about MS Macro viruses - not that I use macros much any more, but you never know what is in a downloaded file.

Then came the autoworm so I downloaded the latest software from Club Mac to cover that eventuality.

And I never once had any significant problems, either with hardware or software.

But then, at the end of last year the good professor decided that he could no longer support Disinfectant. He found that there were too many viruses, bugs and worms that his algorithms didn't discover and his time and that of his associates was becoming scarcer and scarcer. So he announced that he would no longer support the utility.

No problem, thought I. I had the program Virex which came free with the previous year's subscription to one of the computer magazines. Admittedly it was no longer the latest version, but there were virus updates available periodically.

After all, weren't nearly all viruses in the Windoze world, and didn't the macintosh operating system make it very difficult for any virus to get a hold.

Unfortunately, this earlier version of Virex was not able to identify the virus 555 - E. The Graphics Accelerator.

Graphics Accelerator is a file which I had downloaded from somewhere - don't know where, because it looked very much like a utility that I should be using. It even had a spurious Apple like information panel when viewing details in the Extensions manager. And the readme file implied that this was an Apple utility.

To cut a long story short, I became well and truly infected and the initial result was all the troubles that I wrote about in February. I didn't know the cause until much later. The end of March to be precise.

The position had became worse and finally became untenable and I sought professional advice from one of our members who is well known as a knowledgeable macintosh consultant.

His initial thought was that a second hard disk that was installed a little time back had been incorrectly installed. But that was soon quashed when he checked it out.

He ran Nortons Anti Virus and Nortons Utilities; also the the latest version of Virex. Non of them could find the cause.

Finally he downloaded the latest virus definitions from the Virex web site. And.

Lo and behold, many many files were infected with the 666 -E virus from many many copies of Graphics Accelerator.

So the whole of my three hard disks had to be downloaded. All three had to be re formatted (we took the opportunity to create HFS+ formats for the two Apple supported disks). Next the system was reinstalled. Luckily I had just invested in 8.5 - mainly because it came with the latest version of Norton Anti Virus for free (but a fat lot of use that was in detecting 666-E).

Then I had the grinding job of noting and deleting all the infected files. The only good thing about 666 - E is that it does not infect data files, nor does it seem to infect stuffit files.

This involved checking not only all the files on my three hard disks, but also all the files in my backups and archives. All my backups were infected, but not my archives. I hadn't archived anything for about three months so those Zip disks hadn't been used.

Then came the task of reinstalling programs and utilities that had to be scrapped. I was very firm with myself here. Anything that hadn't been used for six months would not be reinstalled. This resulted in an extra ration of hard disk space.

Finally I took the opportunity to re organise my archives and to update them.

All this took me a full week. Lucky it is that I am retired now. I don't know how long it would have taken if I had been working.

The morals of the story are:-

Use more than one virus program

Keep your virus programs running in the background at all times

Keep your virus definitions up to date (Club Mac generally has these definition files as soon as they are published).

Investigate all odd happenings on your computer. They might be caused by a virus

For those who want to know who got me out of my predicament. It was Andrew Beavis, a Club Mac member for many years. He trades as Mac Guru at phone (02) 9244 7039 and he doesn't tell you that you have been silly in not providing the best protection for your computer; especially if you are using the internet for much of the time.

So, if you do get into trouble you have somewhere to go. Don't expect him to help you for free. After all he is a computer professional and this sort of thing is his living.

Thank you Andrew

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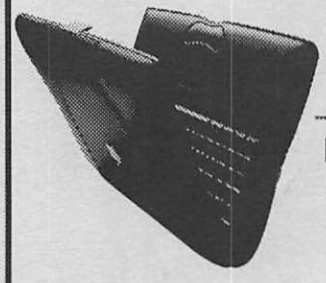

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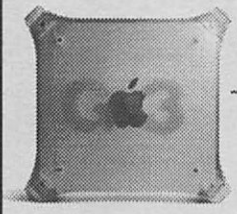
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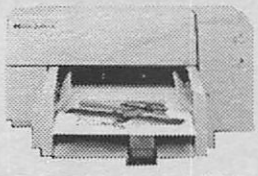


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