

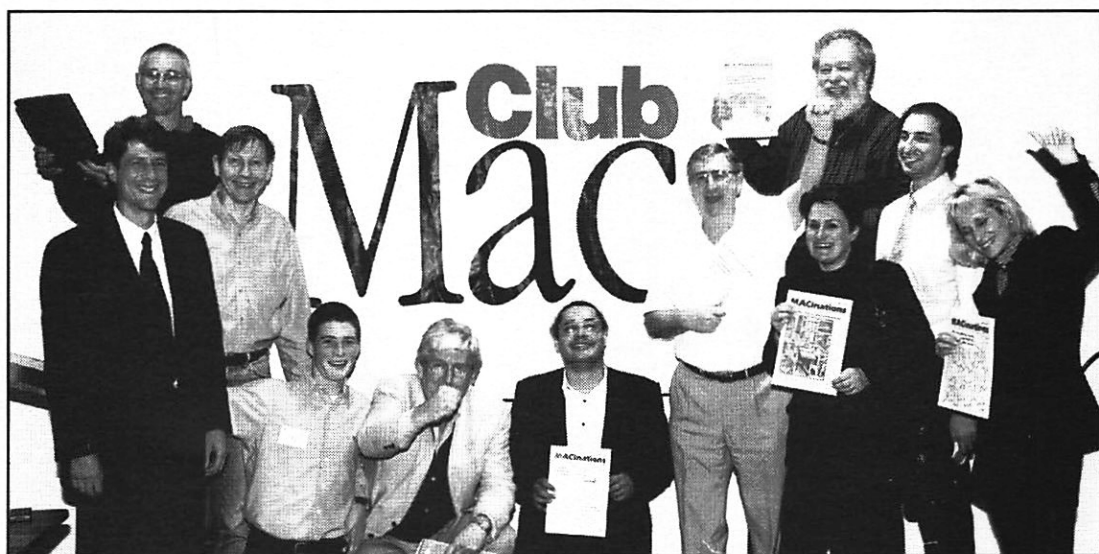
MACinations

Australia's leading Macintosh user group magazine

\$3

What a team!

**Steve Vamos (Apple Asia-Pacific)
pictured with Club Mac officers**



Steve Vamos (front left in suit) with Club Mac officers at Club Meeting, July, 1997. At rear Darryl Chrisp (left) and Tom Pardy. Others (L-R), Andrew Pavey, Alex Hartman, Marshall Ahern, Joe Mithiran, Piers Dunkley, Rose Marshall, Robert Naccarella and Jill Riddiford.

Photo courtesy John Fairfax, used with permission.

What an issue...

Apple & Mac issues

New two-part series
by Martin Blackman

Software reviews

KeyQuencer by Carl Vine
Communicator by Raymond Yu

Networking on a Mac

Lynda Kelly writes the
concluding article in
our four-part series

What's the time, Mac?

by Charles Cave

Personalising Eudora Pro

by Andrew Pavey

Plus all these usual features:

- ★ 20 Years of Apple
(A Personal View by Carl Vine)
- ★ FileMaker Pro Corner
(Repeating or related fields?)
- ★ Get Info Column from the Committee
(This month by Robert Naccarella)

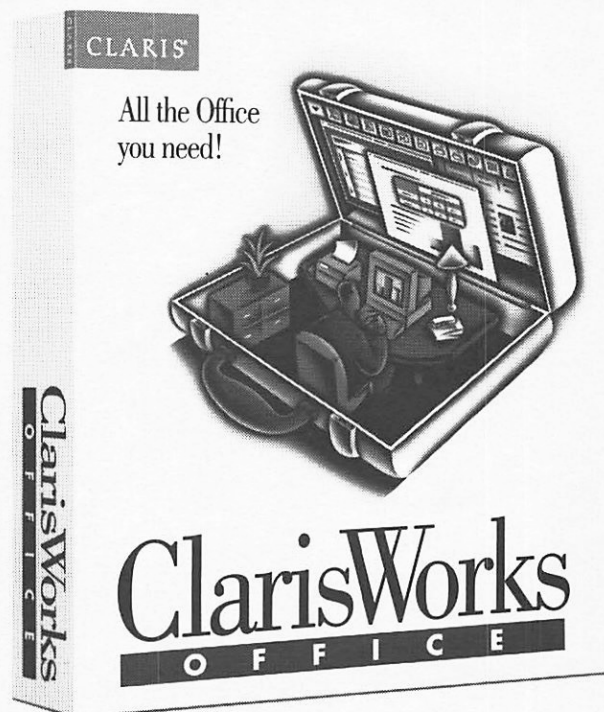
- ★ MACcess Report
(Focus on Macintosh OS 8)
- ★ Dunk's Doodles
(OS 8 President's retirement etc.)

Club
Mac

More Power and Compatibility Plus Internet Enabling and Linking

New Version

Features one click button bar access,
improved text ruler and new Web
and linking capabilities



ClarisWorks 5.0 Office features a customisable button bar, Internet enabling and linking, and enhanced HTML (Hypertext Mark-Up Language) translation for immediate productivity on the desktop or on the World Wide Web; an easy on-ramp to the Internet with a choice of Internet Service Providers (ISPs); Claris Home Page 2.0 for establishing a presence on the Web; and more than 200+ ready-to-use documents including JIAN BusinessBasics (Claris Edition), a comprehensive set of small business solutions from the makers of the popular business planning software BizPlanBuilder.

#80061	Claris Works Office 5.0 Upgrade	\$89
#80062	Claris Works Office 5.0	\$169
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Mac requirements are Mac OS System 7.0.1 or later and a 68020 or newer processor.
On all platforms, ClarisWorks Office requires a CD-ROM drive and 8 Mb of RAM
and 18 Mb of hard disk space for a minimal install.

Right tools at the right time

- The foundation of the ClarisWorks Office product, ClarisWorks Office 5.0 offers significant new features that deliver more power at users' fingertips. In addition to the button bar which brings one click access to 150 of the most commonly used features, ClarisWorks 5.0 includes an improved text ruler featuring new tab and margin guidelines for aligning text easily and instant access to text attributes such as font, size and style. Users can also now specify a default font for all their documents and password-protect confidential documents.
- The spreadsheet now supports named ranges so users can create easy-to-understand formulas that make data sharing easier. In addition, more than 100 functions included in the spreadsheet have been categorised for easier access. And, as important data comes in many forms, the database now supports multimedia fields including pictures and QuickTime movies. More than 400 new clip art images (900 total) are available to illustrate any ClarisWorks Office 5.0 document.
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- When sharing data with associates or friends who use other productivity software, ClarisWorks Office 5.0 makes it simple with translators for popular Microsoft, Lotus, and Corel products and others. It is also the only productivity suite that delivers complete cross-platform compatibility with no translation required.

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MACinations

Co-editors

Tom Pardy pardy@ozemail.com.au
& Rosalie Marshall rosmar@ozemail.com.au
 macinations@clubmac.org.au

Imagesetting

Everysize Typeart Services

Printing

The Print Connection

Club Mac Admin.

Club Mac Inc.
GPO Box 4523
Sydney 2001
NSW Australia

committee@clubmac.org.au

PD Software

PD Secretary
GPO Box 4523
Sydney 2001
NSW Australia

World Wide Web Pages

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A personal view

20 Years of Apple

©1997 Carl Vine

For regular MACinations contributor, Carl Vine, Macs haven't been all about word processing, databases and spreadsheets, they have been musical tools – despite the limitations of the early desktop machines.

It was 1984, the sun was shining, the air was clean, Ronald Reagan was leader of the Free World and I bought my first Macintosh. Like other intrepid adventurers into the world's most exciting new computer paradigm, I forked out \$4,000 for a **128K Mac** with a built-in 400K floppy drive and an Apple 72dpi **ImageWriter** printer.

In the 70s, I had experienced Fortran and Cobol on mainframe computers. It seemed astonishing that you could do something on a machine by inserting punched cards into a slot. I was unduly proud when I forced one of these monsters to play a Bach *fugue* by getting the "register overflow" alert to click at the appropriate rate out of a two inch monitor speaker.

By the early 80s, Apple, Sinclair and BBC Computers were revving up, but I headed straight for the hard-line **AIM-65**, a Rockwell micro-computer – made by the same company which was dutifully creating a "better Inter-Continental Ballistic Missile" for the US Defense Forces.

It had 32K of memory, no disk drive, (programs were stored and entered from cassette tape) and no screen, just a row of red LED's that showed a line of text or the status of the internal processor registers.

With trips to Tandy for add-on cards, I got this lunch box to play musical inventions and even sing a blues version of *Istanbul Not Constantinople*. (I was unable to eliminate the built-in American accent of the voice synthesis card.)

Suddenly the market was flooded. **TRS-80** ("trash-80") from Tandy, Apple, Spectrum, Amiga, Commodore and others emerged, with little machines that could run through a TV set or, for bigger bucks, through a "real" computer monitor.

But the pinball parlour video games seemed miles ahead of these "micro" computers, and I preferred to waste \$10 a hit than spend thou-

sands on a "toy" that only displayed 64 screen pixels at any one time.

When my old **Olivetti** typewriter died, I decided to upgrade. I had three choices: an early **Brother** electronic typewriter; the recently released **Amiga**; or the very first **Macintosh**.

The Amiga appealed because it sported an in-built MIDI port and seemed similar to the Mac's design philosophy. But the "computers should do what you want" tag, combined with Apple's proven track record, tilted the scales towards the Mac. I was determined to do something useful on this computer which, though laughable in today's terms, was a complete revolution thirteen years ago. Since it didn't have one, my first task was to create a **Macintosh-MIDI** interface.

I knew little about serial communication, so designed and built a stand-alone dedicated processor (using a **Texas Instruments CPU** chip, the same serial data chip used in the Mac) to convert Macintosh 57.6Kbd serial into MIDI 31.25Kbd serial. It had its own 240-volt power supply and ran a lot hotter than the Macintosh itself, but it worked! (A year later I discovered that the same effect could be achieved with an opto-isolator and a *System* software patch.)

I learnt Microsoft's first crippleware for the Mac – *MSBasic 1.0*. It had no *System*-level implementation, but I fooled it into sending data to the modem port at about the right rate to talk to the MIDI interface and drive a bank of MIDI synthesisers. This system "premiered" at the Sydney Opera House in late 1984 which, I suspect, was the first use of a Macintosh in Australia to create live music.

I launched into the only reliable programming language I could find – *68000 Assembly (Machine) Code*. With no hard drive and a 400k

floppy, I could write and compile assembly code programs from one *System Startup* diskette, but to actually **run** the programs required booting from another Startup disk.

For the world's most user-friendly *Operating System*, it wasn't very friendly! I set about writing the *ULTIMATE* music program for the Mac. It would be a high powered sequencer and music notation package, with all the bells and whistles, using less than 100K of disk space!


Before I produced something even vaguely useful, the first professional music products for the Mac arrived, making my effort look like the doodlings of a five year old. But, for those few years I could recite the Trap Code of almost any *System* call, had memorised the first two volumes of the *Inside Macintosh* manual, and had a closer relationship to that machine than is healthy or advisable in a grown man.

My current Mac is a **PPC 6100/60**, and I couldn't even tell you the hex address of the *System* heap. It's three years old, but faster than I need, runs all of the latest software, is OS8-compatible, and holds more shareware than I can use in a month.

Customised within an inch of its life, it runs 30 non-Apple Extensions, only crashes on freeware games and Web pages crammed full of *Java*, and still runs faster than with all Extensions off.

I can't believe that Apple will fall over. The *System* software is too good, the hardware (with few exceptions) is dependable, and the original vision of the "user friendly" computer is truer now than ever.

To be completely selfish, I don't care if Apple does collapse. This machine will do me for at least another five years, when the OS war will be over and new technology will make this machine look like a toy.

I love using my Mac. Now, where did I put that demo of *Duke Nukem*? 

Apple and Mac Issues



©1997 Martin Blackman

Some issues surrounding Apple and the Mac have caused quite a stir among both the press and Mac users. We have learned that Club Mac member, Martin Blackman, usually has a firm grip on such issues and we are very pleased to pass on his observations to our readers. As usual, Martin clears the air and gives our readers the "good oil".

Part 1 – Systems, Peformas and Open Transport

Not everything you read in the media gives a fair and unbiased representation of the full story. These are some of the issues where the computer press either is misinformed, fails to tell everything or just plain gets it wrong.

Rhapsody

The press has cited Apple's failure to ship *Copland* as a reason *Rhapsody* will fail to ship on schedule, if at all. Scepticism is understandable, yet this doesn't necessarily follow. Consider:

- \$US435 million buys a lot; in NeXT this means good software and good people.
- More engineers than ever before are working on *Rhapsody* and the Mac OS. (*Copland* had eight engineers, compared with over one hundred now working on the Mac OS and *Rhapsody*.) Many are from NeXT.
- Avie Tevanian (VP of OS development) is very competent. He was part of the team who developed the first microkernel based Operating System, *Mach 1.0*. (*Rhapsody* will be based on an enhanced *Mach 2.5.8* kernel and eventually on the *Mach 4.0* kernel).
- All the elements of the new OS are there, Apple just has to put them together.
- The *Mach* kernel, *NeXTStep* and *OpenStep* are already running on Intel and *OpenStep* already runs on top of *Windows NT*.
- Highly under-reported is that NeXT had almost finished porting *NeXTStep* and *OpenStep* to the Power PC (a dual PPC), but hadn't released anything for the PPC. This included 'partial,

maybe full, support for Symmetric Multi Processing (SMP). As part of the *MkLinux* project, Apple had ported most or all of the *Mach 2.5* kernel to the Power Mac.

- *QuickDraw 3D* and *QuickTime* already run on Power Macs and Intel PCs. Both have been ported to *Rhapsody* and demoed.
- The *Blue Box* is Mac OS 8 with the hardware dependencies removed.
- At the WWDC, *Quake* was demoed running on *Rhapsody* (simultaneously running two *QuickTime* movies and a *Java* applet) indicating that *Rhapsody* already includes much game support, specifically the functionality of the earlier *Game Sprockets*. Games are crucial to *Rhapsody*'s success.
- So far all demos have been crash free, in stark contrast to *Copland*, which was not demoed at last year's WWDC.
- *Copland* had little direction. In contrast, Apple employees comprehensively answer questions about *Rhapsody* – Apple

knows exactly where it's going with *Rhapsody*.

- Apple has to ship on time and it knows it! Apple has shipped *System 7.6*, *7.6.1* and now *Mac OS 8* – all – on time.
- Rumours from several sources indicate that *Rhapsody* is several weeks ahead of schedule, because some elements of *Rhapsody* that Apple had predicted (and scheduled) to be hard to code turned out to be easy. The prime example is the *Blue Box*. Many commentators have questioned *Rhapsody*'s chances of success because few developers have yet committed to *Rhapsody*.

Macintosh developers are waiting until they have the developer release of *Rhapsody* (which will have shipped by the time you read this). It is likely that many who have been withholding support for *Rhapsody* will soon announce their commitment.

On the other hand, NeXT developers are very keen to develop for *Rhapsody* – maybe they know something about NeXT (now a ma-

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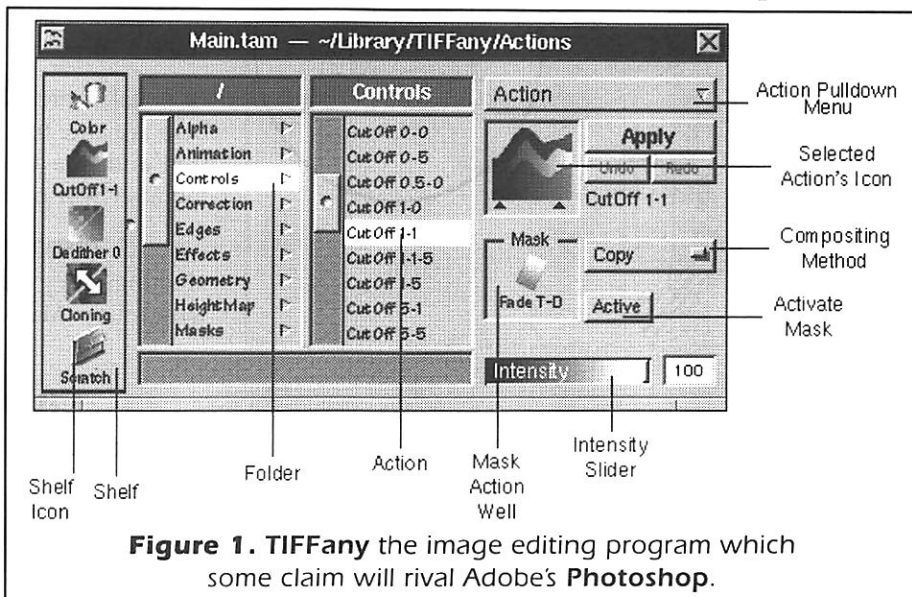
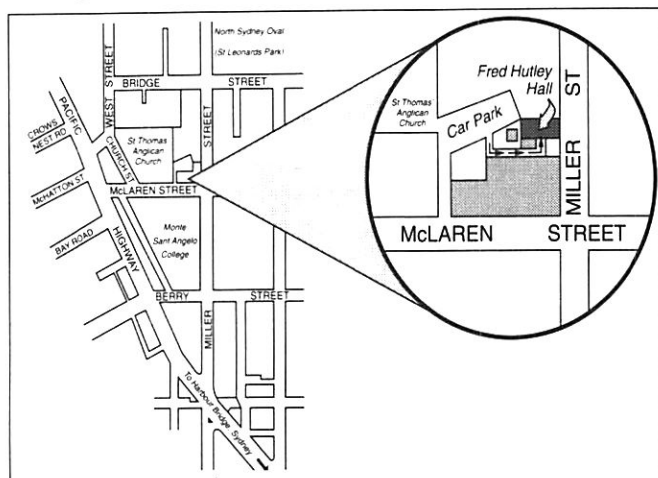


Figure 1. TIFFany the image editing program which some claim will rival Adobe's Photoshop.

October Club Mac Annual General Meeting

The Annual General Meeting of Club Mac will be on Wednesday, 15th October, 1997, at 6:30pm in the North Sydney Council Buildings on the corner of McLaren Street and Miller Street, North Sydney. This is your annual opportunity to exercise your democratic membership of the Club! Who will be on the new Committee to guide the Club through the next twelve months? Come and have your say!



As well as the AGM, the meeting will feature a visit by **Chris Smother** (Systems Manager) and **Teale Bryan** (National Reseller Manager) from **Firmware Design**. They will be demonstrating *VirtualPC*, a great little emulation software package for those who need to use *Windoze*.

As usual, there will be a Q&A session when members are able to ask almost any Mac-related question and, the Club being what it is, some other member will probably have the answer.

Never miss a meeting!

Meetings are great opportunities to rub shoulders with fellow Mac-o-philes.

Club Mac Special Interest Groups (SIGs)

■ Beginners SIG

Meets in the Geddes Room, North Sydney Municipal Council, 6:30 to 8:30pm, Thursdays, eight days after the regular Club Mac meeting.

■ Database SIG (largely FileMaker)

Also meets in the Geddes Room, also 6:30 to 8:30pm, but on the fourth Wednesday of the month.

■ Omnis SIG

Meets at 327 Sussex Street, Sydney (nice and central). Contact Reg Paling (telephone 9905 4405) for more information, including the date of the next meeting.

Club Mac has a Help Hotline

02 9960 5717

Fax or phone and leave your name, phone number and a description of your Mac problem. Another Club Mac member will get back to you and do everything possible to advise you! This service is free, but we are all volunteers. So please be patient! Sometimes we have problems too!



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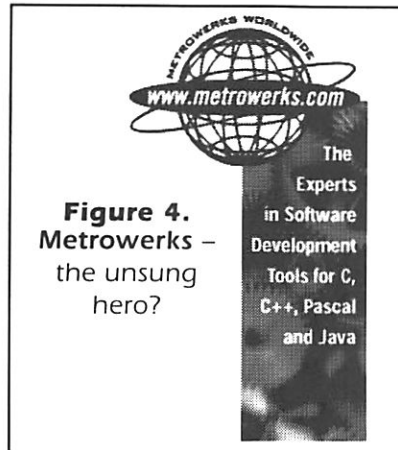
MACinations is an independent publication for users of Apple Macintosh computers and related equipment. Whilst the editors of **MACinations** are answerable to the Committee of Club Mac Inc., the views expressed within **MACinations** are those of the editors or of the respective authors of published material and not necessarily those of Club Mac Inc. Is anyone reading this at all?

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majority of Apple's software division) that Mac developers don't? What's most exciting about NeXT developers is that they may give Mac users alternatives to traditional programs such as *Word*, *Excel*, *PageMaker* and *Photoshop*. There has been much muttering about *TIFFany*, an image editing program designed to take full advantage of *OpenStep*'s multi-threading capabilities.

The transition from today's *Mac OS* to *Rhapsody* will be similar in many ways to the move to the PowerPC chip. Backward compatibility which was crucial to the PPC, will be vital to *Rhapsody* and Apple is providing this.

Metrowerks *Code Warrior*, the first development environment for the PPC, has proved essential. It has meant that many developers have indeed developed for the Power Mac. Metrowerks is right behind Apple and *Rhapsody*, seeking to provide developers with the tools they need. Metrowerks may be an unsung hero (where Apple fails).



Performas

Reactions to the Performa range of consumer Macs were mixed (a brand name Apple has dropped).

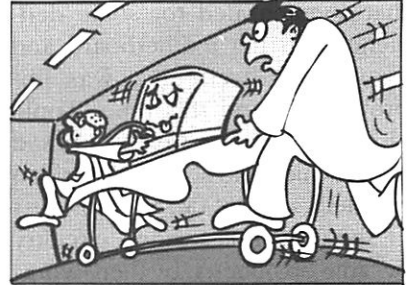
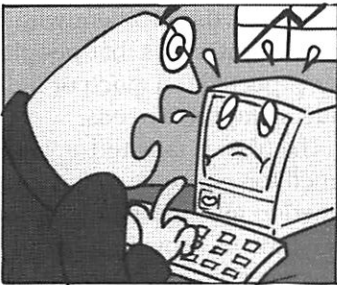
Earlier this year Apple released the Power Mac 6500, the latest of its consumer Macs. Many (the press included) have been uncertain whether or not the 6500 is just another Performa (with the associated problems and shortcomings) and accordingly, whether it should be purchased. This question can be answered by taking a history lesson.

In 1994, following the release of

the LC 575, Apple was attempting to break new ground in terms of value with consumer Macs. The LC 630 was born, based on a new motherboard architecture. This design was to deliver greater capabilities than previous consumer Macs whilst saving money. To achieve this Apple did several things:

- New expansion options were added, including the option for a TV tuner and video capture card, and the disk drive was IDE not SCSI. (SCSI is faster, IDE is cheaper.)
- Sound was 8bit (as opposed to 16bit in the first generation Power Macs) except for CD playback which was 16bit.
- Direct Memory Access (DMA) that allows data transfers between peripheral devices and main memory to go unattended by the CPU, which was present on the first Power Macs and some Quadras, was not used.
- Video was not accelerated (like every other Mac at the time ex-

Continued page 8 overleaf



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cept the Quadra 950) and used standard DRAM that is slower but cheaper than dedicated VRAM (Video RAM).

The LC 630 was a great Mac. In 1995 Apple released the first of its PPC-based consumer Macs, the Performa 5200/75. Its motherboard was replicated from the LC 630, with enhanced sound and a PPC 603 processor.

It is here that the first fallacy regarding Performas arises. The motherboard retained the 32bit memory bus and architecture (lacking DMA). Combined, these factors significantly dragged processor performance compared with the first Power Macs (which had DMA and 64bit memory buses).

Many reviewers wrongly claimed that this was the result of the 603 being significantly slower than the 601. It *was* slower, but only by about five percent. Given that the 603 was cheaper, used half the transistors and a fraction of the power compared to the 601, it was a much better (even amazing) chip.

Later in 1995, Apple released the Performa 5300/6300, which had the faster 100MHz 603e processor that compensated for some deficiencies in the motherboard and again, sound circuitry was improved. Around this time, Apple also released the first PCI-based Macs, which had accelerated video and dedicated VRAM. The slowness of the Performa's video circuitry became obvious as, by then, working at 800x600 pixels had become the norm and Performas supported only 8bit colour at that resolution.

With no way to expand VRAM, overcoming this problem meant buying a PDS card. The PCI graphics and SCSI cards, which by then had appeared, were out performing NuBus/PDS cards that cost substantially more, and Performas were stuck with PDS cards.

Quality issues arose about the Performa 5200/5300/6200/6300 models. Specifically, a faulty cache and ROM DIMMs prevented *Open Transport* from working and a faulty video cable resulted in the screen presenting a blue tint (among other

video problems). To compensate, Apple introduced the seven year repair extension program and, slowly, faulty machines were fixed.

Another problem was that *Real Audio* wouldn't work properly. The problem turned out to be a software conflict between the sound and serial drivers, which has been fixed in *Mac OS 8*.

Recognising that the original LC 630 architecture had become outdated, Apple designed a new motherboard codenamed **Alchemy**, which was used in the Performa 5400/6400. Based around PCI, it used a 64bit memory bus with EDO DIMMs (faster than conventional SIMMs) and had full DMA. The sound is among the best included with any Mac and uses SRS 3D (built into the motherboard) which fools the ear about the origin of the sound. The result is more realistic sound.

The 6400's tower case provided more room for expansion than the 5400 or 6300, so most of the limitations of the 5300/6300 were removed, with the exception of the video which was identical to previous Performas. One compensation was that a third party PCI video card could be used as an alternative to built-in video.

This year, Apple has released the Power Macintosh 5500/6500 which uses the **ATI RAGE II** chip and 2MB of dedicated VRAM (equivalent to an ATI XClaim VR PCI card). As a bonus, the RAGE II chip acceler-

ates *QuickDraw 3D*, *QuickTime* and *QuickTime MPEG*.

Even more impressively, the 6500 included a PPC 603e running between 225 and 300MHz. The 6500 has had two problems – faulty Level 2 cache DIMMs and video ghosting problems – which Apple is addressing.

The Power Macintosh 6500 has removed the last of the limitations facing earlier PPC Performas. Consider this machine if you are looking for a new Mac, but remember that part of the problem with earlier Performas was that people either expected too much or did not understand their needs.

The 6500 is targeted at, and designed for, consumers. It is not designed to give top notch performance, nor to provide a high level of expansion. If you need either of these, you're in the market for a business or high-end Mac (the Power Mac 7300 or 9600). Try before you buy! Unfortunately, the best way to do this is using the 30 day money back guarantee – something Apple should offer on all its products.

Open Transport

Promoted as making Mac networking faster, more reliable, easier to set up and more flexible, the first versions of *OT* left quite the opposite impression. *OT* in *Mac OS 8* is the third major release and, despite its troubled upbringing, it lives up to most promises.



Picture courtesy Holt PR

Figure 2. One of the Performa 5400 series.

Classic Networking – which preceded *OT* – used separate protocols (*AppleTalk*, *TCP/IP*, *PPP*, *IPX*) totally independently of each other, so each protocol was configured through a different interface. *AppleTalk* was controlled through the *Chooser*, *TCP/IP* support was provided by the *MacTCP* Control Panel, *PPP* was provided by Apple (and some third parties) and used the *MacPPP* Extension and the *Config PPP* Control Panel.

MacTCP and *MacPPP* were not new – *MacTCP* was composed of bits of assembly code hacked together. *TCP/IP* was reasonably stable, although the Mac would freeze occasionally while using the 'Net. Configuring *MacTCP* was especially dicey – the Control Panel locked up if you tried to do too much – and making changes to the current configuration meant restarting.

Using two ISPs involved swapping Preferences files and restarting (or some other unorthodox solu-

tion). The shortcomings of *Classic Networking* are often forgotten when comparing it with *OT*.

With the introduction of PCI to the Macintosh and as *Classic Networking* was not PPC-native (not to mention other shortcomings), Apple decided to rewrite the Mac's networking entirely.

The **Unix streams environment** (a modular networking framework) was ported and adapted to the Mac OS, with protocols and drivers adapted as plug-in modules. Apple wrote an *AppleTalk* stack and licensed a *TCP/IP* stack from Mentat Inc. In mid-1995, when Apple was ready to ship the first PCI Mac (the 9500), *OT* was behind schedule. Without it, the 9500 would have had no networking so, to prevent delaying the 9500, Apple rushed out *OT*.

The results were predictable. *OT 1.0* was slow, unstable and had endless compatibility problems with the **Network Interface Cards** (NICs) and Internet software of the

time. Over the succeeding months, Apple released numerous *OT* updates, added support for other PCI Macs (the 7200, 7500 and 8500) and for networking hardware, which improved performance and fixed many bugs that had appeared. *Version 1.1*, which was the first major update, added support for NuBus-based Macs and was included with *System 7.5.3*.

Although still slow, *OT 1.1* provided usable levels of compatibility and stability. As a result of *OT*, Apple would never again tie *System* updates to hardware updates, which is why new Macs now ship with older versions of the Mac OS – support for these machines is added in later *System* versions.

The reviews of NICs and Web servers using *OT* showed poor performance compared with *Classic Networking* and Wintel PCs. Reviewers were quick to blame *OT*

Continued page 10 overleaf

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and the architecture of the *Mac OS*.

While *OT* was partly to blame, also at fault were the PCI network cards that were rushed out by NIC vendors. Many of the card drivers were adapted from earlier NuBus-based cards and were not PPC or *OT*-native. (*OT* provided backward compatibility for drivers and applications using *Classic Networking*.) Applications that used *Classic Networking* had to be modified to take advantage of *OT* and, although backward compatibility was provided, it entailed emulation.

Emulation is slower for two reasons. Firstly, translating instructions incurs an overhead. Secondly, native and emulated code cannot run simultaneously, the Mac must switch between native and emulation mode. While this switch – called a **context** switch – occurs, processing is halted, slowing *Systems* down.

Because drivers and applications were not written to take advantage of *OT* and many drivers were not PPC-native, when an application sent a packet of data, **four** context switches would occur before control returned to the application, two at the backward compatibility level and two at the driver level. The effect on performance is obvious!

Many of the tests reported in reviews of *OT* used *AppleTalk* over high speed networks (10 or 100Mb/s Ethernet). *AppleTalk* was originally designed (along with the first Macs), as a **fixed** packet size to simplify networking code, reducing memory requirements and processor demands.

Each packet consists of **actual** data, **and information** about the contents, **and the source/destination** of the packet, which is used to determine how it is handled. This packet header is necessary for a network to work, but represents wasted network capacity because actual data could be sent in place of the header. In the case of *AppleTalk*, the packet size was chosen so that it would be efficient (maximum throughput with minimum errors) running on *LocalTalk*.

On faster networks, larger packets mean that more actual data and

less control data is sent, making the network more efficient. However, since the packet size of *AppleTalk* is fixed, it is less efficient on faster networks than protocols which allow varied packet sizes (*TCP/IP*, *IPX*). This is the same for both *Classic Networking* and *OT* and is why *AppleTalk* should **not** be used on high speed networks.

This did not deter reviewers from comparing Macs running *AppleTalk* to PCs running *IPX* over fast Ethernet. Such a comparison will simply reflect the difference between *AppleTalk* and *IPX*, a more valid comparison would be to compare Macs and PCs both running *IPX* or *TCP/IP*. As for the architecture of the *Mac OS*, that was less of a factor in the performance of *OT* and more a reflection of the reviewers lack of understanding of *OT* and networking.

So what happened to overcome these problems? Several things. *OT*'s second major update, *version 1.1.1*, went through two public betas, fixing a long list of bugs (including an incompatibility issue with Performas) and improving performance. At the same time, Apple released *OT/PPP*, the first PPC and *OT* native-PPP client, which added to the performance boost.

OT 1.1.1 was the first version it was actually possible to recommend! *OT 1.1.2* was a minor bug fix and *OT 1.2* (included with *Mac OS 8*) fixes approximately forty bugs, including several server related per-

formance and security bugs. Performance is noticeably improved over *1.1.1*, and subjective comparison (actual use) is sufficient to show the performance difference between *OT* and *Classic Networking* when using *TCP/IP*. Expect to see further performance improvements in future versions of *OT*.

NIC vendors released a flood of updates to their drivers. Performance gains as much as forty percent or more reflected the poor state of the first versions.

Software developers also made Internet and networking applications fully *OT*-native as they rolled out new versions. Today, emulation in the Mac's networking and the resulting performance penalties have been virtually eliminated.

The Web servers, **Rush Hour 1.2** and **Web Star 2.1**, stand head and shoulders above any previous offerings, allowing the Mac to come much closer to *Windows NT* Web servers in performance.

Until recently, if you were using *AppleShare*, the only choice of network protocol was *AppleTalk* on *LocalTalk* and 100Mb/s Ethernet. Third party products such as *Run Share* and *Net Doubler* attempt to speed up *AppleShare* and reduce *AppleTalk*-associated performance penalties. Some months ago, Apple released *AppleShare IP 5*, which supports *AppleShare* running over *TCP/IP*, giving a signifi-

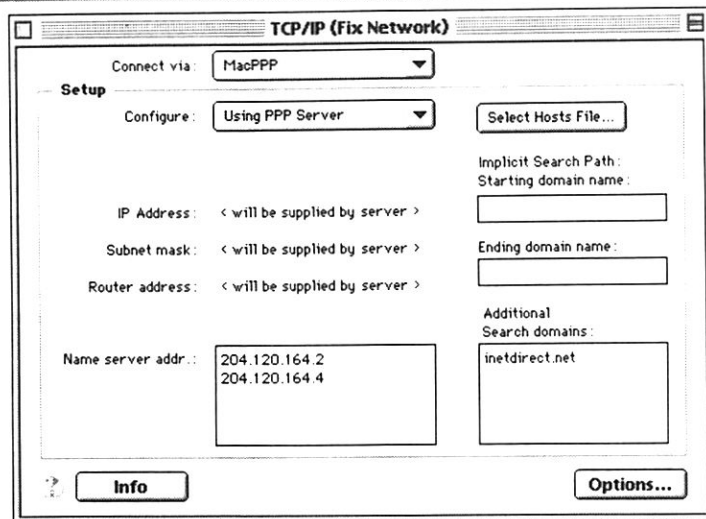


Figure 3. Sample Open Transport TCP/IP settings.

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From the President

The news from Apple USA continues to be controversial. Not only has Steve Jobs reasserted his authority, he's apparently now actively trying to reduce the Mac clone market.

The Internet is alive (as I write) with rumours that Apple will buy out the licences of the two key clone manufacturers, Power Computing and Motorola. Power has been the most successful of the clone manufacturers and Motorola has a premier position by virtue of providing motherboards to other clone manufacturers as well as their own branded line of Mac clones.

Apple originally hoped that the clone manufacturers would expand the marketing of Macs to areas where it had neither the expertise nor the interest. Instead, the clone makers have cannibalised Apple's own sales.

Steve Jobs, who introduced the Mac as a closed architecture design, has expressed strong views about clone licences and, now that he's back in a position to influence Apple's directions strongly, it appears that he's trying to kill off the clones. This may help Apple's immediate bottom line position, but I feel that it is not a good long term decision.

Apple's market share has been falling, despite improving sales. It hasn't kept up with the expansion in sales of personal computers world-wide. Adam Smith was right (I paraphrase), "There's nothing that succeeds as well as a low price".

PC sales are expanding as manufacturers drive prices ever lower, making the PC attractive to a wider customer base. Apple has done well in providing increased "bang for our buck" over the years, but the reality of the market place is that Macs are still more expensive than poorly specified (by comparison) PCs. At least the clone manufacturers were pushing prices down. I fear that, if Apple drives them out of existence, it will return to its old high price, high margin ways, and reduce the ability for an even greater number of people worldwide to experience the joys of owning a Mac.

This will be my last column as President. For mainly personal reasons, I have decided not to stand again this year. I was Vice-President for two years, and have been President for the last three.

I believe it is important that the executive in voluntary organisations is turned over regularly. There is a need for a mix of wiser old heads

with experience and new blood keen to take on the challenges.

Once again this year, we have not been flooded with volunteers to take on Committee jobs. For most positions there is only one nominee (and therefore no need for an election). Two positions, for which there were no nominees at the close of nominations, will need to be filled via nominations from the floor at the AGM.

When I joined the Club, things were much more haphazardly organised. Then we went through a period of instability. I thought I could contribute to defusing the flame wars and removing the personal fiefdoms which had developed, and stood for a Committee position. The bad times are now well behind us.

Today the Club is running on a sound financial basis, the magazine has great mix of local and international content. The BBS is well run and has a variety of services, like e-mail, chat and message areas and a huge selection of software. As good as things are, there is always room for improvement. I hope the new Committee can deliver on behalf of the members. I wish them well.

Andrew Pavey

Apple & Mac Issues - cont from p. 10

cant performance boost over previous versions of *AppleShare* and allowing it to operate effectively in Intranet environments.

If you're worried about using *OT*, relax. Many of the bad things you've been hearing or experiencing no longer apply. *Mac OS 8*, which includes *OT 1.2*, bundled Internet programs and an *Assistant* to help you set it all up, is likely to make life easier when hooking up a Mac to the Internet. If you use *AppleShare* in combination with a 10BaseT Ethernet (or faster) network, you should seriously investigate *AppleShare IP 5*.

Just when everything was falling into place, *OT* got the chop when Apple restructured earlier this year. *Version 1.5* was cancelled

and *OT* entered "maintenance only mode" and was declared dead by the press. The *OT* team at Apple was reduced in size and support for outdated versions of the *Mac OS* was dropped. In practice, this means that enhancements will be added to *OT* more slowly than before and the latest version will only run with the latest version of the *Mac OS* (and possibly the one immediately before).

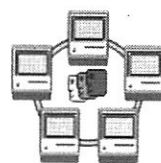
The revised release schedule for *OT* calls for a new version of *OT* with every new version of the *Mac OS*. This should mean about seven releases in the next two and a half years (hardly dead). One of the two updates following *Mac OS 8* will include **multi-homing** and added features will be those most

requested by users.

Apple has said that it will be unnecessary to port *OT* to *Rhapsody*, as they are enhancing the user interface of networking in *NeXT/Open Step* (the basis of *Rhapsody*) and they may add a streams environment (the basis of *OT*) in the mid-1998 unified release. If this is true, then *Rhapsody*'s networking will include all the functionality and features of *OT*. ■

Look for the second of Martin Blackman's two part series on **Apple and Mac Issues** in the November, 1997, edition of **MACinations**, in which he investigates the effects of clones on Mac sales, chip choices and Apple's dilemma over **Game Sprockets**.

Networking with Macs



©1997 Rosalie Marshall, Lynda Kelly and Andrew Pavey

What a series this has been! We take some delight from noticing at least two of the commercial Mac magazines have picked up the idea and run articles of their own on networking, sometimes even using our headings! In the first two articles, MACinations Co-editor, Rosalie Marshall, introduced readers to the general concept and then focussed on the sophistication of Ethernet. In the third article, Club Mac President, Andrew Pavey, discussed the practical application of networking by commercial operations, specifically in setting up an Intranet. Now Lynda Kelly completes the series with a "nuts-and-bolts" description of an Intranet in action.

Part 4. An Intranet in action

by Lynda Kelly

The introduction of an Ethernet network at St Joseph's Regional High School, Albion Park, has been somewhat of a bombardment for some but, for those of us who have painstakingly worked with two labs of 30 stand-alone Macs for an eternity, the Ethernet network is welcomed enthusiastically.

As far as computing at the school is concerned, there is no turning back. The quantum leap from stand-alone to the Intranet and the Ethernet network has been well worth the wait. To arrive at work in the morning – lesson on disk in hand – and:

- Not to have to run around and copy the contents of the disk individually to hard drives; and...
- Not to have to carry home boxes of 60 Year 10 disks to mark Web page assignments; and...
- Not to have to run from one end of the school to another whenever there is a computing problem; and...
- Not to have to load application programs on each machine from a set of floppies...

this can be described as nothing less than a pleasant relief!

The networking installation has not been without its problems. Small technical hitches along the way have had to be overcome. Still, they are not significant enough to convince us to go back to the stand-alone problems of the past.

Intranet advantages

To outline *all* benefits would take all day. A small summary of the major benefits will suffice.



Files and applications can be shared between all computers in the school, alleviating the need to move from your own workstation or to transport files on disks.

For example, school reports can be transferred to an administration workstation to be processed. In a large school, this is a huge benefit because it saves time running from one end to the other.

From the computing labs, students can drop assignments or assessments into a folder on the staff-room workstation.

Any networkable printer in the school can be selected and commanded to print a document. This allows for rosters, notices and timetables to be printed out accurately without manually photocopying them and having them delivered by hand.

Storage is better too

Storage becomes a matter, not of how much will fit on an 80MB hard drive but rather, how much room is left on the 4GB server. Up until now, tasks such as video editing, colour scanning and intense graphic animation have been very trying.

Once files on floppies, hard drives and Zip disks have been compressed beyond choking point, you begin to get a frustrated class.

With networking, it is now pos-

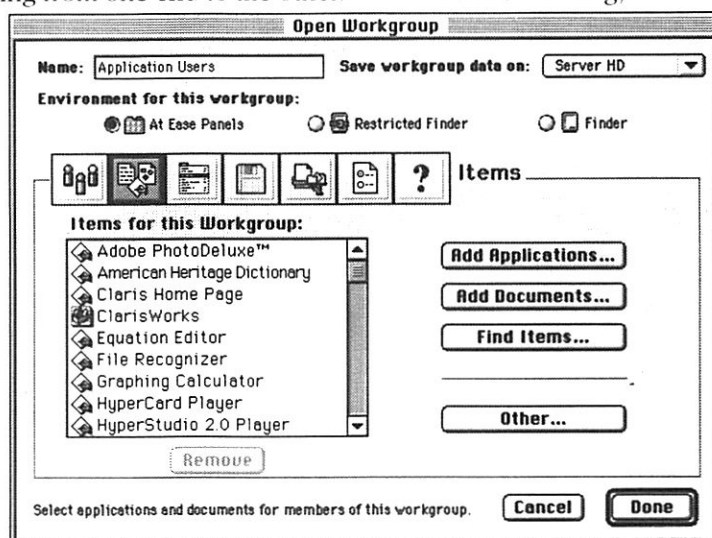


Figure 1. By putting all applications on a server, they can be made available to those in designated At Ease workgroups.

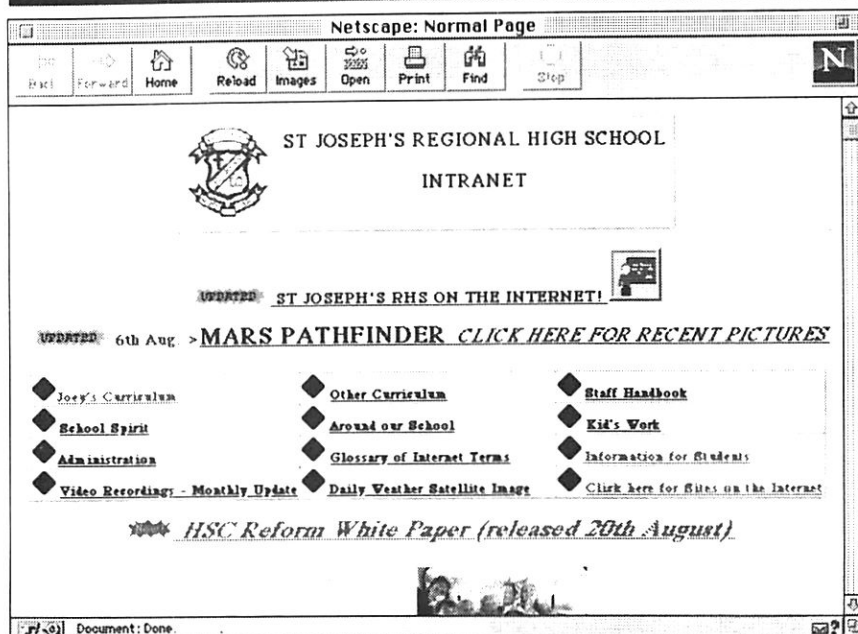


Figure 2. This is the main Menu for the Intranet. As you can see, it is much like browsing on the Web, even to using Navigator.

sible to save all work to a file server – be it the *AppleShare* or *NT* server.

Software installation is made simple. All software is loaded onto the filer server, from where it can be directly installed to the required workstations. There is no copying of folders, Extensions or Preferences bit by bit. Just click on the Installer icon and...no problems. This means that, theoretically, all machines can install software at the same time.

CDs too!

CDs can also be accessed across the network. A CD tower or stacker allows for 14 CDs to be accessed

simultaneously from anywhere in the school. Of course, access speed is not as fast as reading it straight from your own drive, but the loss is minimal. If you are in a hurry, CDs can be placed into the CD drive of the *AppleShare* server and shared that way.

Some of the CDs we are running at the moment include:

- *The Sydney Morning Herald*;
- *Totally Gorgeous*;
- *World Book Encyclopedia*;

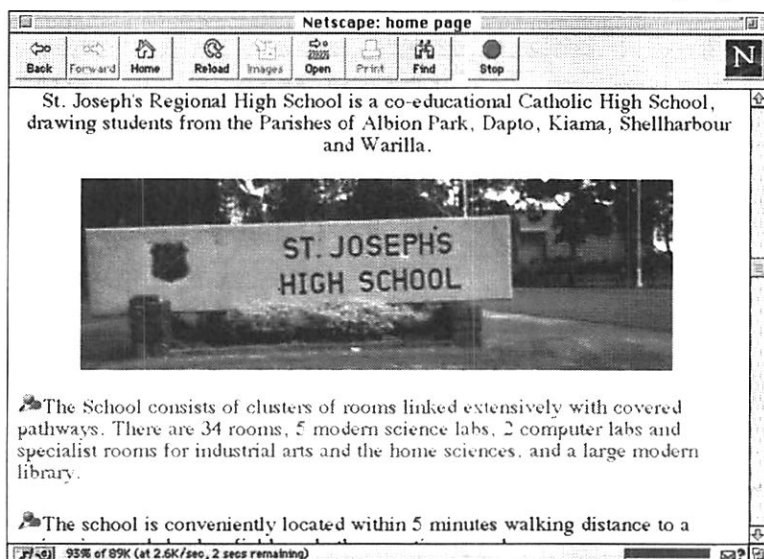


Figure 4. This is the school Web page that gives access to the various student Web pages.

- and *Pickle Street*.

There is an ever increasing number of CDs being developed for all Key Learning Areas (KLAs). I have been particularly impressed lately by the quality of CDs now entering the market place for educational purposes.

Resources from the WWW

Interactivity does not stop at the CD-ROM tower. The newly developed Intranet is also an asset in our networking system. With the help of invaluable software like *Web Whacker*, teachers can "whack" pages from the Internet. (This means saving the Web page in its complete form, graphics and links included, to the hard drive of one's own computer.)

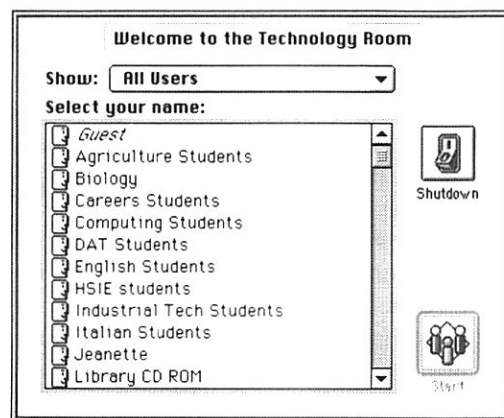


Figure 3. When starting to log on, this is the dialog box that greets you.

These pages can then be uploaded to our school Intranet. The advantage of this is that, as teachers, we can select content carefully from the Internet – content which is appropriate to the area being studied – and students are not given the opportunity to go "surfing externally". They cannot access inappropriate material and there is no extra cost for online access time.

Time-savers

Many of the educational arguments surrounding the Internet complain that it is frustrating, slow and overwhelming. Most studies in Internet usage indicate that vast amounts of time can be wasted with little to show for the effort. By the time the use of a search engine has been

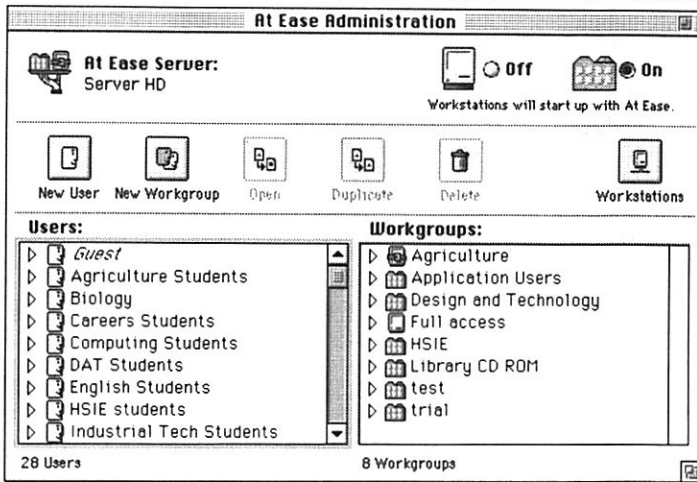


Figure 5. At Ease Administration is simplicity itself.

mastered and some useful content has been found, both teachers and students can be left with the feeling that the whole ordeal was a waste of time.

Intranets alleviate this problem. Apart from using content from the Internet, teachers can also develop their own content. Software like Claris *Home Page* can be used to develop one's own pages. Web page development is not limited to teachers. Students can also publish their work on the Intranet for the whole school to view. For the junior stu-

dents, *Web Workshop* is an excellent application that is very simple to use – it alleviates difficult graphic insertion and linking.

Easier e-mail

Internal and external e-mail can be an integral part of the school's communication system. For the moment, our paper delivery system is deemed far more effi-

hold incoming and outgoing mail. With the help of a router and a domain name, a limited number of users can be given access to the Internet. This is not meant to be used as an ISDN line, because it's not. One dedicated phone line is used in conjunction with a hardware router to provide Internet service to all workstations connected to the network.

It is not expected that a full lab of computers will be accessing the Internet at the same time. This simply won't work with the current

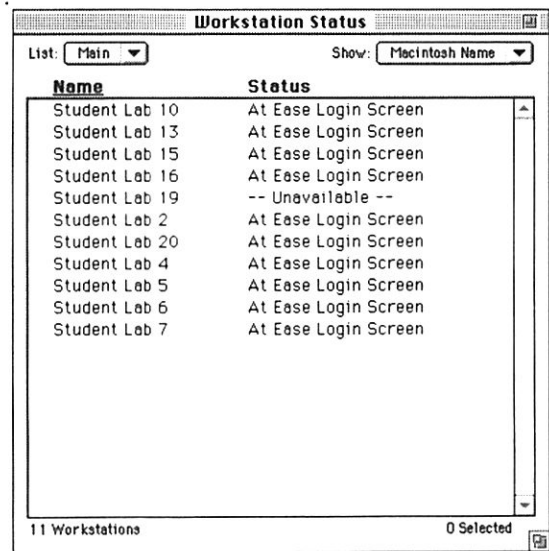


Figure 6. This is what the network administrator sees on log in.

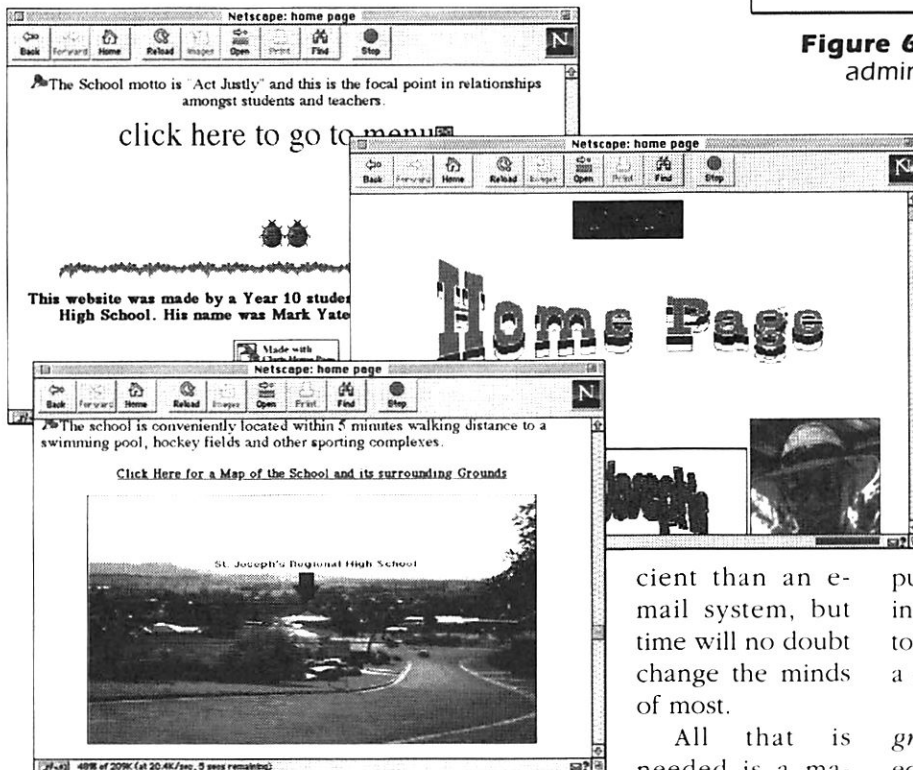


Figure 7. Students' Web pages show the usual creative skills!

limited bandwidth and a 33.6k modem. Our system is designed simply to provide Internet facilities for staff and for senior students requiring the Internet for research.

What about security?

Network security is an issue of utmost importance. There are always going to be concerns when student labs are connected to the same network as staff and administration computers. The thought of students having access to their own reports or to teachers' resources was, for most, a contentious issue.

We have found *At Ease for Workgroups (version 4.0)* more than adequate for developing appropriate levels of security. *At Ease* allows for a list of users to be set up, each

cient than an e-mail system, but time will no doubt change the minds of most.

All that is needed is a machine dedicated as a mail server to

Networking with Macs

with their own username and password. When starting a lab computer you are presented with an *At Ease* login screen from which you can select your user ID and enter a password (see Figure 2).

Users can be given varying degrees of access, according to their needs. **Full Access** allows an ordinary Macintosh environment to be used. **Restricted Finder** allows for users to see the basic *Finder* setup, including a folder for the workgroup with items allowed to be used. The final level of security is the *At Ease* panel.

Once logged in, a student is presented with an **Applications Panel** and a **Documents Panel**, allowing that student access to work on the file server. The network administrator has full control of the amount of access, including the access any one group has to applications, printers, documents and storage.

This has been an absolute godsend as we are not constantly resetting Control Panels and emptying out unwanted Extensions – as we have done the past. As you can imagine, the hard drives remain unscathed!

Network Administrator

Apart from *At Ease*, the most innovative software I have seen for a

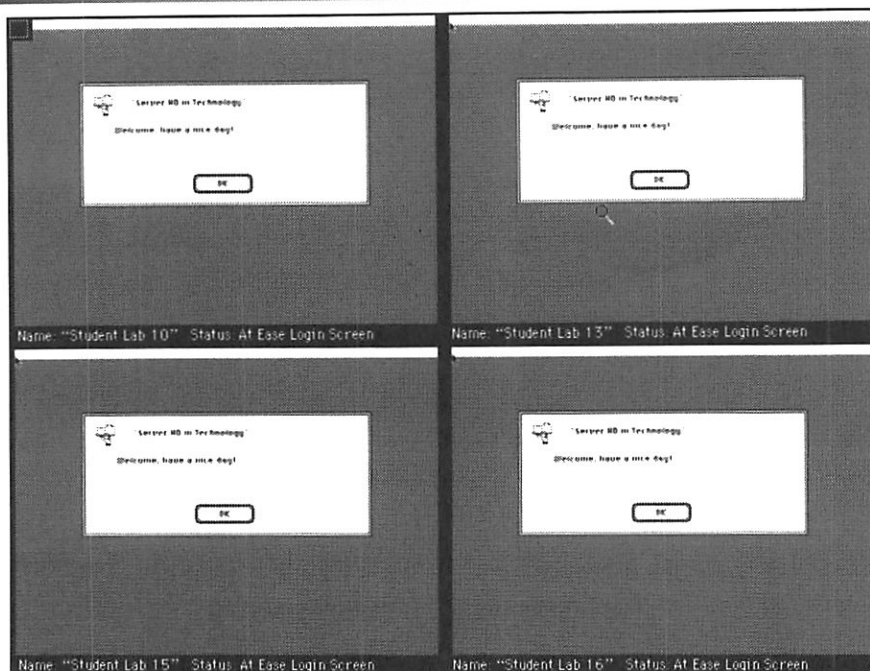


Figure 8. How useful it is with **Network Administrator 4.0** for a teacher to be able to watch the screen of every pupil in the class!

long time is *Network Administrator*. This is truly an amazing piece of software. If necessary, any machine in the school can work as the administrator machine.

This program allows for remote administration of all computers in the school, if necessary. An administrator can take full control from the user of any machine on the network. The administrator can observe a particular machine individually or can tile the screens of every computer in a class or, if

down at the same time and files can be copied within seconds to each machine. No more installation from floppies! Text messages can be sent across the school instantaneously.

Teach by showing

The screen of the administrator can also be shared with all other workstations. This is particularly handy for demonstration purposes.

It is difficult to instruct students on how to use computers. Some learn from listening, others from reading, but most from observing. By talking the students through a procedure, showing them on their own workstation, you can be guaranteed a better result. If one student has done some work that is particularly impressive, his or her screen can be shared to all other computers in the lab so that the rest of the class can view the work.

Networking our school has been well worth the financial outlay. Although it has been hard work constructing and developing it, the advantages of such a system are becoming clearer to us every day. With perseverance and patience, this system will continue to expand and deliver the goods in terms of time and resources. Most importantly, it will be a valuable educational tool.

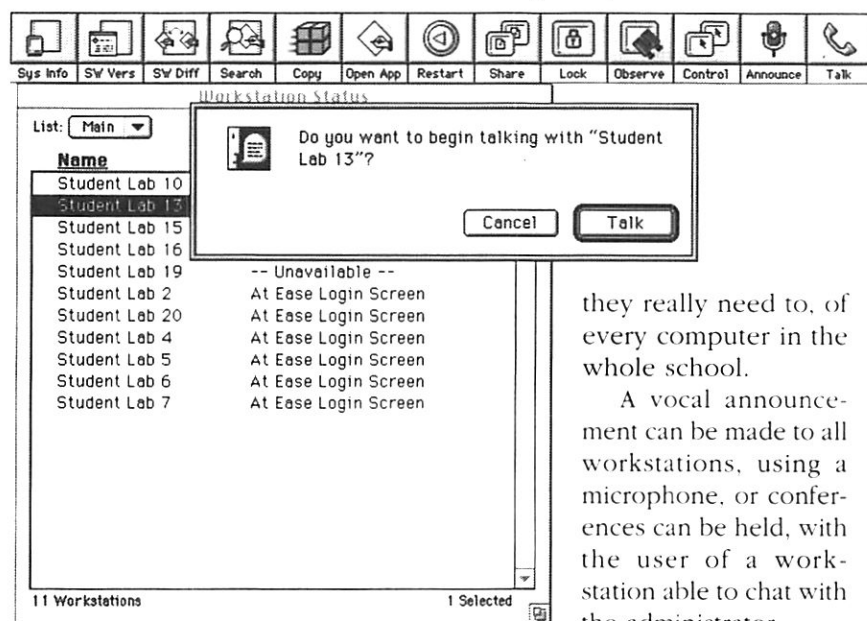


Figure 9. A vocal message to a classroom is just a click of a button away.

they really need to, of every computer in the whole school.

A vocal announcement can be made to all workstations, using a microphone, or conferences can be held, with the user of a workstation able to chat with the administrator.

All workstations can be restarted or shut

Personalise Eudora's Personality!



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When *Eudora Pro 3.1* came out, it included the ability to deal with more than one e-mail account. This was achieved through the addition of "Personalities".

When you set up a second or subsequent Personality through the **Settings** dialog (right down at the foot of the icon list – it's easy to miss!), you are given the option of "naming" your new personality. Unfortunately the first account set up becomes **Dominant** and there's no way within *Eudora* to change it.

Now John Delacour comes to the rescue with his *Main Personality Plug-in*.

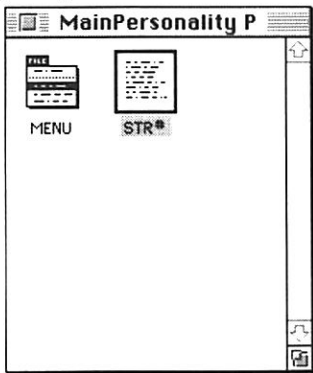


Figure 1. The two resources.

First you need to use *ResEdit* (*v2.1.3* is available from the **Club BBS** in the **PD Library**). Drop *Main Personality* onto *ResEdit* and you'll find two resources (see Figure 1). Double click the **Menu** re-

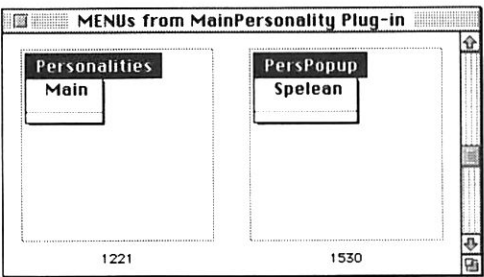


Figure 2. Look for MENU resources.

source, and double click each of the two items (**1221** & **1530**) contained within (one is called **Personalities**, the other **PersPopup**) (see Figure 2).

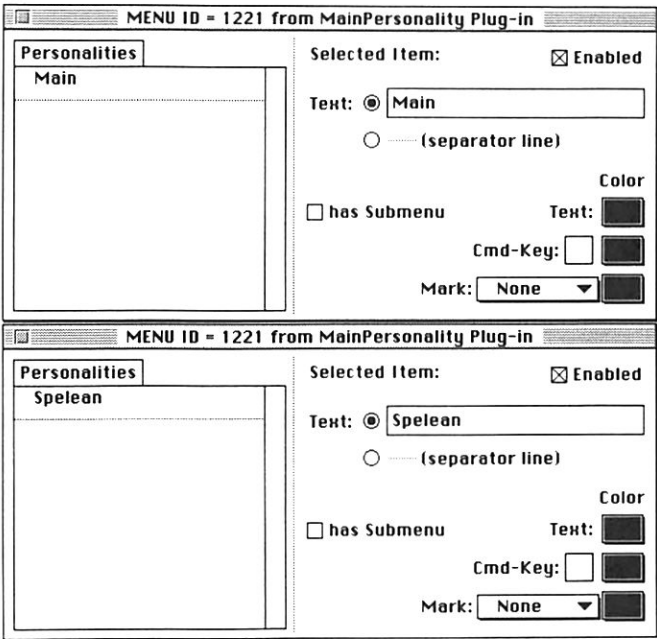


Figure 3. The "Before" and "After" views of the Personalities Menu.

Double click on the heading of the menu and then on the word **Main** on the left side and change the text "Main" (in the editing box on the right) to whatever you want your Dominant Personality to be called, in both items. In my case I've changed it to my business name "Spelean" (Figure 3 shows before and after).

Now double click the string resource, double click string ID **9100**, scroll down to num-

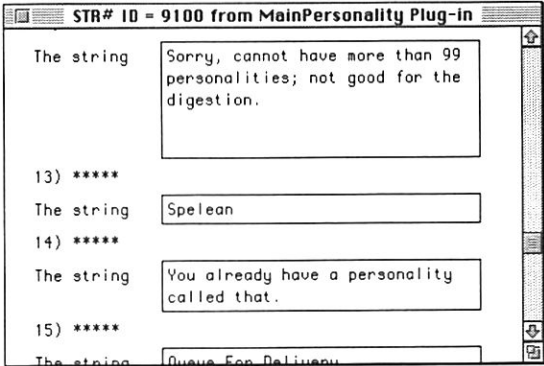


Figure 4. Changing the string resource. Double click on item number **13** and change it from "Main" to the exactly the same as you changed the Menu items to (see Figure 4).

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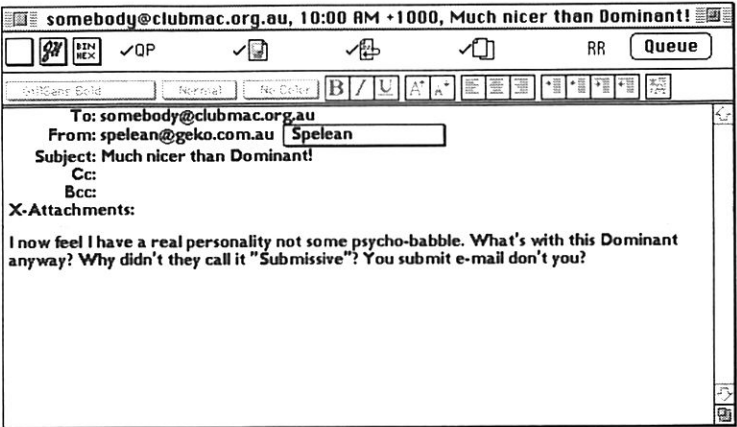


Figure 5. And here are the results!



Get Info

The monthly column of the Club Mac Committee

Ever seen John Wayne riding his horse into town, guns-a-blazing? Steve Jobs has certainly become the John Wayne of 1 Infinite Loop, Cupertino. Since unofficially taking over the reins of Apple after the resignation of Gil Amelio, Jobs has brought some sweeping changes. Certainly, with his gung-ho style, he would either take Apple to great heights or destroy it in a cataclysmic ball of fire.

Jobs' recent form at Apple during this reconstruction period has irritated many developers, yet he has never been apologetic about it. The recent agreement with Microsoft has certainly saved Apple for the next five to seven years. In this deal, Bill Gates announced that Microsoft will develop *Microsoft Office* for the Macintosh platform for the next five years – a definite saviour for the hurting, but not yet dead, Apple.

I can't help feeling that Bill got the better part of this deal. Microsoft has not come up with a great innovative product for some time – some say it never has – its products are usually inferior and have only stayed at the number one position because of Microsoft's aggressive advertising and marketing of its products.

Microsoft was incredibly slow to embrace the Internet and has only recently caught up with Netscape in the browser wars. Not only is the Internet a threat to Microsoft's dominance, so is *Java*.

As a result of this deal, Apple's default browser will be *Microsoft Internet Explorer*. As more than 25%

of all computers using the Internet are Macs and more than 60% of all Web sites are made by Macintoshes, this is a huge win for Gates. Microsoft will have gained the upper hand over Netscape. The alliance also means that Apple will now – more than likely – closely develop a *Java* platform with Microsoft.

Not only has Microsoft managed all this for a mere \$US200 million (loose change for Gates), it also keeps the anti-trust dogs off Microsoft's back. Additionally, Apple has dropped its lawsuit against Microsoft – which "borrowed" Apple technology patents to make its successful *Windows Operating System* – for an undisclosed sum.

I am glad that Apple's future is assured, but the deal means a whole lot more to Microsoft and its future viability than it does to Apple. I think Jobs should have managed a better deal but I suppose, with Apple on its knees, it is hard to dictate deals and policies.

Although only in his early 40s, Jobs is considered an old hand in Silicon Valley, so he and his friends on the Board of Directors will direct Apple. Maybe my analogy of Jobs as John Wayne was inaccurate, as most Apple users see him either as a saint or as a traitorous devil.

The next few months are really shaping up to be something special. Our Club Mac monthly meetings are held at North Sydney Council – usually on the second Wednesday of the month – unless otherwise specified. It would be great to see *you* there!

Club Mac has just received shipment of the new *MacAdvocate II* CDs from Apple, USA. You can only pick up one of these CDs free of charge if you come to our monthly meetings. They have Apple software, shareware, freeware and a bundle of goodies that prove the *Mac OS* is the best *Operating System*. This is a "must have" CD! It will convince your PC friends that the Mac is best.

The October meeting is the AGM and that meeting will also feature a demonstration of *Virtual PC*. This emulation software will allow you to use *Windows (NT, '95 or 3.1)* in the familiar surroundings of your Mac/clone PowerPC. This is a must-see for anyone who is considering buying a PC – perhaps *Virtual PC* is the answer.

November's meeting will be the Internet night. This will be great for any of you who is considering going out into the World Wide Web. No matter where the Internet takes you, nothing will feel more at home than getting back to the Club Mac BBS.

December will be a special event. Because of the IT/marketing contacts of our Marketing Officer, Jill Riddiford, we have managed to invite Steve Rust, Managing Director of Apple Australia, to come and talk to the Club in an informal and informative chat. Don't forget December is also Pizza night! As well as that, it will be a **Buy Swap** meeting, so you can pick up early Christmas specials. See you there!

Rob Naccarella

Personalise Eudora – cont from p.17

Close and Save all changes. Put this changed plug-in in your *Eudora* Folder, which is normally in the *System* Folder (it's the

folder where your settings file is stored).

When next you open *Eudora Pro*, you'll be able to select from

a list of e-mail accounts with your names on them, not Dominant and others (see Figure 5).

This is unsupported software. If you have problems with *Eudora*, you can try posting an e-mail to

comp.mail.eudora.mac

in the hope that one of the many helpful people there will help; don't assume it will be me! ☐

Other useful information about Eudora can be obtained from:
Eudora web site: <<http://www.eudora.com>>
Andrew Starr's Eudora Site:
 <<http://www.amherst.edu/~atstarr/eudora>>
comp.mail.eudora.mac FAQ by Hank Zimmerman:
 <<http://www.amherst.edu/~atstarr/eudora/faq.html>>

Reviews & Previews



KeyQuencer revisited

Review © 1997 Carl Vine

Product: KeyQuencer 2.1 (commercial) and KeyQuencer Lite (shareware)
Category: Utility
Author: Alex Levi Montalcini
Distributor: Binary Software
Avail from: Commercial from <http://www.binarysoft.com/>
Shareware from Club Mac BBS
Cost: Commercial: \$US39.95
Shareware: \$US20.00

This is now the third article I've written about *KeyQuencer* (see also *MACinations*, May and December, 1996), but I keep finding more useful things to do with it, and would feel guilty not sharing the immense power of this great utility. In the immortal words of Marge Simpson, "I just think it's neat" – though she was talking about a potato!

KeyQuencer is so powerful it's hard to describe its potential without listing a seemingly impossible collection of features.

- Imagine you've just turned on your Mac. You hit a key and your Web browser opens.
- You download a .bin file that fails to decompress. Hit another key to take you back instantly to the *Finder* and open the

download folder. Select the .bin file, hit another key and it decompresses.

- It's a *SimpleText* file but you want to open it with *BBEdit*. Select the file and hit a different key – *BBEdit* opens it.
- The document has a number of useful Web addresses. You select and store them as individual clip files, using another key combo.
- Hit the first key again and you go straight back to the browser. You load each of the saved Web addresses with simple key clicks.

So what is it?

KeyQuencer is a "macro" utility that uses key-strokes to emulate *System* events on your Mac, much like

*"Much like
QuicKeys,
but quicker,
much cheaper
and leaner."*

QuicKeys, but quicker, much cheaper and leaner. It has been 100% PPC-native for ages and works on any Mac OS from 7.0 to 8.0.

It can replace literally dozens of other single-purpose utilities and, frankly, makes Apple's *Launcher* and all other application palette programs obsolete.

What are its limits?

There are three things *KeyQuencer* can **not** do:

- (1) Automatically "record" a series of user actions;
- (2) Use the same key combination for different purposes in different applications; and
- (3) Respond to a "conditional" state (like executing a command only if *AppleTalk* is active, for instance).

These are not much of a limitation. *QuicKeys*' ability to record a sequence is nice enough, but so much fiddling can be required to make them work properly you wonder if it's worth it (it's not!)

Not being able to use the same key for different purposes in different applications could be annoying, until you realise most keyboards have over 600 unique key combinations without touching any of the simple alpha-numeric keys or menu command-keys.

If you absolutely need to respond to conditional situations, you can integrate *AppleScripts* and *FrontierScripts* into *KeyQuencer* macros, passing variables from one to the other if necessary, or else sending *AppleEvents* directly from *KeyQuencer*. (*AppleScript* is impressive, but you still need *KeyQuencer* to activate a script from a key-click.)

Flavours

KQ comes in two flavours. *KeyQuencer 2.1* is the full commercial version (\$US39.95), while *KeyQuencer Lite* is the fully-enabled \$20 shareware version, limited to 50 active macros and 50 installed commands. You can download *KQ Lite* for free from ClubMac BBS, and order 2.1 direct from the distributor at

www.binarysoft.com

Full installation requires 2MB of disk space, 4MB of RAM and, of course, a Macintosh.

Both versions need just two things to operate: the *KeyQuencer Engine* (a 59K *System Extension*) and a *KeyQuencer Extensions Folder* (about 200K) inside the active **System Folder**.

KQ knows what you expect it to do from the *KeyQuencer Macros* file saved inside the **Preferences Folder**. This is a compressed database of macro instructions that define what key



Figure 1. The unassuming front panel of *KeyQuencer 2.1*, hiding enormous capability.

combinations to intercept and what actions to initiate when those combinations are used.

These macros can be created and modified with the *KeyQuencer* Control Panel, or with the much more powerful *KeyQuencer Editor*.

What can it do?

With a single keystroke in *KQ Lite* you can:

- Open any application or document immediately;
- Switch between open applications instantly;
- Change *Monitor* and *Sound* settings;
- Replace any character with any other character;
- Produce *Fkey* actions on small keyboards;
- Immediately access any Menu Item or nested sub-menu;
- Drag files to the *Trash* and then empty it (in the *Finder* only);
- Eject all floppies or removables;
- Instantly open any folder on any disk;
- Invoke a **Save** command with **Command-S** in non-standard applications;
- **Quit** the *Finder* to reduce memory fragmentation;
- **Restart**, **Sleep** or **Shut-down**;
- Automatically **Paste** frequently used text; and/or
- Take a snapshot selection of the screen and save it somewhere useful.

Similarly, in *KQ 2.1*, with a single keystroke you can achieve all of the above, plus:

- Toggle *PPP* on or off;
- Turn a selection of text into e-mail "quote" format;
- Change printers without opening the *Chooser*;
- Stuff or expand *StuffIt* files with a keystroke (needs Aladdin's *StuffIt Engine*);
- Move instantly to any folder location in any **Open** or **Save** dialog;

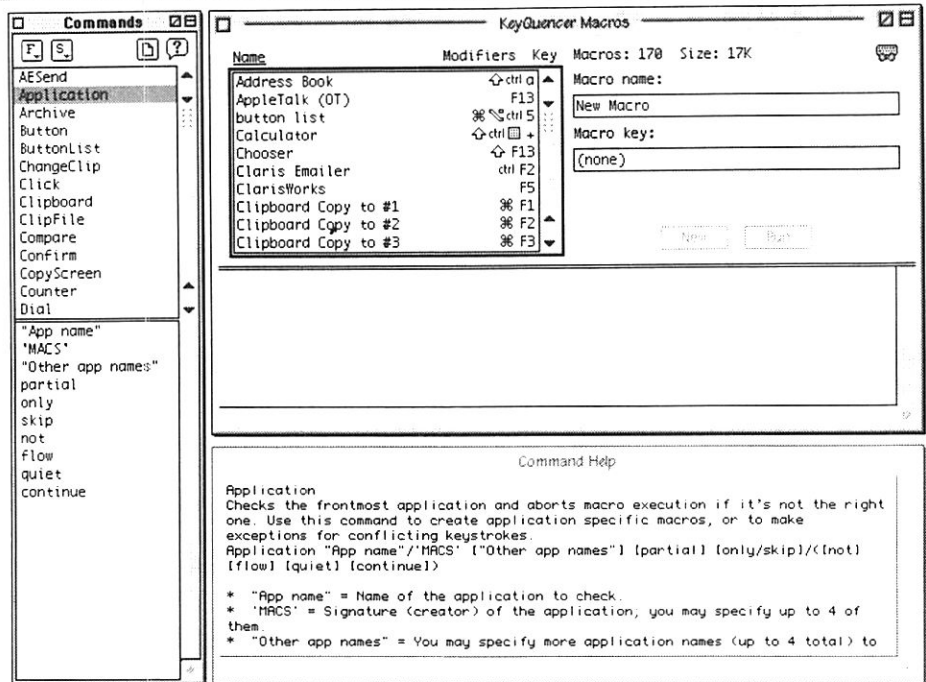


Figure 2. The *KeyQuencer Editor* windows. These are explained by the diagram in Figure 3.

- **Save**, access and modify *ClipFiles* direct to disk;
 - Call *AppleScripts* from a *KQ* macro (and vice versa);
 - View and set file type and creator signatures on the run;
 - Move any file to the *Trash* and then empty the *Trash* (at any time);
 - Use variables within *KQ* macros;
 - Make a macro wait for certain *System* events;
 - Select and play Audio CDs;
 - Send *AppleEvents* direct from a macro;
 - Create stand-alone mini-applications;
 - Batch process files with *KQ* macros;
- ...and much, much more!

Remember that you can change the key combination for any macro at any time, assemble a complete sequence using any of these events and test the results immediately.

How to use it

Once you've installed *KQ* or *KQ*

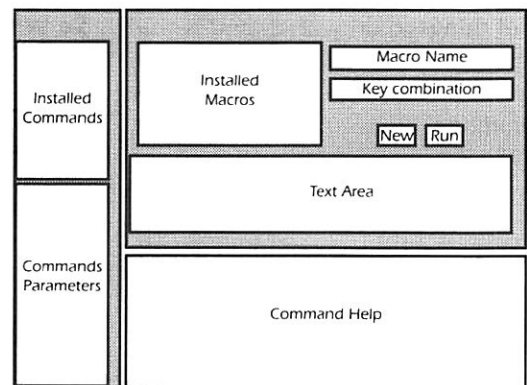


Figure 3. A diagrammatic representation of Figure 3 identifying segments.

Lite, restart your Mac and *KQ* is ready to run. Hit **Command-Option-K** and *KQ Editor* will open automatically. It should look something like Figure 2 (with a brief explanation given in Figure 3).

This might look daunting at first but, with a bit of trial and error, even newbie Mac users should be able to create their own macros within the first half hour.

In any case, you can't really go wrong. If you make a mistake in your macro, *KQ* either does nothing or else tells you that your syntax was wrong!

You should see three windows in the *Editor* (see Figure 2 again). If the Command Help window is invisible, just hit **Command-H**.

For presentation to the Annual General Meeting of the Association
on Wednesday, 15th October, 1997

From the Constitution

- 4.18 The president shall provide to the annual general meeting a written, or verbal, or both, report on the activities of the management committee throughout the previous year and shall include in that report a statement of the goals or objectives of the management committee over the next year.
- 4.24 The secretary shall provide the annual general meeting with a report, whether verbal or written or both, of his or her activities, in relation to the association, during the year, including a statement as to the current state of membership of the association.
- 4.29 The treasurer shall:
 - 4.29.1 draw up and present to the annual general meeting a statement of income and expenditure, along with a balance sheet; and
 - 4.29.2 cause the financial affairs of the association to be audited by the date of the annual general meeting each year, with such auditor's report to be presented to the annual general meeting.

Committee Report 1997

Club Mac has had another interesting year, membership has declined compared to last year but we have managed to contain costs and increase membership benefits. Apple's market share has similarly declined, but the two are not related. Our financial position is balanced, the magazine has improved its already excellent coverage of issues and range of articles and the BBS, although suffering some teething problems during the year, has recovered and is serving an historically high proportion of members (79%).

Magazine

The Club magazine *MACinations* has gone from strength to strength with Tom Pardy and Rosalie Marshall at the helm. We've had an excellent number of articles and reviews written by members, supplemented, of course, by material gathered from the Internet. A series

on writing Web pages was a highlight for the year, along with the *FileMaker Pro Corner* articles, not forgetting the occasional quirky item like the *History of the Dogcow*. We also continued to cover interesting tips on how to use the Internet, making music with your Mac, education issues and lots of useful tips and hints on making your Mac even easier to use. A major task for the year was creating and analysing the first *Club Mac Survey* (thanks to Hilton Brown). The information provided proved very useful to the Committee and the Co-editors in planning future Club activities and *MACinations* articles.

BBS

During the past year we have upgraded the BBS, adding a faster computer (a 9600/233), larger drives for storage of PD and more CDs; and introducing the *Online*

Assistant to help Find files much faster. We upgraded our link to the Internet to speed up e-mail transmission and reception significantly, and have established our own Web pages at:

<<http://www.clubmac.org.au>>

John Agapitos and his trusty helpers have continued to improve the BBS, putting in long hours to improve our file and forum structure and to file material in the online **Library** and **Latest Additions** area. Problems with the BBS earlier in the year were tracked down by John Agapitos to some esoteric software conflicts and, since that time, the BBS has become much more reliable. The minor disaster with the tape backup dying has been overcome and we've learnt from the experience!

PD Software

Darryl Chrisp has done a sterling

Continued p.2 overleaf

job collecting PD software this year, with well over 2 Gigabytes made available to members, mainly via the BBS. Disappointingly, PD sales of **ClubMacWare** on disk continued to decline and this is no longer a viable option for the Club.

Meetings

During the year we held 11 regular monthly meetings at North Sydney, along with **Beginners'** and **Database Special Interest Groups**, and the **Omnis Database Group** in town. Speakers at the monthly meetings covered new software like *Cyberdog*, *OpenDoc*, *Claris Home Page*, the latest versions of *PageMaker* and *Photoshop*

and hardware like CDs, scanners, and our first glimpse at Macintosh clones, as well as changes at Apple like the acquisition of NeXT and announcements about *Rhapsody*, the release of *System 7.6* and previews of *OS 8*.

Constitution

The Club's **Constitution** was written a long time ago, when the Club was much smaller. The proposed changes were rejected at last year's AGM, and we continue to limp along with an outdated Constitution. Democracy rules.

Thanks

The Club is very dependent on the volunteers who give up thousands

of hours every year keeping things running. During meetings, for example, Ken Macdonald, Hazel Johnson and Gordon Maxwell work tirelessly to serve up the drinks and nibbles. John Agapitos puts in long hours keeping the BBS up and working.

During the year there were few changes in our officers. Alex Hartman stepped down as Help Desk co-ordinator, to be ably replaced by Marcelo Pena. To all who've contributed during the year, we'd like to say thanks for your efforts on behalf of the Club.

Andrew Pavey

President, Club Mac Inc.,
on behalf of the Committee.

Treasurer's Report for year ended 30 June 1997

Accompanying this report are the Club's audited Balance Sheet and Expenditure Statements for the year ended 30 June, 1997.

This year has been difficult for Club Mac membership levels because of the massive interest in the Internet which attracts many of the same people as are drawn to Club Mac. Added to that was the failure of organisers to hold a Macintosh Expo in Sydney this year. This has been a source of quite a few new members in past years.

A comparison of financial members at 30 June for the years 1995, 1996 and 1997 reveals that Club Mac membership suffered a substantial decline during the reporting period:

	Basic	BBS	Premium	Total
1995	393	1055	n/a	1448
1996	333	944	n/a	1277
1997	185	642	54	881

It is now obvious that some hard work is required – both by the Committee and by members – to arrest the declining membership. We need to improve our current standards of service delivery even more and to sell the benefits of Club Mac membership to the Macintosh community. This is not a job which the Committee can do alone – it is the responsibility of all members.

I recently wrote an article for *MACinations* regarding the decline

in sales of Public Domain (PD) software from the Club Mac Library, which must be one of the most extensive and current libraries of any Macintosh club in Australia. (That, at least, ends the self-promotional part of this report.)

The reality is that there is very little interest from Club Mac members in purchasing **ClubMacWare** disks. I received only a few verbal comments from people who were interested in seeing an expanded catalog of software available and also received one offer of assistance to maintain the PD Library. No written submissions on "the way ahead" for PD were received. The only conclusion which can be drawn is that the best which the Club could expect is that we might maintain our current level of sales. These do not cover the cost of producing the information for publication in *MACinations*. There is a lot of work required to provide this facility and it is just not worth it. Any changes will be determined by the Committee and members will be informed through *MACinations*.

Having dispensed with all the bad news for the year, let me now address some of the financial highlights and expand on some of the other topics which Andrew touched on in his *President's Report*.

I promised at the last AGM that

the cost of producing *MACinations* would be reduced. With the co-operation of the Co-editors, the costs were contained within the budget allowed bringing savings of almost \$8,000 over the previous year. That the quality of *MACinations* has not suffered is a real credit to both Co-editors (Tom Pardy and Rose Marshall).

I should also add that Club Mac members, Klaus Muller (Everysize Typeart Services) and John Bonato (The Print Connexion), also deserve the thanks of Club members for once again providing the typesetting and printing services respectively. The packaging and dispatching was, as usual, provided by Beehive Industries Co-operative and they have also performed well throughout the year.

The BBS operating costs increased this year because we improved the access to Internet via a 24 hour link. In addition, the Club purchased a new BBS server in June 1997. The server, a PowerPC 9600/233, accounted for about two-thirds of capital expenditure for the year with the remainder expended to provide a Powerbook 1400cs/133 for PD Acquisitions. These two computers and associated equipment required the Club to dig into the hard won capital to the extent of about \$14,350 but members can

Continued foot of p.3 opposite

CLUB MAC Inc. BALANCE SHEET as at 30 June 1997

	Year to 30/6/97	Year to 30/6/96	\$ Difference	% Difference
ASSETS				
CURRENT ASSETS				
CASH FLOATS				
Float PD Secretary	0.00	250.00	-250.00	-100%
Floats All Others	150.00	150.00	0.00	0%
Total CASH FLOATS	150.00	400.00	-250.00	-63%
BANK ACCOUNTS				
ANZ Current Account	9591.57	13532.97	-3941.40	-29%
BT Hi-Yield Cash Mgmt Account	7000.00	7000.00	0.00	0%
Total BANK ACCOUNTS	16591.57	20532.97	-3941.40	-19%
Sundry Debtors	0.00	360.00	-360.00	-100%
INVENTORY				
Inventory PD & CD stock	934.00	1072.50	-138.50	-13%
Inventory PD & CD despatch	87.50	87.50	0.00	0%
Inventory Other	165.00	500.00	-335.00	-67%
Total INVENTORY	1186.50	1660.00	-473.50	-29%
PREPAYMENTS				
PP All Other	0.00	295.00	-295.00	-100%
Suspense	769.95	139.50	630.45	452%
Total PREPAYMENTS	769.95	434.50	335.45	77%
TOTAL CURRENT ASSETS	18698.02	23387.47	-4689.45	-20%
NON CURRENT ASSETS				
BBS Computer & Modem Equip	39996.17	29528.28	10467.89	36%
Accum. Depreciation BBS	-26303.00	-20239.00	-6064.00	30%
PD Computer & Modem Equip	8501.48	2996.00	5505.48	184%
Accum. Depreciation PD	-3238.00	-1608.00	-1630.00	101%
GA Computer & Equip	19122.00	18872.00	250.00	1%
Accum. Depreciation GA	-12339.00	-7935.00	-4404.00	56%
GA Assets NIU or NBV	7254.00	7354.00	-100.00	-1%
Accum. Depreciation GA NIU	-7354.00	-7354.00	0.00	0%
PD Library Master Disks	680.00	1494.00	-814.00	-55%
TOTAL NON CURRENT ASSETS	26319.65	23108.28	3211.37	14%
TOTAL ASSETS	45017.67	46495.75	-1478.08	-3%
LIABILITIES				
CURRENT LIABILITIES				
Subscriptions Rec'd.in Advance	12235.00	17045.00	-4810.00	-28%
Accruals	189.90	189.90	0.00	0%
Total CURRENT LIABILITIES	12424.90	17234.90	-4810.00	-28%
TOTAL LIABILITIES	12424.90	17234.90	-4810.00	-28%
NET ASSETS	32592.77	29260.85	3331.92	11%
ACCUMULATED FUNDS				
Retained Surpluses	28151.85	28765.46	-613.61	-2%
Reserve-PD Master Disks	0.00	814.00	-814.00	-100%
Current Year Surplus	4440.92	-318.61	4759.53	-1494%
TOTAL ACCUMULATED FUNDS	32592.77	29260.85	3331.92	11%

Treasurer – cont from p.2

be assured that there are still some bikkies left in the bin – just not as many.

Before I finish my report I would also like publicly to thank the Club Mac Marketing Officer, Jill Riddiford, for the work she has done to get valuable advertising revenue for *MACinations*. Through her efforts, the advertising revenue

increased by 80% and, just as importantly, most advertisers were prompt with their payments, which made my life just that little bit easier. Of course, Jill is also the Club Mac Administrator and my thanks go to her for her performance in these duties as well.

One year is over and another begins. It is my intention to con-

tinue as the Club Mac Treasurer – mainly because I see a distinct lack of volunteers but also because I am committed to seeing Club Mac shake off the current complacency and reassert itself as the premier Macintosh club in Australia.

Cheers,
Darryl Chrisp
Treasurer.

CLUB MAC Inc. Statement of Income and Expenditure

For the Twelve Months Ended 30th June, 1997 (with comparison with Year Ended 1996)

	Year to 30/6/97	Year to 30/6/96	\$ Difference	% Difference
INCOME				
MEMBER SUBSCRIPTIONS PAID				
Basic Subscriptions	43,340.00	50,565.00	-7,225.00	-14%
BBS Subscriptions	24,986.00	24,206.00	780.00	3%
Premium Subscriptions	2,430.00	0.00	2,430.00	NA
Total Member Subscriptions paid	70,756.00	74,771.00	-4,015.00	-5%
PD/CD SHAREWARE SALES				
PD Sales	1,926.50	4,795.45	-2,868.95	-60%
CD Sales	1,074.25	3,613.45	-2,539.20	-70%
Total PD/CD shareware sales	3,000.75	8,408.90	-5,408.15	-64%
Advertising Revenue – Magazine	7,233.35	4,059.20	3,174.15	78%
Bank Interest Earned	293.57	445.94	-152.37	-34%
Miscellaneous Income	1,435.00	3,100.10	-1,665.10	-54%
TOTAL INCOME	82,718.67	90,785.14	-8,066.47	-9%
EXPENDITURE				
BULLETIN BOARD SYSOP				
Depreciation BBS Equip	6,064.00	5,916.00	148.00	3%
Power Expenses Reimbursed	400.00	0.00	400.00	NA
BBS Sundry Expenses	137.45	558.75	-421.30	-75%
BBS Install / R&M Costs	0.00	352.00	-352.00	-100%
BBS Telecom & ISP Expenses	6,289.30	3,407.00	2,882.30	85%
Total Bulletin Board Sysop	12,890.75	10,233.75	2,657.00	26%
OTHER COMMUNICATION EXPS.				
Magazine Costs	39,412.29	47,328.70	-7,916.41	-17%
Other Print Costs	2,144.65	700.50	1,444.15	206%
Meeting Expenses	1,781.33	3,131.64	-1,350.31	-43%
Advertising Costs	709.00	0.00	709.00	NA
Total other communication exps.	44,047.27	51,160.84	-7,113.57	-14%
PUBLIC DOMAIN COSTS				
Depreciation PD Equip	1,630.00	1,265.00	365.00	29%
COGS - PD disks/ CDs/specials	1,176.00	3,736.59	-2,560.59	-69%
PD Collection Costs	702.81	490.35	212.46	43%
PD Despatch & Sundry Costs	104.85	460.53	-355.68	-77%
Total Public Domain costs	3,613.66	5,952.47	-2,338.81	-39%
GENERAL ADMINISTRATION				
Administrator	4,800.00	5,700.00	-900.00	-16%
Audit Expenses	435.00	420.00	15.00	4%
Bank Charges	0	0	0	0
Bank & Govt. Charges	200.71	326.12	-125.41	-39%
Merchant Fees	1,077.62	1,231.28	-153.66	-13%
Dept of Fair Trading	30.00	0.00	30.00	NA
Loss/(Gain) – Disposal Assets	-200.00	369.00	-569.00	-154%
Insurances	1,661.56	1,206.40	455.16	38%
Sundry Expenses	165.00	30.00	135.00	450%
Membership Promtn & Help	1,069.70	1,862.40	-792.70	-43%
MacExpo Exhibition Expenses	0.00	5,009.77	-5,009.77	-100%
Postage Expenses	1,859.60	1,039.80	819.80	79%
GA Repairs & Maintenance	1,056.45	546.55	509.90	93%
GA Stationery	221.74	142.58	79.16	56%
GA Telephone/Fax	530.29	477.45	52.84	11%
GA Travel	414.40	528.34	-113.94	-22%
Depreciation GA Equip	4,404.00	4,867.00	-463.00	-10%
Total General Administration	17,726.07	23,756.69	-6,030.62	-25%
TOTAL EXPENDITURE	78,277.75	91,103.75	-12,826.00	-14%
Operating Profit (or loss)	4,440.92	-318.61	4,759.53	-1,494%
Other Expenses	0	0	0	0
NET PROFIT/(LOSS)	4,440.92	-3,18.61	4,759.53	-1,494%

Activate the **KeyQuencer Macros** window by clicking anywhere in it. This shows the 40 macros that come pre-installed and ready to run on *KQ*. Scroll down the list and click once on "Launch *Key-Quencer Editor*". This is the macro you've just used to open *Key-Quencer Editor*.

The text area beneath the macro list now reads **Open Kqmt** (the complete text of the macro).

Kqmt is the application signature of *KQ Editor* and is the only information that *KQ* (and the *Mac OS*) needs to open it. You can move the application to a different location – or not even know where it's stored – and the macro will still work.

Let's create a new macro to open *SimpleText*. Click on the "New" button, and hit **Tab** a few times until "Macro Name" is highlighted. Type "**SimpleText**", hit **Tab** to advance to the Macro key box, hit **Control-S**, and hit **Tab** again to move to the text area of the new macro. Now just type "**Open txt**" and hit **Command-S** to save the new macro. You can now hit **Control-S** to open *SimpleText* automatically. You've just written and executed a *KQ* macro!

Now hit **Shift-Control-Tab** and you will be taken back to *KQ Editor*, using the pre-installed "Switch to previous app" macro. **Control-Tab** will take you back again to *SimpleText*. Successively hitting either of these combinations will rotate through all open applications, including the *Finder*. If you have a number of open applications, **Control-S** will not try to open a second copy of *SimpleText* but just bring the existing one to the front.

Organize your keys

Although there are thousands of possible key combinations, you shouldn't assign single keys to a macro without adding a modifier key (**Shift/Control/Option/Command**), otherwise typing a simple letter would produce a barrage of computer activity!

You could, however, make the **T** key produce an **H** and vice versa

– a fascinating exercise for next April 1st!

Remember that *plenty* of Menu items and program functions are produced with the **Command** (cloverleaf or "Open Apple") key, while *few* use **Option-Command**, and almost none use the **Control** key.

It's a good idea to work out a logical organisation of key combinations when you first start using *KQ*. I use **Control-letter** to open basic applications, using the first letter of the application (or some other sensible mnemonic), and **Shift-Control-letter** for Control Panels and other *System*-oriented files like the *Chooser* or *Calculator*. (**Shift-Control+** for the *Calculator*).

KQ distinguishes between normal numbers and the keys on the numeric keypad. So you could keep keypad numbers for a particular purpose or application and use normal numbers for more general use. Maybe reserve the 15 *Fkeys* on an extended keyboard for action

sequences which, along with the four modifier keys, gives you 240 different key combinations!

And, if you ever forget one of your key-combinations, *KQ* also comes with a "QuickMacro" macro that instantly gives you a selectable list of installed macros with the right key combinations.

On-Line Help

If you've just installed *KQ*, you will find over a hundred macros ready to install or you can create original macros from scratch.

Click on a command in the **Command List** and the **Command Help** window will tell you what it does and how to format the macro. Double-click on a command and it is automatically entered for you in the text area. Double-click on any of the parameters for a selected command and it will also be entered in the text area.

Locate **Session** in the **Command List** and click it once. The **Command Help** window will

Putting KeyQuencer to work

Here is an example of a *KeyQuencer* command set that I use to achieve the following actions:

- Install a minimal **System Folder** onto a RAM Disk;
- "Bless" the newly created **System Folder**;
- Set the **Startup Disk** to boot from the RAM Disk; then
- **Restart** from the RAM Disk.

Open system "ram.sys.cpt"

WaitApp 'CPCT'

Wait 2

Key cmd "a"

Key cmd "e"

GoToFolder "RAM Disk" quiet

Key cmd "e"

WaitWindow "Compact Pro Status" open

WaitWindow "Compact Pro Status" close

Quit 'CPCT'

WaitApp 'CPCT' closed

SwitchApp 'MACS'

Open "RAM Disk: System Folder"

WaitWindow "System Folder" open

Key cmd "w"

Open panels "Startup Disk"

WaitWindow "Startup Disk"

Click 141 55 window

Key cmd "w"

Session restart quiet

Open the **CompactPro System** archive

Wait for **CompactPro** to open
Another couple of ticks for luck
"Select All" of the archive

And expand it

Directly into the "RAM Disk" volume

Start expanding

Wait for **CompactPro** to start

Wait for **CompactPro** to finish

Quit **CompactPro**

Wait for it to quit

Go back to the **Finder**

Open the new **System Folder** on "RAM Disk"

Wait for it to be "Blessed"

Close it again

Open the **Startup Disk Control Panel**

Wait for it

Click on the "RAM Disk" icon

And then close it

Now restart from the RAM Disk!

now read:

Session

Restarts, shuts down or puts the computer into sleep mode.

Session Restart/Shutdown/(Sleep [disconnect]) [confirm] [enforce] [undelayed] [quiet] [continue]

The third line shows correct syntax for the selected Command. Items inside square brackets [] are optional, items separated by a slash / are mutually exclusive, and items inside round brackets () should be grouped together.

The effect of each item parameter is explained beneath the syntax line. So:

Session restart simply restarts your computer, while

Session sleep disconnect quiet puts it to sleep, turning *AppleTalk* off first (**disconnect**), and doesn't complain if it can't complete the command (**quiet**).

Many of these parameters are common to many commands, and they are also pretty self-explanatory.

Open a document

Document files can't be opened with application signatures, so you must use a full **File Pathname** to open them. Fortunately, *KQ Editor* will insert the correct pathname for you with the **Command-I** (Insert Pathname) menu item. Let's say you have a text document called *AText* stored in the **Apple Menu Items Folder** inside your **System Folder**. The macro to

open this would be:

Open "Hard Drive:System Folder:Apple Menu Items:AText"

However *KQ* is smart enough to know where your **System Folder** is and what it contains, and the **Command Help** window will tell you that the **Apple** parameter tells a macro to look for an item in the **Apple Menu Items Folder**. So this macro can simply read:

Open Apple "AText"

This is useful for opening Control Panels and other files with no signatures. To open the *Memory Control Panel*, for instance, just use

Open panels "Memory"

With any application

If you're anything like me, you can't stand how slow, greedy and featureless Apple's *SimpleText* is. Yet almost every *ReadMe* document in the Mac world is a *SimpleText* document.

You're in the *Finder* and about to read yet another *SimpleText ReadMe* file. Instead of double-clicking to open the document (and *SimpleText*), just click once on it and then hit the key combination for this macro: **Open "TBB6"** selected. Instead of *SimpleText*, the document is opened in *Tex-Edit Plus* ("TBB6").

If you prefer *BEdit*, then use **Open "R*ch"** selected.

Obviously you can use this for any other type of file, and it will work as long as the application you call can read that kind of file.

Another example would be using *GraphicConverter* to open graphics files, no matter where and with which application they were created.

Feel the power

There are literally thousands of things you can do with *KQ*, so I'm not going to attempt any sort of comprehensive guide. As a general demonstration, in the grey box on the previous page, *Putting KeyQuencer to Work*, I have given you an example of a set of *KeyQuencer* commands in action.

The next instalment

There are wondrous things you can do with *KQ*. It operates at such a low *System* level I have yet to find a button, window or dialog nested so deeply that *KQ* can't operate on it.

Most macros are so quick and silent that you wouldn't know they were happening without the little flashing keyboard next to the **Apple Menu** icon. And, over four years and six *System* upgrades, I haven't traced a single operating error to *KeyQuencer*.

Previous articles on *KQ* haven't elicited much response from other Club Mac members, but the few people I've been able to convince to use it have always thanked me for ever after! If there is sufficient interest from members this time, I'll write a follow-up article delving deeper into the more advanced features of *KQ*. ■

Navigator becomes Communicator

Review © 1997 Raymond Yu

Ever since its birth as *Mosaic* in 1993, Netscape *Navigator* has undergone major transformations. It has evolved from a plain old Web page browser to an application incorporating e-mail and news reading facilities.

With each new version more and more new features are added. The latest version of *Navigator* is no exception. In fact, this is probably an understatement.

So what is in *Navigator 4.0*

Sorry, wrong term. The latest version *would* have been called *Navigator 4.0*, but it is no longer referred to as this, it has been absorbed into a mammoth product called *Netscape Communicator*. This is said to be a "suite of products that transforms Intranets and the Internet into media for multimedia groupware." It aims to blend e-mail, browsing, discussion groups and real-time collaboration seamlessly.



The *Navigator Browser* is part of this suite of products. Others products or components include:

- **Netscape Messenger** – This is a sort of e-mail component that

Product: *Netscape Communicator 4.01*
Category: Internet communication suite of tools
Publisher: Netscape Communications Corporation
Avail from: <http://merchant.netscape.com/netstore/clients/index.html>
Cost: \$US\$59.00

permits the embedding of *HTML* codes. The result is e-mail that looks and feels like an *HTML* page.

- **Netscape Collabra** – Consistent with its groupware theme, this component facilitates collaboration with co-workers.
- **Netscape Composer** – Create and publish a Web page. This is similar to the features available under *Navigator Gold*.
- **Netscape Netcaster** – (This component is not yet available.) This will permit the reception of personalised information, from latest sport news to share prices. I believe it will be similar to the *PointCast* software that has been available for the past year or so.
- **Netscape Conference** – A component that allows communication with co-workers using real-time voice and textual information.

These are the components in the standard edition. In the professional edition there are even more components, such as *Netscape Calendar*, *Netscape AutoAdmin*, *Netscape IBM Host On-Demand*.

System requirements

In keeping with the trend of modern software, *Communicator* demands a **lot** of disk space! For the PowerPC version, a complete installation requires more than 20MB of

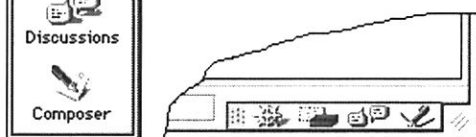
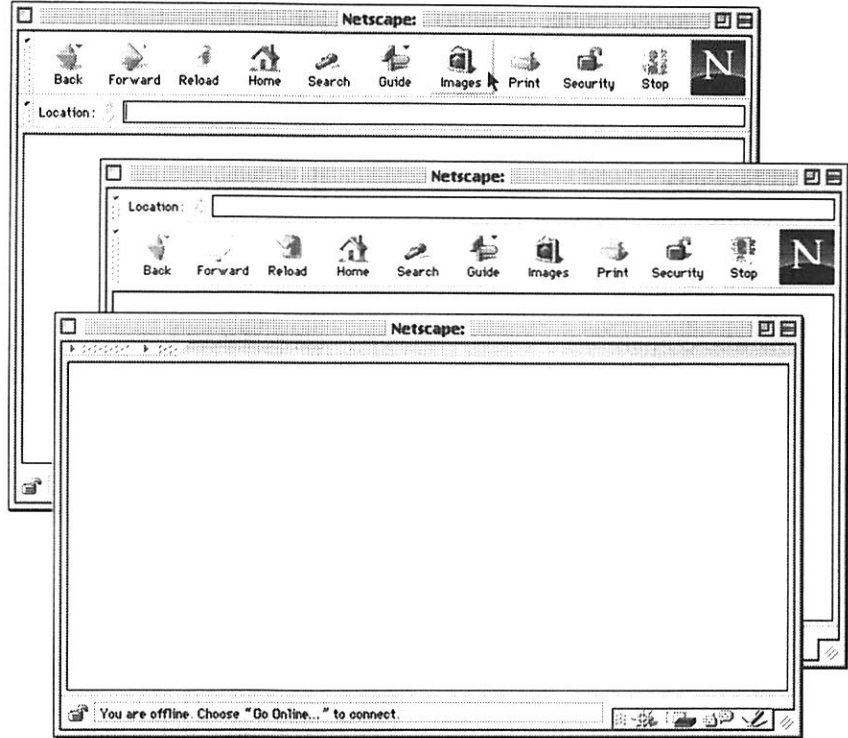


Figure 2. The floating palette of buttons (left) and the same buttons when on the bottom of the window.



Figures 1. The two control bars can be seen at the top of the backmost shot and swapped over in the middle shot. Note the "raised" box in the backmost shot when the cursor moves over an icon. In the front shot the control bars have been closed.

hard disk space and, by the time you install your entire collection of plug-ins, it could easily swell to 30MB or more.

However, the RAM requirement is rather modest considering its capabilities – after all, it is really six products in one! On a PowerPC with *Virtual Memory* turned on (or *RAM Doubler* installed), it requires 6MB (without *Virtual Memory* you need about another 6MB).

The interface

The entire interface has been overhauled, yet, it retains the characteristic Netscape *Navigator* feel. Those used to *Navigator* should feel right at home. The *Navigator* icon is still there on the top right hand side, although the animated image has undergone some slight modification.

The first thing that you will see is two "removable" title bars within the *Navigator* browser window. (See Figure 1.) The title bars are "removable" in two ways:

- You can swap them around by a simple drag and

drop action;

- They can be closed by clicking on the tag to the left (see Figure 1, frontmost shot).

This gives it a rather neat and sophisticated feel. On a practical note, it would no doubt be very handy for those who have a smaller monitor. By closing these bars the browsing space is increased – not by much, but enough to make a clear difference. At the same time, the tag at the top provides quick access to these bars when needed.

The ability to swap the control bars around is interesting (see Figure 1, middle shot), but I fail to see how useful this can be. I guess it's a good thing to be able to customise the layout.

Floating control

In addition, there is also a floating, dockable task bar (see Figure 2). It is similar to those floating palettes you find in graphics and desktop publishing programs like *Illustrator* and *PageMaker*.

For those unfamiliar with such palettes, they are floating in the sense that you can drag them any-

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where on the screen. Unlike a dialog box, the palette allows the main browser's window to remain active.

There are four options on the floating palette. These are (from top to bottom):

- (i) **Navigator** – switch to the main browser window;
- (ii) **Mailbox** – switch to Netscape *Messenger* where you can handle e-mail;
- (iii) **Discussion** – switch to Netscape *Collabra*. This is the “Message Centre” where, as the name suggests, you can check your various mail boxes (e-mail) or different newsgroups to which you have subscribed;
- (iv) **Composer** – open the Web page authoring part of the software, Netscape *Composer*.

What if you don't like the control pad floating around? Well, you can just close it – it is “dockable”. Interestingly, once the palette is closed, its buttons became part of the bottom right hand corner of the *Navigator*'s window (see Figure 2) and you can still access the four options by clicking on the corresponding icon in the window!

3D effect

Another thing you will notice immediately is that when you drag the mouse across a control icon (at the top of the browser window or in the floating pad), the icons pop-up in a square 3D button (see

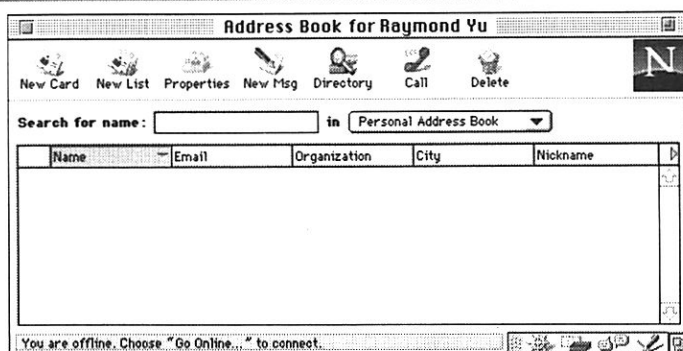


Figure 3. The Address Book component of Communicator.

Figure 1). And, when you click on the icon, it “pops-down”, creating the illusion that a button has been pressed. This 3D effect makes it feel really sophisticated.

Stability

During three weeks of frequent use, *Communicator* (at least the *Navigator* and *Messenger* components of it) seems to be more stable than previous versions. So far I have experienced no crashes or freezes.

As well as that, *Communicator* does a much better job than *Navigator 3.0* at relinquishing memory once it has finished with it. *Navigator 3.0* tended to hog valuable memory space (even after quitting) that was not available to other software. *Communicator* does not seem to share this problem.

Navigation

Want to return to the third last page you have visited? Previously you would need to click on the **Back** button three times, or,

choose the name of the site from the Menu. You no longer need to do this. By clicking the **Back** button and holding the button down, a pop-up Menu of all previously visited pages for the current window appears. This feature is indicated by a little inverted triangle on the top right hand corner of the **Back** button. The same feature is available for the **Forward** and **Guide** buttons.

New HTML features

In an endless drive toward a better Web publishing environment, the Web language, *HTML*, has undergone a major evolution over the years. In *Navigator 4.0*, additional layout features have been added to provide better control over the layout of Web pages. Some of these features include:

- **Layering.** Objects, such as images or blocks of text, can be stacked on top of each other in separate layers. These layers can be transparent so that you can see through to the next layer. If you do not wish to show a particular layer, you can hide it.

- **Style Sheets.** As in a word processor, these allow you to specify how text, headings etc., will appear. They give you the convenience of defining formatting once, instead of manually applying it to all elements on a Web page. For a large site, this could save a lot of time.

- **Absolute Positioning.** This is supposed (I have not tried it yet) to allow you to specify where a block of *HTML* (which could include images, links, text, plug-ins and applets) will appear on a page using **x** and **y** co-ordinates. This should complement the control

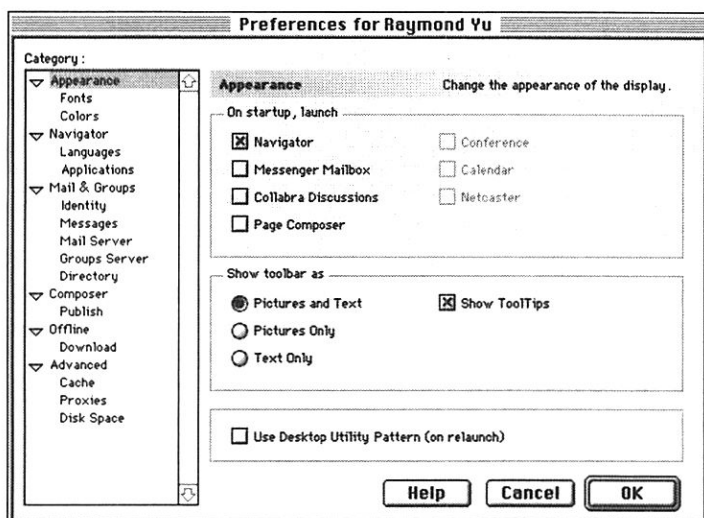


Figure 4. The Preferences dialog box allows even greater customisation in an easy-to-follow format.

offered by the layering facilities.

- **Dynamic Font Support.**

With this, Web page designers can specify fonts and font effects. Fonts do not need to be in the user's *System* – they are simply downloaded together with the rest of the Web page, just like the graphics.

Further, because these new features are fully *Java*-scriptable, it really opens the door to interesting effects (like simple animation and page layout manipulation) that were previously impossible to achieve or, at best, far too complex.

E-mail facilities

Netscape *Messenger* is now an application in its own right. Indeed, each of the products within Netscape *Communicator* is a separate application. *Messenger* is no longer an *ad hoc* e-mail addition to *Navigator*. The features are as you would expect from typical e-mail software.

At last – a filter

Yes! There is even a filter with Netscape *Messenger*! Previously, the lack of a filter was the main thing stopping me using *Navigator's* e-mail facilities. Now it has one, I am evaluating whether to use it for my own e-mail.

One advantage of *Messenger* is that it is integrated with *Navigator*. This means you can jump quickly to Web pages referred to in the e-mail through active **HyperText** links in the body of e-mail. This is certainly useful for those who switch frequently between e-mail and a Web browser.

The use of one "master" program is convenient. Instead of opening three programs (*Navigator*, an e-mail program and a news reader), you only need to launch one. However, because opening different programs can be automated with *AppleScript*, the advantage may not be that great.

Performance

Apart from the convenience, e-mail retrieval is also rather fast. For reasons I don't understand, it retrieves e-mail significantly faster than

Eudora Lite. It also filters the mail as each item is downloaded. You can even start reading e-mail while other items are being downloaded.

By contrast, *Eudora Lite* filters all the mail only after the batch has been downloaded. And you can't do any reading while the download is in progress. (As I have not used *Eudora Pro*, I have no idea how it compares.)

HTML e-mail

E-mail that looks like a Web page! Because it is integrated with Netscape *Composer* (the application that creates Web pages) you can create e-mail messages that look and respond like Web pages. You can even put graphics and *Java* applets in them. This sounds interesting! However, unless your friends are using *Messenger* or a compatible e-mail client, the use of such features is limited (at least for the time being).

It also has a range of additional features I have not yet had the opportunity to evaluate. These include:

- **Encryption** as an integrated feature of *Communicator*. This is in line with Netscape's stated aim of providing a secure communications environment. In relation to e-mail, it supports *S/MIME*, which protects the confidentiality of the e-mail as well as providing a means of authentication.

- **Spell checking.** A handy feature for those people like me who can't spell. [We agree! – Eds]

- **Organising and prioritising** of incoming messages.

Address Book

The **Address Book** is rather neat. Not only does it sort e-mail addresses, you can even store someone's contact information like snail mail address, phone number etc. This is certainly consistent with the

aim of creating a suite of products to handle all your communication needs (see Figure 3).

However, if like me you already have a large contact database in *FileMaker Pro*, it seems rather absurd to have to retype all the data into the *Messenger* Address Book. I wonder...if only it could somehow be integrated with my existing database, wouldn't that be great? As it stands, it can never replace my *FileMaker* database because it cannot do the sort of things that have been alluded to in the excellent series of articles by Hilton Brown.

An interesting feature is that *Messenger* can search directly any open standards-based online directory, such as the *Four 11* Directory or the *WhoWhere* Directory. This is handy, although I am not sure how useful this can be as the person for whom you are searching needs to be listed on such a directory in the first place.

Should you upgrade?

My few weeks of experimenting with *Communicator* suggests that Netscape has done a fairly good job of integrating e-mail with Web browsing. The two components remained distinct yet integrated.

This review has only looked at two components of *Communicator*. There are many features even within these two components that have not been covered. I cannot say that this is a product for everyone, although, for the frequent Web surfer, Web publisher and e-mail user, I would encourage you to look into this product.

The latest version means you can experience all the new *HTML* tags and layout capabilities. Indeed, the new *HTML* layout features alone provide a very fertile ground to explore – not to mention the hours of fun you can have! □

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FileMaker Pro Corner

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There has been speculation in the press about the arrival of millennial events with the arrival of the year 2000. A year ago there were six Web sites devoted to issues surrounding the turn of the century, now there are over 6,000. Take your pick of catastrophic events predicted for the end of the millennium. However, many scholars believe Jesus was born in 4BC at the latest and the calendar was thrown out by the arithmetical error of an obscure monk in the sixth century. This means that 1996 should have been the apocalyptic year. Did you notice anything out of the ordinary?

#1 The Millennium Bomb!

In the opinion of this writer, the only issue of concern in the year 2000 will be the so called "millennium bomb". This refers to any software written on the assumption that a date entered with only the last two year digits, such as 1/1/00, means the year 1900, not the year 2000.

The perceived problem

Most software is aware of the current date from the System clock. What happens when the System clock ticks past 1999?

If a date entered in short form as 1/1/00 (to represent the first day of the year 2000) is interpreted as 1900 instead of 2000, but the System clock knows the current date is 1/1/2000, a calculation subtracting one date from the other will result in 100 years, rather than one day or less. Imagine getting a bill for a 100 year mobile phone call!

Software which demands that dates be entered in short form, such as 1/1/00, may not be able to accept entry of four digit years, such as 1/1/2000. Many companies with custom software are now employing programmers to check whether the new millennium will present this kind of problem. Some consultants have been mak-

ing good money testing software for problems by setting the System clock forward to the year 2000 and entering test transactions.

Those of us with Macs should be spared these agonies. If you don't believe me, just set your System date to 11:59 pm, 31 December, 1999, and wait one minute. Did anything happen? Your Mac should just tick over to 2000 and keep going. Fortunately, Apple software engineers foresaw the problem and made 1904 the default System date. That is why this strange date appears whenever the System battery is flat. Hopefully, future System updates

will prepare us for the year 2004.

FileMaker and the millenium

FileMaker Pro users can also feel reasonably smug, in that both FileMaker Pro 2.x and 3.0 can easily cope with the new millennium, although with a slightly different implementation.

Both versions of FileMaker Pro treat dates internally as serial numbers, commencing from the date 1/1/0001. You can test this by creating a **Calculation** field and defining the result as a number simply equal to any date field, as in Figure 1.

The result is shown in Figure 2, which shows the date entered in the first column, with the internal serial number in the last column. This internal date handling system means that 4 February, '97, is in fact day number 729059. The last day of the year 1999 will be day number 730119 and the first day of the next will be 730120.

Since the first day of the year 2000 is just another serial number to FileMaker Pro, there should be

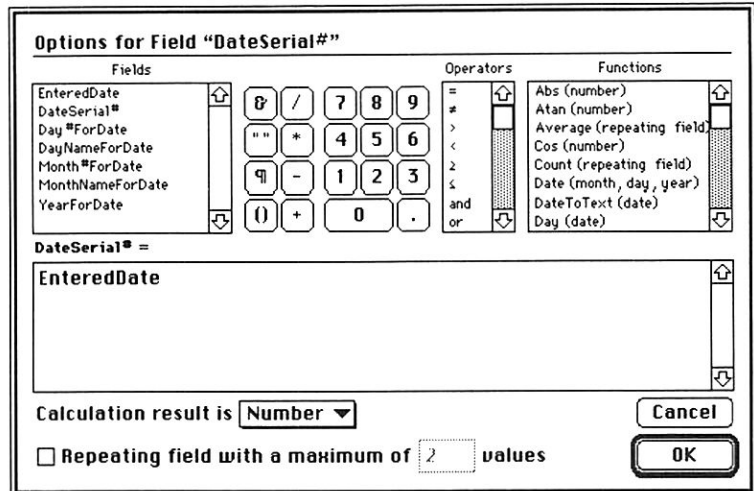


Figure 1. Revealing the internal serial number of a date field.

Enter date	Day name	Month name	Year	Day#	Month#	DateSerial#
1-1-1	Monday	January	1	1	1	1
1-1-00	Monday	January	1900	1	1	693596
4-2-97	Tuesday	February	1997	4	2	729059
31-12-99	Friday	December	1999	31	12	730119
1-1-2000	Saturday	January	2000	1	1	730120

Figure 2. FileMaker Pro 2.x assumes the date 1-1-00 is 1st January, 1900.

no problem with any calculations based on dates. *FileMaker Pro* just adds or subtracts one serial number from another.

Data and FileMaker

Data entry is another issue. Both versions of *FileMaker Pro* require data entered in date fields to be in short form, which is day-month-year under Australian *System* software. *FileMaker Pro* does not mind if days or months are entered with or without leading zeros, nor does it mind if the year is entered as two digits or four digits.

However, there is a difference in the way the two versions treat years entered as only two digits. In *FileMaker Pro 2.x*, entry of the date 1/1/00 is assumed to be 1 January 1900, not 2000. *FileMaker Pro 2.x* will cope just fine with the year 2000 if the year is entered in full. Figure 2 verifies this date treatment. By the way, notice the handy calculation functions available to extract day number or name, month number or name, or year, from any date input.

With the release of *FileMaker Pro 3.0*, Claris took the opportunity to revise the default treatment of dates which are input as the year 00. Whereas previously a year input as 00 was treated as 1900, *FileMaker Pro 3.0* now assumes 00 is the year 2000. This is verified in Figure 3.

The first column in Figure 3, labelled **Entered**, shows the

Entered	Formatted	Day name	Month name	Year	Day#	Month#	DateSerial#
1-1-1	1-1-01	Monday	January	1	1	1	1
1-1-1900	1-1-00	Monday	January	1900	1	1	693596
4-2-97	4-2-97	Tuesday	February	1997	4	2	729059
31-12-99	31-12-99	Friday	December	1999	31	12	730119
1-1-2000	1-1-00	Saturday	January	2000	1	1	730120
1-1-2000	1-1-00	Saturday	January	2000	1	1	730120

Figure 3. *FileMaker Pro 3.0* assumes the date 1/1/00 is 1st January, 2000. See text for details.

unformatted date entered. The first five records were imported from the same database created in *FileMaker Pro 2.x*. Notice that *FileMaker Pro 3.0* has decided to convert the imported date 1/1/00 into 1/1/1900 and display all four year digits. *FileMaker Pro 3.0* seems to be aware that *FileMaker Pro 2.x* treated 00 as 1900 and treats imported data consistently with that convention.

However, if you enter the date 1/1/00 into *FileMaker Pro 3.0*, it will be treated as 1/1/2000 and converted into a four year digit display. The other data is left in two digit format. In fact, any year in the range 00...09 will be treated as 2000...2009 and converted into four digit year display. Any year in the range 10...99 will be treated as 1910...1999 and not converted into four digit year display, unless so formatted. We can assume that the Claris programmers are changing the treatment of dates as we approach the year 2000.

Although both current and previous versions of *FileMaker Pro*

cope with the millennium problem, the date format is an issue which should also be considered by all database developers. Date format means the way the dates are displayed, as opposed to the way they are handled internally.

As noted, *FileMaker Pro 3.0* converts post-millennium year data into four digit dates. If you need a two digit year display, then this formatting can still be achieved, as shown by the second column of Figure 3. However, as a developer, you should consider whether this will confuse the users.

Look at the data already input and project forward a few years. *FileMaker Pro* will not stop you using a two digit year format but, if there is a large date range, you might get some 00 years referring to 1900 and some referring to 2000. *FileMaker Pro* knows which is which, but the users will not. It might be a prudent long term design consideration to allow space on every layout for four digit years, at least until well into the next millennium.

#2 Lookups and Repeating Fields, or Related Fields?

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When converting *FileMaker Pro* files from earlier versions to version 3.0, you'll notice that the files are almost identical. *Lookup* fields are still *Lookup* fields and *Repeating* fields are still *Repeating* fields. *FileMaker Pro 3.0* does this to maintain ease of conversion and to allow for the voluntary adoption of its new relational capabilities.

After conversion to *FileMaker Pro 3.0*, you have the option of replacing **Lookup** fields and **Repeating** fields with **Related** fields. A **Related** field is indicated in the new interface by two colons in front of the field name, eg., "::Contacts". It allows you to display data from another file, based on a re-

lationship with that file. Figure 1 (overleaf) shows an example of a layout with nine of its twelve fields being related to other files.

Related fields can be formatted and used in the same way as any other field in a database, as though the **Related** field were part of the same file. The behaviour of a **Related** field is very similar to that of

a **Lookup** field with one important difference – a second **Lookup** is no longer necessary to update the values in the field. In a **Related** field, if the value of the field in the related file is changed, **all** linked records are updated automatically.

Lookup fields

Sometimes, it may make sense to

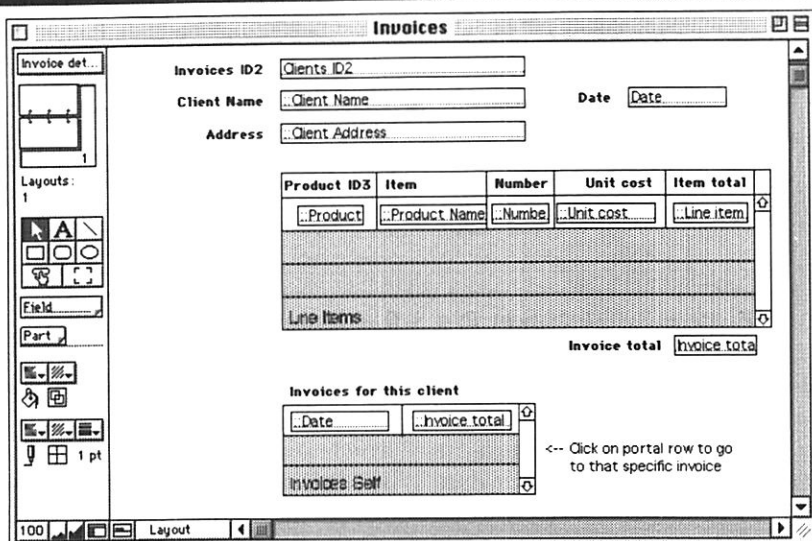


Figure 1. A layout in a file which has nine of its twelve fields related to other files.

retain Lookup fields rather than replace them with Related fields. For example, you may want to retain Lookup fields when you wish to transfer data from one file to another (so that it's in two places) during data entry. This may be appropriate if you're creating a file that will not be part of a full database solution, but still borrows data from other files through a Lookup.

Another example where Lookups may be more appropriate is where you may have fields that should *not* be updated when related data changes. For instance, the price of an item on an invoice, if updated, would cause problems with existing invoice totals (refer to Figure 2).

It is important, therefore, to consider your database very carefully before changing it to incorporate relational features.

Converting fields

During the conversion of a database into *FileMaker Pro 3.0* format, relationships are automati-

cally created to handle the match-field links necessary for the Lookup fields. These existing relationships can be used as the basis for the Related fields that will replace the Lookup fields.

You can check any of your converted *FileMaker Pro 2.x* databases

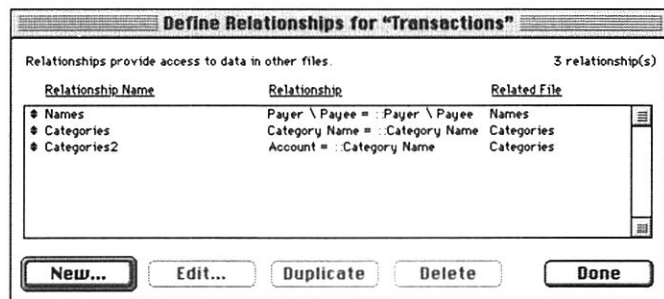


Figure 3. Relationships automatically defined by a *FileMaker Pro 2.x* → *3.0* conversion.

you examine the Define Relationships dialog box, you will note that three parameters are necessary for the creation of a relationship:

- Choosing the file that is related;
- Naming the relationship; and
- Selecting the field in each file that will be used for matching purposes.

Figure 3 shows an example of this statement. If you have a working knowledge of Lookup fields from previous versions of *FileMaker Pro*, you'll see that the function of the "Define Relationships" dialog box is similar to the matching portion of the **Lookup Value** dialog

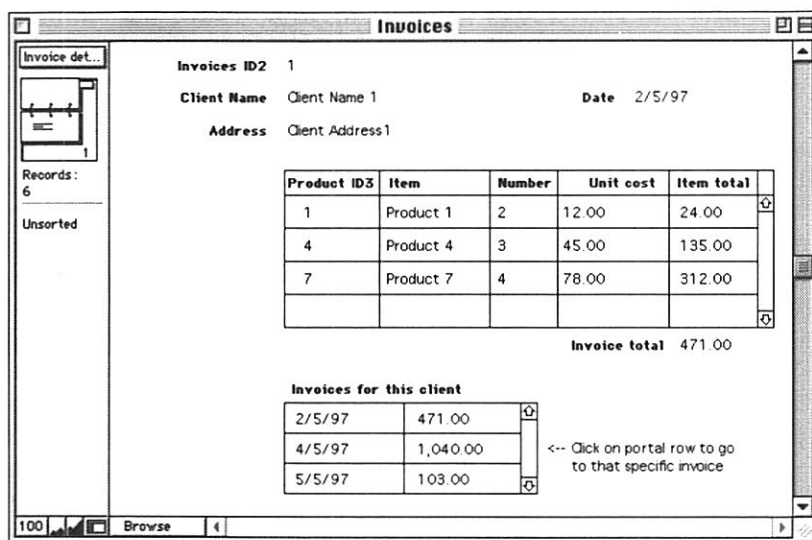


Figure 2. A later change to a unit cost would change the invoice total – not a good idea!

box, shown in Figure 4.

This box requires you to specify a file to Lookup, and which fields to check between the two files for the Lookup match. In the relational area of *FileMaker Pro 3.0*, a Relationship replaces that portion of the Lookup definition. Like Lookups, Relationships can be defined to link records within the same file.

Having decided that your database system would work better with dynamic data rather than static Lookups, you will need to determine which layouts in the database currently use the Lookup field. One way of accomplishing this is to use the **Access Privileges** command

(using the **Define Relationships** command under the File Menu) to see which relationships have been automatically created. When

Continued foot of page 29



From the Editors



This issue of *MACinations* is a significant one for a few reasons – not least of which, it is the last issue for which Andrew Pavey will be President of Club Mac. On 15th October, the Annual General Meeting will elect the Management Committee for the next twelve months and, as Andrew explains in his own column (see page 12), he is not seeking re-election.

With only a relatively small percentage of members able to attend the monthly meetings, many of our readers may never have met Andrew. Fortunately for you, his regular monthly *President's Column* and the occasional full-length article (like last month's contribution on Commercial Intranets) have given you a glimpse of his wide-ranging experience, knowledge and wisdom on matters Macintosh.

Andrew's term as President appears relatively peaceful compared to some of the internal squabbles that went on before. Yet he has had

his share of difficult situations, ranging from Club equipment disappearing to sudden resignations of Committee members to settling flame wars on the Bulletin Board.

Most of our readers will be blissfully unaware of these matters, for the most part, because Andrew's style has been one of quiet and effective work behind the scenes. His position has often required him to be the public face of Club Mac and yet he has never sought the limelight.

Those who are able to attend the monthly meetings of the Club (and you should make the effort, particularly for the Annual General Meeting and the wonderful annual December binge!) will know of Andrew's incredible breadth of knowledge in the Q&A sessions. No doubt this knowledge has arisen from his daily work, which involves him in the use of his Mac for desktop publishing, data control, financial management, network communication and stock control. As well

as this, he has interests in programming and, of course, in using the Internet.

This is beginning to sound like an election pitch – except, of course, Andrew is not standing for election. Instead, it is *MACinations'* way of reminding the Club that it has had the services of a President for the last three years who has done the Club proud. He took on the rôle believing he could offer his skills in sorting out some of its problems. Now, three years later, we can say to him, "Well done, Andrew! The Club is running more smoothly and confidently, and a lot of that is the result of your efforts".

We look forward to Andrew's continued association with the Club and, in particular, with *MACinations*. He has promised to give us the occasional article and, on past experience, we can tell you they will be worth reading.

Tom Pardy and Rose Marshall
Co-Editors

FileMaker Pro – cont from p.28

Figure 4. The Lookup Value screen in FileMaker Pro 2.1.

in the File Menu. After choosing **Overview**, click on the Lookup field you want to replace with a Related field. This will cause a bullet to appear against any layout on which the field is placed, as shown in Figure 5.

Once you've determined the layout on which you're going to use

ically selected in the **Specify Field** list, as shown in Figure 6.

Note also that, in *FileMaker Pro 3.0*, there is an additional pop-up menu at the top of the dialog which allows you to specify a field in the **current** file, or access fields from other files if a **relationship** is defined with linkage to those files.

a Related field, use the **Mode** Menu to enter **Layout** mode. Double-click on the Lookup field on the layout to display the **Specify Field** dialog box. Note that the existing field is automati-

Remember that, in the case of your **Lookup conversion**, the relationships have already been created for you, so you can simply choose the relationship that is based on the correct file and match-field information.

Once the relationship is chosen from the pop-up menu, the list of fields that can be specified is updated to display the fields in the related file. Replace the Lookup field with the **Related** field by choosing it from the list, as shown in Figure 7. The Related field will appear on the layout with two colon symbols preceding the field name. Return to **Browse** mode and note that the Related field is displaying the current information from the matching record in the **Related file**.

Once you've replaced all occurrences of the Lookup field with Related fields, you can delete the Lookup field using the **Define Fields** dialog box. With this deletion,

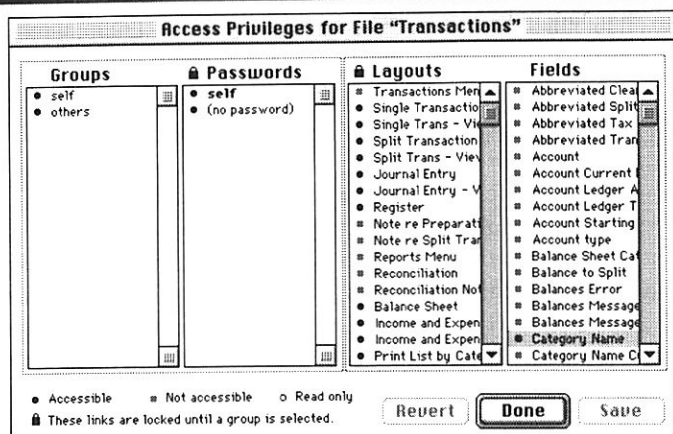


Figure 5. Determining the layouts containing a lookup field.

you've taken full advantage of the relational capabilities of *FileMaker Pro 3.0*, using a relationship to share data between two databases. You've eliminated the need to re-Lookup fields to ensure that the data in the field is current, and you've removed the redundancy and overhead of storing the data in two separate files.

Repeating fields

Now what about **Repeating** fields? They are like databases within records. Along with several conveniences, they can also make certain operations more difficult. Think about the advantages and disadvantages of Repeating fields before you use them in your database. These can be summarised as follows:

Advantages:

- The concept is easier to understand;
- Related data can be listed in

a single record;

- All entries in the field can be searched at once;
- The field can be located on a layout and formatted as a single block; and
- Calculations can quickly determine the minimum, maximum etc., of the values in the Repeating field.

Disadvantages:

- Repeating fields must be split by importing into the same or a new database before they can be summarised;
- Only the first item in a Repeating field is used for sorting; and
- It's not possible to sort or insert values within Repeating fields easily.

Converting Repeating fields

In earlier versions of *FileMaker Pro*, Repeating fields were the only way to store multiple values of data within each record.

One of the major limitations in the use of Repeating fields was that it was somewhat difficult to sort or report on the information contained in them. Typically, the management of Repeating fields

involved scripts that would clone the file and import all of the records, so as to split the multiple values in Repeating fields into separate records in the clone. The importing process could be slow and tedious if large numbers of values were to be split.

Fortunately, the relational capabilities of *FileMaker Pro 3.0* allow you to choose between Repeating fields and Related fields. Consider replacing any Repeating fields with Related fields and a **portal**. A portal is a new layout object in *FileMaker Pro 3.0* that allows for the display of multiple related records from a related file. Figure 8 shows two examples of portals, one displaying **Line Items** fields and the other **Invoices Self** fields.

There are two major components in the conversion of Repeat-

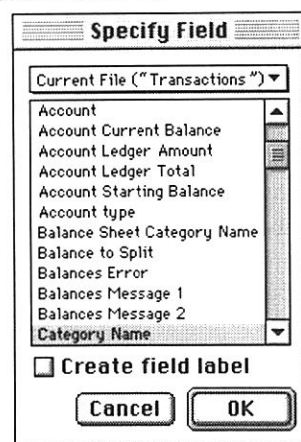


Figure 6. The Specify Field dialog box after double-clicking the lookup field on the layout.

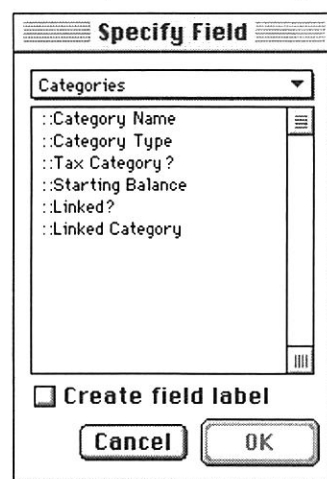


Figure 7. The Specify Field dialog box after choosing the appropriate relationship.

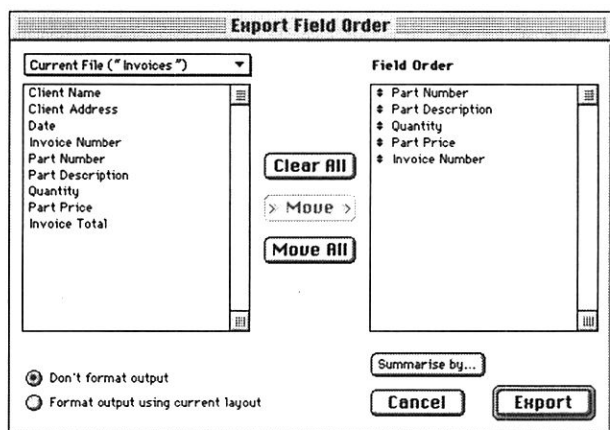


Figure 8. Exporting repeating fields from the **Invoices** file to the new **Line Items** file.

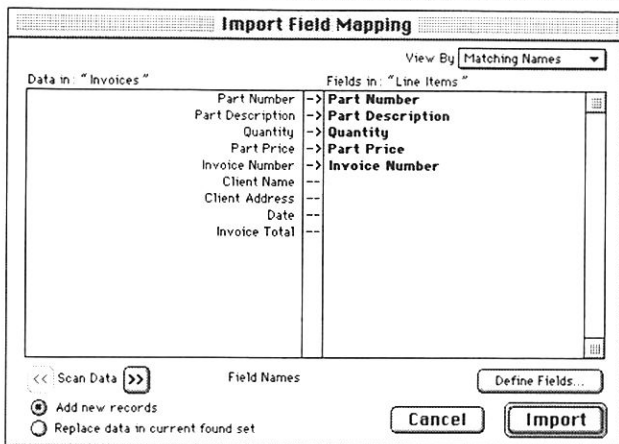


Figure 9. The **Import Field** mapping dialog box used to define the fields to be imported.

ing fields. These are:

- (1) Creating the file that will contain the information currently in the Repeating fields; and
- (2) Relating the new file back to the original file and replacing the Repeating fields with Related fields in a portal.

Export Repeating fields

In order to eliminate the Repeating fields, the data currently in them must be transferred to a new file. Fortunately, a new feature in *FileMaker Pro 3.0* allows you to export data while simultaneously creating a *FileMaker* database.

To do this most efficiently, perform a **Find** in the database of the Repeating fields so that at least one record is in the **Found Set**. Using the **Export Records...** command under **Import/Export** in the File Menu, name the file and choose *FileMaker Pro* as the export format.

When the **Export Field Order** dialog box is displayed, check the Repeating fields and, in addition, the field that will be used for the relationship. For example, let's say you are working with an invoice system in which there are currently Repeating fields for **Part Number**, **Part Description**, **Quantity** and **Part Price**. You wish to replace those Repeating

Line Items – will need to contain the information from the four Repeating fields, as well as information for a field that will be used as a **match** field for the relationship.

In our invoice scenario, the most likely field for this use would be something like an **Invoice Number** field. As a result of the export, the **Line Items** file will consist of five fields: **Part Number**, **Part Description**, **Part Price**, **Quantity** and **Invoice Number**, as shown in Figure 8. After the export is finished, do a **Find All** in the **Invoices** file, and then open the **Line Items** file.

The **Line Items** file is going to be used as the source for the information that we'll display back in the **Invoices** file in place of the Repeating fields. Generating this file is simply a matter of importing from the original **Invoices** file and choosing to split Repeating fields one last time.

fields using Related fields and a portal.

The related

file – let's call it

Line Items –

will need to contain the information from the four Repeating fields, as well as information for a field that will be used as a **match** field for the relationship.

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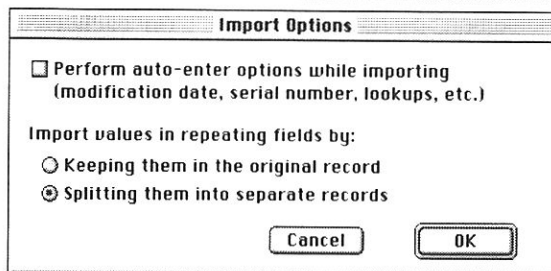


Figure 10. Check the radio button to split the records during the import.

Before importing, use **Define Fields** to remove the repeating options from the four parts-related fields in the **Line Items** file. Now delete any records in the **Line Items** file. In the **Import Field** mapping dialog box, note that the **Match Fields** button has been replaced by the **View By** pop-up menu in the upper right hand corner of the dialog box, as shown in Figure 9. Don't forget to split the records during the import by checking the appropriate button, as shown in Figure 10.

After the import, the **Line Items** file will contain all of the information that is also being kept in the original Repeating fields in the **Invoices** file. The clue here is that there are now multiple records for those invoices that had multiple entries in the Repeating fields, and that these records can be matched, based on the **Invoice Number**. The **Invoice Number** field will be used as the basis for the relationship between the **Invoices** and **Line Items** files.

Creating relationships

Open the **Invoices** file and use the **Define Relationships** command in the File Menu to create a new relationship. Specify the **Line Items** file and choose the **Invoice Number** fields from the left and right field lists in the **Edit Relationship** dialog box, as shown in Figure 11. Remember, we are choosing our match fields using this dialog box.

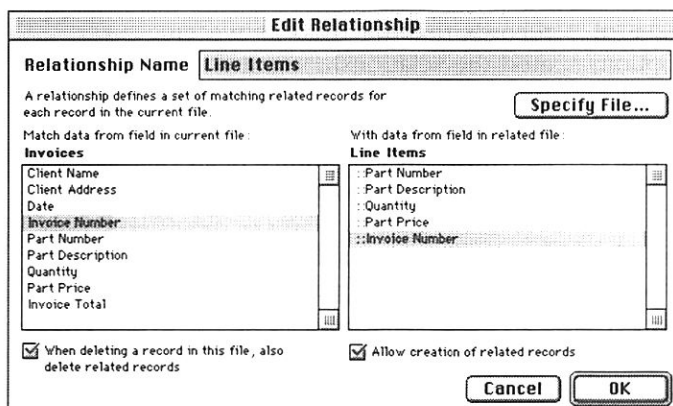


Figure 11. Editing the relationship between the **Invoices** and **Line Items** files.

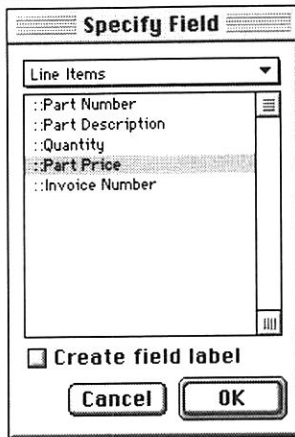


Figure 12. The Specify Field dialog box used when changing repeating fields to related fields.

Take a look at two other options in this dialog box that will come into play, as we build the functionality of the Repeating fields into Related fields.

The first option allows us to delete any related records if the current record is deleted. In our scenario, we must ask ourselves, "If I delete an invoice, do I also want to delete the line items that are a part of that invoice?" In this case the answer is "yes"; if an order for four widgets has been cancelled and the invoice deleted from the **Invoices** file, we don't want the line item record for the parts to remain in the **Line Items** file. Therefore the option to "Allow deletion of related records" should be checked.

One of the advantages of using the Repeating fields was the easy entry of multiple pieces of information in an expanded field format. We can retain that ease of entry by using the second option, "Allow creation of related records." This option should also be checked and then the relationship saved.

Set up a portal

Whilst still in the **Invoices** file, enter **Layout** mode. Double-click

on each of the Repeating fields, replacing them with the Related fields from the **Line Items** file, using the relationship that we have defined to the **Line Items** database. The appropriate dialog box is shown in Figure 12.

If necessary, arrange the four Related fields horizontally on the layout. Enter **Browse** mode – note that you should be seeing data displayed from the first related record in the **Line Items** file.

To list multiple related records from the **Line Items** file, a portal must be created on the layout. Return to **Layout** mode, and use the portal tool to create the portal on the layout. In the **Portal Setup** dialog box, choose to show records using the relationship to the **Line Items** file, as shown in Figure 13.

You will probably want to display the same number of rows in the portal as the number of repeats in the Repeating fields that are being replaced. In addition, check the option to allow deletion of portal records. This option allows us to delete one of the Line Item records easily if a mistake is made while entering parts and quantities in an invoice.

Arrange the Related fields within the first row of the portal. Return to **Browse** mode. You should be viewing the same information from the portal as was originally being displayed by the Repeating fields.

Test the results

Remember the options regarding the creation and deletion of related records that we used as we created the relationship to the **Line Items** file? Try entering a new invoice in the **Invoices** file and we'll see how these options make it easier to enter parts and quantities in the invoice.

You should be able to enter parts and quantities as necessary, using

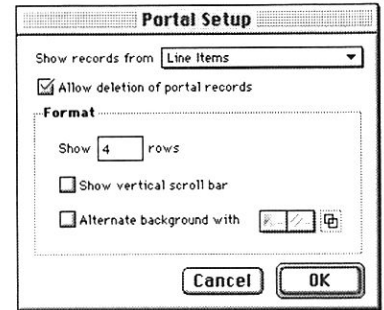


Figure 13. The Portal Setup dialog box.

the Related fields in the portal. Display the **Line Items** file using the Window Menu, and note that, as you enter additional parts and quantities to the invoice, new records are being created in the **Line Items** file.

This ability to create related records automatically is the real power of using a related file rather than the original Repeating fields. The entry of parts and quantities into the invoice using the Related fields results in the same files as if you had imported and split Repeating fields. This happens automatically, *without* having to import.

Once you've implemented the **Invoices** and **Line Items** relationship, it's a fairly straight-forward task to script the generation of summary reports in the **Line Items** file! ■

Future articles...

Amongst others, Hilton is planning the following topics for future articles:

- Splitting names and addresses into multiple fields;
- Performing a Find and Replace within a record;
- Creating custom job numbers;
- Preventing modification to a field after data entry; and
- Automatic recording of payments against invoices.

Your input is most welcome.

The great **Club Mac Garage Sale** will form part of the legendary December Club meeting (scheduled for 10th December). As well as being the annual pizza night, it is shaping up as a wonderful buy, swap or sell occasion. Bring along your pre-loved or unwanted hardware and software. Strike a deal or grab a bargain! See you there!

'Net.files – Worldly Domain(s)



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Domains form an integral part of Internet addresses, and yet some parts of them can be quite difficult to decipher. This month we look at the basics of domain names and why you can't always take them at face value.

In an Internet address, the most important part is the **domain name**. This is the section of the address to the right of the @ sign, or, in URLs, the address to the right of the service type (**http**, **ftp** etc.) before the next forward slash /.

Domain names can be considered as alphanumeric names for each machine on the 'Net. They are sometimes referred to as "human readable" – because it's generally easier for us lowly mortals to remember "clubmac.org.au" than its **IP (Internet Protocol)** address of "203.111.84.129".

Domain name servers (DNSs) throughout the Internet keep track of the mappings between domain names and their IP addresses so that we can continue to be less machine-like, and the machines can do their thing. (Internet-connected computers use IP addresses for all data transfer on the 'Net.)

In many ways, it's easy to figure out domain names. Those which begin with "www", for example, are World Wide Web servers. Those which end in ".au" are (generally) in Australia.

Levelling off

Each domain can be broken into segments divided by fullstops (or "dots", as they're called on the 'Net). For example, "clubmac.org.au" has three segments or "domains": "clubmac", ".org" and ".au". Each domain tells a story.

The rightmost domain says that the machine is in Australia. Each country has a two letter code which is determined by the International Standards Organisation's **Standard 3166**. These are listed in Table 2.

The country codes are also called "top level domains". Unfortunately, although there are meant to be standards on such things, there are six other top level domains. These domains, listed in Table 1, were the original top level

Code	Usage
com	Commercial entity
edu	Educational institution
org	Non-profit organisation
mil	Military organisation
net	Network
gov	Government organisation

Table 1. The original six top level domains.

domains before the country codes became standard.

Since most of the domains were in operation before the use of country codes in the US, and as the Americans feel they can do things their own way, (even now that country codes are standard) domains such as ".org" are top level and (usually) American when they are the last domain, or middle-level when followed by a country code (such as ".org.au").

To add to the confusion, the UK has its own set of domains which correspond to the domains listed in Table 1. For example, a domain name for a machine from a commercial entity in the UK would end with ".co.uk", while an educational institution's machine would end with ".ac.uk". So much for standards!

The middle ground

Moving leftwards, the next segment of the domain name is the name of the entity which owns or runs the machine. In the example of our Club's domain, that's "clubmac".

The domain then usually indicates further categorisation of the machine. If it is part of a division within an organisation, the division name is usually the next domain to the left, and then the machine name itself precedes that. Alternatively, the next domain could indicate the function of the machine – so "www.clubmac.org.au" is Club Mac's Web server.

Sometimes, as in the "clubmac.org.au" domain, there are no more than the basic domains. Sometimes,

there are more domains, as in "www.sydney.apana.org.au", which is the Web server of the Sydney region of APANA. Domain names give a lot of information about the machine in question – sometimes, however, they can be quite cryptic, once the top level and organisation name domains are deciphered.

Domain dilemmas

Company names used before top level domains, are matters of contention when more than one entity has similar or identical names, or when someone beats the owners of that name to the punch by registering the domain first. This has even been used to make a handsome profit by such claim jumpers who sell the domain name to the legitimate trademark owner. Although efforts have been made to clear this up, it still remains a problem.

Some people on the 'Net feel too constrained by the original six top level domains, and are trying to have more of them standardised – such as ".biz" and ".sex". As there are only so many combinations of letters and numbers which make sense and are easily remembered by humans, you can understand why there might be a need for more top level domains.

As the proponents of these domains need to have them registered in domain name servers throughout the world, their new domains will probably need to be accepted by the standards-setting bodies of the 'Net before they gain wider acceptance. For now, the domains can be accessed by putting domain name servers which know about these domain names in the **TCP** settings of your computer.

Despite the vagaries of some domain names, and the need for exact typing, they seem the best way to keep people happy on the 'Net. I think every 'Net user would rebel if we had to start using only IP addresses – I know I would! ☐

Codes and country names

ad	Andorra	fi	Finland	lc	Saint Lucia	sc	Seychelles
ae	United Arab Emirates	fj	Fiji	li	Liechtenstein	sd	Sudan
af	Afghanistan	fk	Falkland Islands (Malvinas)	lk	Sri Lanka	se	Sweden
ag	Antigua and Barbuda	fm	Micronesia, Federated States of	lr	Liberia	sg	Singapore
ai	Anguilla	fo	Faroe Islands	ls	Lesotho	sh	St Helena
al	Albania	fr	France	lt	Lithuania	si	Slovenia
am	Armenia	fx	France, Metropolitan	lu	Luxembourg	sj	Svalbard and Jan Mayen Islands
an	Netherlands Antilles	ga	Gabon	lv	Latvia	sk	Slovakia (Slovak Republic)
ao	Angola	gb	United Kingdom	ly	Libyan Arab Jamahiriya	sl	Sierra Leone
aq	Antarctica	gd	Grenada	ma	Morocco	sm	San Marino
ar	Argentina	ge	Georgia	mc	Monaco	sn	Senegal
as	American Samoa	gf	French Guiana	md	Moldova, Republic of	so	Somalia
at	Austria	gh	Ghana	mg	Madagascar	sr	Suriname
au	Australia	gi	Gibraltar	mh	Marshall Islands	st	Sao Tome and Principe
aw	Aruba	gl	Greenland	mk	Macedonia, The Former Yugoslav Republic of	sv	El Salvador
az	Azerbaijan	gm	Gambia	ml	Mali	sy	Syrian Arab Republic
ba	Bosnia and Herzegovina	gn	Guinea	mm	Myanmar (Burma)	sz	Swaziland
bb	Barbados	gp	Guadeloupe	mn	Mongolia	tc	Turks and Caicos Islands
bd	Bangladesh	gq	Equatorial Guinea	mo	Macau	td	Chad
be	Belgium	gr	Greece	mp	Northern Mariana Islands	tf	French Southern Territories
bf	Burkina Faso	gs	South Georgia and the South Sandwich Islands	mq	Martinique	tg	Togo
bg	Bulgaria	gt	Guatemala	mr	Mauritania	th	Thailand
bh	Bahrain	gu	Guam	ms	Montserrat	tj	Tajikistan
bi	Burundi	gw	Guinea-Bissau	mt	Malta	tk	Tokelau
bj	Benin	gy	Guyana	mu	Mauritius	tm	Turkmenistan
bm	Bermuda	hk	Hong Kong	mv	Maldives	tn	Tunisia
bn	Brunei Darussalam	hm	Heard and McDonald Islands	mw	Malawi	to	Tonga
bo	Bolivia	hn	Honduras	mx	Mexico	tp	East Timor
br	Brazil	hr	Croatia (local name: Hrvatska)	my	Malaysia	tr	Turkey
bs	Bahamas	ht	Haiti	mz	Mozambique	tt	Trinidad and Tobago
bt	Bhutan	hu	Hungary	na	Namibia	tv	Tuvalu
bv	Bouvet Island	id	Indonesia	nc	New Caledonia	tw	Taiwan, Province of China
bw	Botswana	ie	Ireland	ne	Niger	tz	Tanzania, United Republic of
by	Belarus	il	Israel	nf	Norfolk Island	ua	Ukraine
bz	Belize	in	India	ng	Nigeria	ug	Uganda
ca	Canada	io	British Indian Ocean Territory	ni	Nicaragua	um	United States Minor Outlying Islands
cc	Cocos (Keeling) Islands	iq	Iraq	nl	Netherlands	us	United States
cf	Central African Republic	ir	Iran (Islamic Republic of)	no	Norway	uy	Uruguay
cg	Congo	is	Iceland	np	Nepal	uz	Uzbekistan
ch	Switzerland	it	Italy	nr	Nauru	va	Vatican City State (Holy See)
ci	Cote d'Ivoire	jm	Jamaica	nz	New Zealand	vc	Saint Vincent and the Grenadines
ck	Cook Islands	jo	Jordan	om	Oman	ve	Venezuela
cl	Chile	jp	Japan	pa	Panama	vg	Virgin Islands (British)
cm	Cameroon	ke	Kenya	pe	Peru	vi	Virgin Islands (U.S.)
cn	China	kg	Kyrgyzstan	pf	French Polynesia	vn	Vietnam
co	Colombia	kh	Khmer Republic	pg	Papua New Guinea	vu	Vanuatu
cr	Costa Rica	ki	Kiribati	ph	Philippines, The	wf	Wallis and Futuna Islands
cu	Cuba	km	Comoros	pk	Pakistan	ws	Western Samoa
cv	Cape Verde	kn	Saint Kitts and Nevis	pl	Poland	ye	Yemen
cx	Christmas Island	kp	Korea, Democratic People's Republic of (North Korea)	pm	St Pierre and Miquelon	yt	Mayotte
cy	Cyprus	kr	Korea, Republic of (South Korea)	pn	Pitcairn	yu	Yugoslavia
cz	Czech Republic	kw	Kuwait	pr	Puerto Rico	za	South Africa
de	Germany	kz	Kazakhstan	pt	Portugal	zm	Zambia
dj	Djibouti	la	Laos, People's Democratic Republic	pw	Palau	zr	Zaire
dk	Denmark	lb	Lebanon	py	Paraguay	zw	Zimbabwe
dm	Dominica			qa	Qatar		
do	Dominican Republic			re	Reunion		
dz	Algeria			ro	Romania		
ec	Ecuador			ru	Russian Federation		
ee	Estonia			rw	Rwanda		
eg	Egypt			sa	Saudi Arabia		
eh	Western Samoa			sb	Solomon Islands		
er	Eritrea						
es	Spain						
et	Ethiopia						

Table 1. Country codes as specified by ISO 3166.

What's the time, Mac?



©1997 Charles Cave

Deep inside your Macintosh is an electronic real-time clock ticking away the seconds. Time is fundamental to your computer and is used for many purposes, from setting file creation dates and times to controlling the action in games.

This article describes ways of setting the time accurately and using your machine as a fancy clock.

Superclock!

One of the first things I wanted to do with my Macintosh Classic (purchased back in late 1990) was to display the time in the Menu Bar. *SuperClock!* was the answer, and I obtained my first copy from the *Macintosh Bible Software Disks*.

SuperClock! is a Control Panel that keeps the time and day of the

"The passing minute is everyone's possession, but what has once gone by is not ours." – Marcus Aurelius

brief messages for each quarter hour: "It's on the hour"; "A quarter past"; "It's half past", and "It's a quarter to the hour" so the computer tells me the time in my own voice.

This is useful if I want to watch a television program at a particular time as well as reminding me of the need to take a break now and then. It's amazing how quickly time passes when I am deeply involved using the Macintosh.

A stop watch is available and can be useful for timing

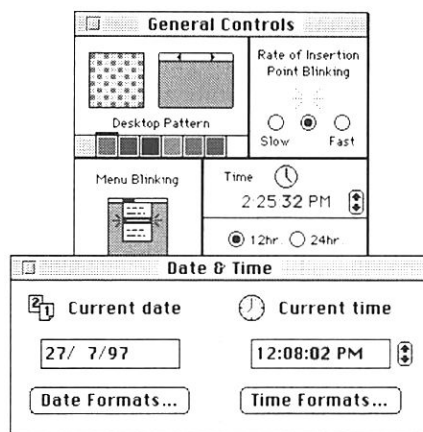


Figure 1. Use either the **General Controls** or the **Date & Time** Control Panels.

"When you sit with a nice girl for two hours, you think it's only a minute. But when you sit on a hot stove for a minute, you think it's two hours."
– Albert Einstein

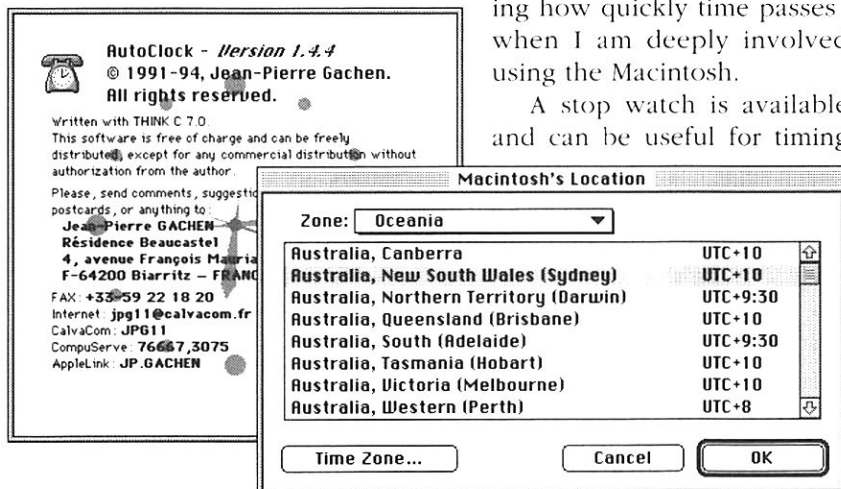


Figure 2. The splash screen and one of the settings windows for **AutoClock** – set your Mac's time **very** accurately!

week constantly on display at the top of the screen. A single click on the time display cycles the program through the time, date, and a stop watch.

The main options include a variety of settings to configure the clock display, but my favourite feature is associating *System* sounds with chimes. I recorded

long distance phone calls or Internet sessions. I rarely use this feature as my main use of the program is a digital clock. *SuperClock!* also has an alarm clock which I have set to midnight to remind me to go to bed!

Manual setting, date & time

The clock has a small area of

memory (parameter RAM) that keeps its values (date and time) even if the computer is powered off, thanks to a long-life battery on the circuit board. The clock does its work by sending an interrupt (an electronic "tick") every second to the CPU circuitry.

Time and date are set using one of two Control Panels, either *General Controls* or *Date and Time*. A number is selected with a mouse-click and adjusted with the arrow keys or by typing the new number. There's not much more to say about these Control Panels, except to note that it is important to set the date and time, particularly when you communicate with the outside world with e-mail, faxes and the printed word.

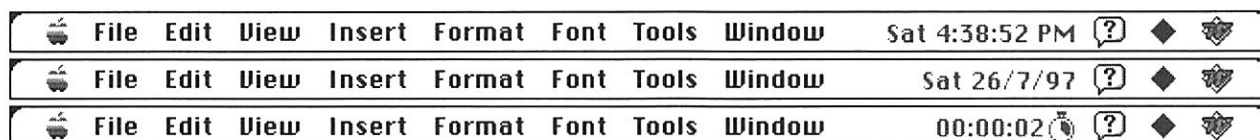


Figure 3. Composite screen shot of the Menu Bar display changing from time to date to stopwatch when used with **SuperClock**.

Precision time-setting

How about setting the clock using a precision clock? If you have a modem, the *AutoClock* program can be used to dial a time server. When *AutoClock* is started, the date and time are displayed in a small window. The "About" screen includes a colourful analog clock. The location (time zone) is set using a screen of place names, and daylight savings options can also be configured. Communications settings include selecting the time server – in my case, the Sydney number of 9267 4648.

Setting the time is a simple matter of selecting the menu option. The modem comes to life, the number is dialled and, after a very short call, the clock is set and a message shows the time difference.

AutoClock includes a useful feature of displaying world time. A new clock window can be dis-

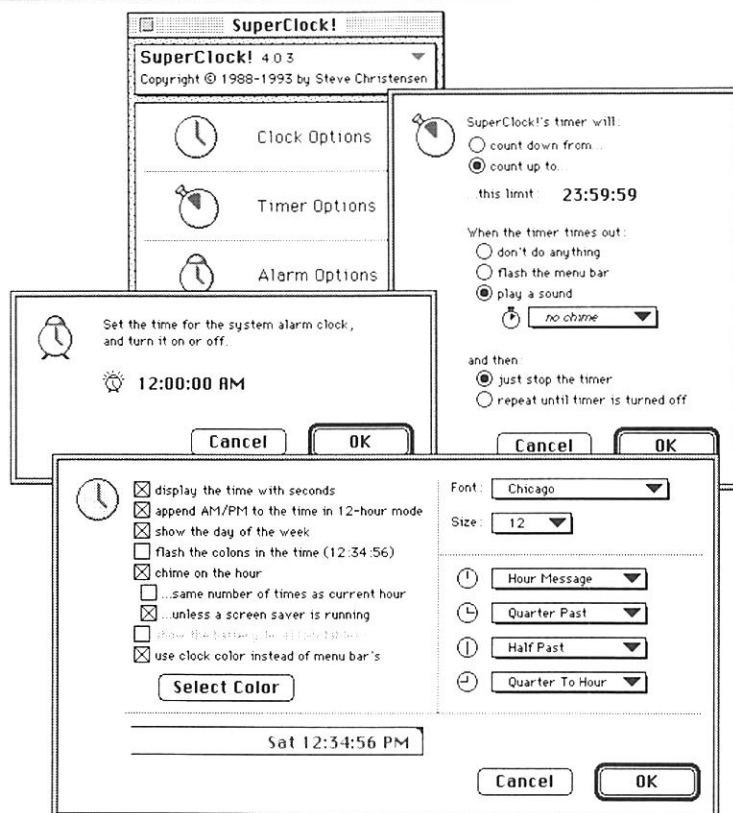


Figure 4. SuperClock, with its various setting windows.

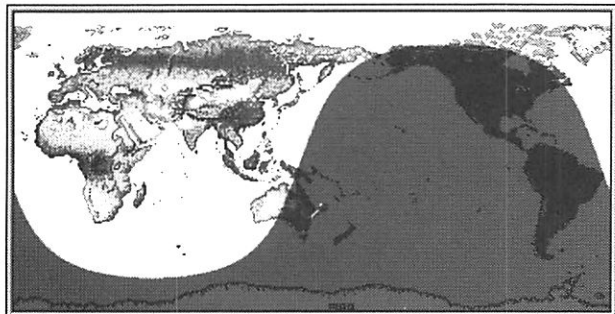


Figure 5. What you get with SunClock.

played by selecting a location from a hierarchical menu of geographic regions and city names.

A small collection of clocks

I searched the Club Mac BBS for other clocks and found a variety of clock styles.

TrueClock is a small program that displays a round clock-face. It can be made "omnipotent", meaning that the clock will always remain visible by staying in front of other windows.

There is also a small digital date, time, day of week and timer display – accessible with a mouse click. A useful feature of this program is copying the time and date to the *Clipboard*, for example: 11:39:15am Sunday, 27 July 1997.

SunClock is an application that shows what parts of the world are in sunlight. If you are in the habit of using your Macintosh for many hours in one sitting, you will notice the darkness moving gradually westwards. The program will also be of interest to students of geography and astronomy with its real-time display of day and night on planet Earth.

TrashClock displays a very small date and time display and is so small that I wondered what the program was doing when I double-clicked its icon. I eventually found the minuscule clock near my Trash Can.

Equipped with these programs, you are now able to set and display the date and time with great accuracy. All that remains to be solved now is a means of setting the time correctly on your microwave, VCR, wrist-watch, car clock, watering system, and bedside alarm clock!

Software mentioned in this article

Superclock! version 4.0.3 by Steve Christensen (USA)

Cost: Free, but the author requests donations to the Children's Hospital of Stanford, California in lieu of shareware fee.

AutoClock version 1.4.4 by Jean-Pierre Gachen (France)

Cost: Free

TrueClock version 1.0 by Jean-François Burrol (France)

Cost: Free

SunClock version 1.1.1 by Darik Datta (Canada)

Cost: Free

TrashClock by Paul Jones (Western Australia)

Cost: Free, but the author requests a bag of sweets and a notel

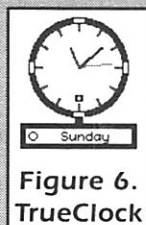


Figure 6. TrueClock

"Time and tide wait for no one"
- a proverb

MACcess Report

compiled by Colin Lee



Love or hate it, Mac OS 8 has now been out for almost two months so, given that members have now had time to install it, we've dedicated this month's column entirely to the problems and praises of what Apple calls "the most important upgrade since 1984". I think they can be forgiven the hyperbole in the face of what the Microsoft machine says about **it's** software.

At the time of writing, I've had Mac OS 8 installed on my 8600/200 for about a week and I like it. After minor installation problems, like not being able to boot from the CD, then booting from a Zip back-up disk and then magically being able to boot from the OS 8 CD, installation was fine (although a little long). A friend also had a few minor installation problems on his PowerCentre 120 but that seemed to be fixed when he updated the hard disk driver to a more recent version.

Overall, I've found Mac OS 8 to be slicker and quicker, the interface refreshing (if a bit Windows-esque), the Desktop pictures novel and the multi-threaded Finder – which allows things like copying, formatting a disk and launching more than one application at a time – useful. The implementation of Windows-like Sticky Menus is less annoying than the PC equivalent and the Contextual Menus, invoked when holding down the Control button and mouse, are similar to the Right Mouse Button function of Windows.

Pop-Up Windows is one of those features that looks useful at first but in practice is limited. You can turn any Finder window into a Tab at the bottom of the screen, but it can only be invoked through the View Menu (with no keyboard short cut). Also, once you restore the window to full size and move the position, the Tab disappears, which to me defeats much of its purpose.

So far, Mac OS 8 seems to be quite robust with no crashes or freezes, even when I installed a piece of software that didn't seem to like OS 8. The application fell over but the System kept chugging along, despite the warning to Restart the machine. Although I found 7.5.5 stable, I somehow feel more confident with OS 8. Time and the computer gods will tell.

I chose to install FreePPP instead of Mac OS 8's Internet connection and experienced none of the problems I'd read about on the BBS and the 'Net. But what impresses me most about Mac OS 8 is the Pop up Folders feature, which I prefer to call, the "burrow down" feature. With a mouse click or a move of a file over a selected folder, you can burrow down through the hierarchical layers of folders to the desired location. Release the mouse button and all the windows close except the one at your destination. This makes for a cleaner screen and easier folder/file maintenance.

Now I'm waiting for HFS Plus, that will be part of Mac OS 8.0.1 at the end of the year. This will enable formatting of your hard drive so a 1K file will **only** take up 1K of space instead of 9K or 32K or whatever, depending on the size of your hard disk partition. This should effectively increase the size of your hard disk. So, Mac OS 8 may not be "the most important upgrade since 1984", but it is certainly a much needed fillip for the Mac community. It's sold millions of copies world wide and has even driven hardware sales, according to some retailers in the US. Here's what some of the Club Mac members had to say. Happy Macking, Col.

To: Whomever can help!
From: Anthony Nicholson
Subject: **OS 8**

I have been reading the various comments – pro and con – OS 8 with great interest, particularly as I just installed it on an LC 630 with 20MB of RAM. After a number of false starts I could actually Startup from the CD, which I wasn't able to do with the original System 7.5 CD. That was the good news.

Ultimately, I had to reformat my hard drive on the advice of a service technician, and then things worked fine until I used my modem. The Internet Setup utility (a misnomer) would get about a third of the way through and then just quit – not very helpful! Anyway, after much fritzing around I got some semblance of sense out of it.

Then I tried to connect. 90% of the time when I dial into my ISP the PPP panel displays the message "Connecting at an unknown rate" and then hangs for a while until it quits. With the same ISP when using System 7.5.5, I had no problems connecting. I have tried various things. I thought that I had it licked by trashing MacTCP DNR from the System folder before trying to connect – but it didn't help. Any useful suggestions or comments would be greatly appreciated.

To: All
From: Peter J White
Subject: **System 8/8.1**

Thank God for Club Mac. Here I am on Sunday trying to install System 8 and, after several hours of struggle and unsuccessful attempts to contact my friendly local Mac guru, I log into Club Mac and all is revealed. (And doesn't

the new TeleFinder version look and sound good!) From the System thread so far, the idea seems to be to zap the PRAM and increase the disk cache. Nortons said there were some errors on the OS 8 disk. (PJW supplied a print out of the log – CL)

I know some of this is picky stuff but, when the average user can't even boot from the freaky CD, then I say this seriously sucks! Now the word is out that System 8.1 is about to be released, with all the stuff they couldn't finish in time for OS 8.0, including the ability to save a 1K file as a 1K file on large disks. But, of course, you will have to format your drive with the new tools, so back-up now!

The upgrade is not big enough for a CD-ROM so it will mean a 'Net download. Can Club Mac post this ASAP so we don't have to spend hours sponsoring our ISP's expansion plans? Back to the install.

To: Peter J White
From: Colin Mackellar
Subject: **System 8/8.1**

According to the Australian MacUser magazine, Nortons 3.5 has a few problems with OS 8 – you seem to have found them. The article said that a fix should be available on Symantec's Web site.

To: Andrew Stedman
From: Kim Kohen
Subject: **OS 8**

AS> I thought that the Internet Setup was about as simple and easy to use as it could get and I was surfing within

MACcess Report

minutes. To those who have been trashing OS 8's Internet stuff and using AICK, this is not a great move – there's no need. And forget about the apparent hassle of a clean install. KK> I did do a clean install and the Internet Setup is a dog. The update script didn't work and there is no way to simply to type in a login script or custom modem setting. AICK was easier, had less steps and was a lot more customisable.

To: All
From: Martin Blackman
Subject: **Notes about Mac OS 8/Internet**

Firstly, you don't have to use the Internet Setup assistant, you can just use the TCP/IP and OT/PPP Control Panels to set things up manually. This has not changed since System 7.5.5.

If you're using OT/PPP, you can create a login script by logging in using the Terminal Window and saving the script (see page 20 of the Mac OS 8 Installation Manual). If you want to create your own modem script for PPP, there is the Apple Modem Script Generator. (I think it's somewhere on the Mac OS 8 CD.)

The Internet Setup under Mac OS 8 works by setting OT/PPP to open a connection upon launch of an Internet application, if you don't want it like this (for instance if you use your Web browser off line) change it. All the AppleScripts on the Desktop do is open your preferred Web browser and e-mail program. These AppleScripts tend to work best if your 'Net applications are on the same partition as the Mac OS 8. In my experience, Mac OS 8 installs better (with less hassle) if your hard drive is unpartitioned.

To: Martin Blackman
From: Anthony Nicholson
Subject: **OS 8**

I think that I set up the modem init string correctly – finally! – but to no apparent benefit. With 7.5.5, I used FreePPP which worked just fine. I have a Global Village Platinum 28.8 modem. Out of necessity I have temporarily reverted to System 7.5.5 until I have more time to phutz about. For the moment I just need to be able to connect. But I haven't yet abandoned all hope – it's just a question of timing and priorities!

To: Anthony Nicholson
From: Colin Lee
Subject: **OS 8**

FreePPP works just fine with OS 8 too! I didn't go through the full OS 8 Internet Setup, I just reinstalled FreePPP, dragged my Preferences from the old System Preferences to the OS 8 Preference Folder and I didn't have to retype my connection script or any set up info.

To: All
From: Christopher Bounds
Subject: **OS 8**

In defence of OS 8, I have installed it on both of my machines without a hiccup. It was a breeze! I like it very much indeed! It is far easier to install than System 7.6.

Of course, there is the slight bug that we know of – Performa 5400s and others of that ilk will not mount floppies when RAM Doubler is on. I hear that Connectix are doing a fix this week. PC card users will also find that RD needs disabling to prevent bombs at Startup. Nice to find that bugs are differentiated! Overall, however, it's the best money I've spent on a System!

To: All
From: Andrew Shipton
Subject: **Desktop Pictures**

Every time I try to change my Desktop picture to one of the six or so photo-realistic pictures that came with OS 8, I have a System crash. Has anybody else experienced the same problem, or is it just me?

To: Andrew Shipton
From: Robert Naccarella
Subject: **Desktop Pictures**

Andrew, I found this to be true on slow(er), low-end Power Macs. I haven't seen a fix for it but I am sure it is going to be in the November release System 8.1 update. I found it mainly happens with pictures which did not come with Mac OS 8. A word of warning, if you value speed, do not use it on a 5300 PowerBook.

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Dunk's Doodles



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August was notable for a complete lack of news-worthy Mac happenings, that is, if you discount the great new *Operating System* that Apple has just released.

Mac OS 8.0 is magnificent – almost everything for which I previously needed third party Extensions and Control Panels is now included in the basic *System* and my Mac is gliding along like a galleon in full sail. I can't remember a time when I had fewer glitches and freezes.

Not only that, I am finding that the full *System* uses less RAM than before. Even my Internet connection is snapping along breezily with remarkably few unexpected disconnections. Yes, at last I am using *OT/PPP*!

However, Apple still can't get its Installer right – I tell it that I don't want certain Control Panels and Extensions but what does it do? It blithely disregards my requests and installs them all and I have to spend hours fishing them out of my *System* Folder.

That said, I found that the new Installer is far better than any of the previous ones and much faster. I know that some of you had trouble in getting the CD-ROM to load, I think that is partly because of the new requirement to do some fast finger work whilst booting up. Remember that you must hold down the **C** key when Starting up with a CD-ROM disk. As soon as the happy Mac icon appears, release **C** and press the **Shift** key (to stop Extensions from loading) and away you go.

The install manual is very clear, offering considerable detail about what to do if you still have trouble. The *Macintosh Guide* is also much more robust than it used to be and is, consequently, a much more usable product.

The only problem I have with *OS 8* is that, when closing down a communication session whilst still

printing, my computer freezes.

Some power users have had problems with things like *Now Utilities*, *RAM Doubler* and other "go fast" applications, but I think that says more about the industry at large than about Apple. *Copy-Doubler* hasn't really been effective since *System 7.6* and, as far as I can gather, Symantec has now completely stopped supporting *Disk-Doubler* and *AutoDoubler*. I'd appreciate it if anybody can steer me in the right direction to get the latest upgrades for these.

*"Thank you, Andrew,
for all that you
have done for the
Club during your
time as President."*

Lets face it, Apple delivered **on time**. That's an unheard thing with any software, especially *System* software – you only have to look at the record of the major competitors. *Windows '95* wasn't delivered until 1996, and it was (reputedly) originally called *Windows '94*.

By delivering on time, Apple caught all the other companies on the hop – they thought it would take Apple at least another couple of months to deliver. And Apple has delivered now!

Committee

It's good to see that there have been nominations for almost all the Committee positions. Those without nominations are **PD Secretary** (who, under the current Constitution is Deputy Secretary to the Committee) and **Purchasing Officer** – a task normally undertaken by our very efficient Sysop. Did you forget to nominate, John?

There are some new names in the hat for the first time in a while. Rosalie Marshall, one of the Co-editors of our magazine, *MACinations*, has nominated as a Com-

mittee Member, as has Hilton Brown, whom most of you will know through his articles on *FileMaker Pro*.

Other changes to the Committee include Rob Naccarella's nomination as President and Jill Riddiford as Vice President. Darryl and myself remain as Treasurer and Secretary respectively, whilst Marshal Ahern is the remaining Committee Member.

Andrew Pavey

This will be the last meeting that Andrew Pavey presides over. After three years as President of Club Mac, he has decided that there must be more to life than Club Mac. But trekking and climbing in the Himalayas – I ask you – fancy trading us in for that? :-)

Thank you, Andrew, for all that you have done for the Club during your time as President. I have certainly found your incisive way of looking at things a great help in my position as Secretary through all that time.

Flaming

Recently there have been a couple of instances of "flaming" which clearly go beyond the realms of decent behaviour. This is particularly so in the **BBS Chat Room**.

First of all, we had the incident outlined in the *Letter to the Co-editors* in the August, 1997, *MACinations*, where a disabled member was flamed because his responses in the Chat Room were slow. Now an instance has been reported to the Committee of language being used which was not only abusive but on the borderline of being obscene.

If this happens to you and you wish to bring it to the attention of the Committee, please take a screenshot of the offending material (using the old **Command-Shift-3** – or **4** if you are using *OS 8*) and send the screen shot to the Committee mailbox. This will make it far easier for us to deal with the matter. ☐

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- ★ **Web Weavers' Corner**
(Big Brother to the rescue!)
- ★ **MACcess Report**
(Chatter from the Club Mac BBS)
- ★ **Dunk's Doodles**
(Telstra offer, meetings and such)

**Part 2 of John Norstad's
detailed review of
Rhapsody**

**Club
Mac**



Sawat dee

20 Years of Apple

©1997 Kenny Howchin

*When we first heard of Kenny's former **one day** journeys, just to print his Macintosh files, we knew this was a story MACinations had to have! Kenny has kindly agreed to share more of his early Apple experiences. This is a reflection from a true Macophile!*

I started using computers in 1985 at Macquarie University. We used big, bulky **Datamax** machines which had green text screens, twin 5 1/4 inch floppy drives and ancient processors.

SPSS was used for statistical analyses and the mighty **Wordstar 1.0** to write reports. Formatting involved inserting control codes at the start and end of text blocks with no controls over margins, page size etc. We printed onto wide format paper using a 9 pin dot matrix line printer.

I splurged \$1,650 on a second-hand **PC-XT compatible** from **Imagineering**. It had a CGA monitor, 640K RAM and **WordPerfect 4.2** – but no GUI.

A friend sang the praises of his **Mac Plus**, which he lugged around in a black carry bag. I dismissed his ravings by questioning how 85% of the world's computer users could get it wrong. Yet, somewhere, I developed the perception that, although Macs were a better machine, they were prohibitively expensive.

I became an English teacher at a high school in Nakhon Sri Thammarat, the central town of southern Thailand's most populous province of the same name.

I needed a machine to prepare teaching materials, write letters and get "The Great Australian Novel" off the ground (it never germinated). So I headed off to a computer show in Bangkok. I played on a variety of Macs and learned that the **Plus** was being reduced from 60,000 baht to 41,000. It was available at Haat Yai, 195 km south of Nakhon Sri Thammarat.

At Haat Yai, the Plus was available but I couldn't afford an **ImageWriter** – about 30,000 baht. How could I print? By bringing my work – on floppy disk – back to Haat Yai to use their LaserWriter for 5 baht per page.

Software was available for copy-

ing, there was nothing for **sale**. Piracy wasn't an issue – certainly not for the guy selling me the Mac – there was simply no market for Mac software. Ironically, I am now the registered user of later versions of many of the programs I once used for free. I look on it now as "try before you buy".

System 6.02 came with the machine – "Thai-ised" to handle Thai script. The Mac was a distinct leader in handling Thai, PC solutions were clumsy and difficult. Thai uses a script-based writing system and an alphabet to construct words in much the same way as English.

The Plus came with a standard keyboard, the Thai letters were decaled onto each key. Application software was Thai-ised (version numbers were followed by "TH"). Exactly what this involved, I don't know, but non-Thai-ised software also worked fine.

I played with **Superpaint 1.0**, **Word 3.02**, **Ready, Set, Go! 3.0**, **PageMaker 2.0**, **FileMaker 1.0**, **HyperCard 1.2** among others. I made newsletters for friends at home, overhead transparencies for classroom use and exam papers with pretty pictures. I used **HyperCard** to set up a lesson data-base. I wouldn't use **HyperCard** for this now, but it did give me a good feel for scripting, buttons, designing layouts etc.

Printing was a full day's activity. I'd be up early for the three and a half hour, 195 km bus journey to Haat Yai. With lunch and the return bus journey, I was rarely back before 7pm. Printing sure is a lot easier these days – I just turn on the **QMS-PS410** sitting next to me here!

A high priority was acquiring a hard disk drive. A Plus with a single 800K floppy drive – in those days of version 1.0 software – meant a **lot** of disk swapping.

In Haat Yai only genuine – ex-

pensive! – Apple peripherals were available. So I went to Singapore by coach – the bus-trip-from-hell down to the island State. The trip was incredibly cheap (about \$A20) but even more incredibly horrible...icy air blowing from the overhead vents which couldn't be shut! I picked up a **Rodime 20MB** external drive. Whoooooeee! Pure luxurious space!

A friend told me about a primary health care centre at the city hospital, which had been given a Mac and printer by a foreign aid agency. Although the software was installed, they didn't really know how to use it and needed someone to show them. Their **SE 1/20** was connected to an early LaserWriter, so I offered to help them in return for use of the printer. They agreed, and we had a long and happy association, they learning to use their Mac, and my seven hour bus trip being superseded by a ten minute motorbike ride.

On a trip home to Australia, I bought a **MacRecorder**, a **Microtek ScanMan** hand scanner and 4 big Megabytes of lovely lovely RAM. I lifted images out of papers and books for use on my overheads – probably not strictly legal, but it seemed the norm in copy-just-about-anything-from-music-to-Rolux-watches Thailand at that time.

The RAM was like manna from heaven. I didn't bother with a fan or a "chimney" to assist with cooling, even though I lived in a place where I owned neither a jumper nor a blanket. But the Plus performed splendidly until I sold it when I returned to Australia in 1992.

Nakhon Sri Thammarat is still my second home, where I have many friends and interests. When I visit, I take along my trusty **Powerbook 180** and a portable **StyleWriter**, and marvel at what getting a hard copy out of my Mac used to involve. *Sawat dee.* ■



MACinations

Co-editors

Tom Pardy pardy@ozemail.com.au
& Rosalie Marshall rosmar@ozemail.com.au
 macinations@clubmac.org.au

Imagesetting

Everysize Typeart Services

Printing

The Print Connection

Club Mac Admin.

Club Mac Inc.
GPO Box 4523
Sydney 2001
NSW Australia

committee@clubmac.org.au

PD Software

PD Secretary
GPO Box 4523
Sydney 2001
NSW Australia

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Club Mac: <http://www.clubmac.org.au>

MACinations: <http://www.clubmac.org.au/~macinations>
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September Club Mac Meeting

Normally, Club Mac meets on the second Wednesday of each month in the North Sydney Council Buildings on the corner of McLaren Street and Miller Street, North Sydney, from 6:30pm to about 9:00pm.



Tom
Brodhurst-Hill

The date and time are right and the September meeting will, indeed, be on Wednesday, 10th September, 1997. But the venue is a little uncertain as we go to press. When you turn up, there will be a sign telling you where to go next! Every month the meeting starts with a Q&A session when members are able to ask almost any Mac-related question and, the Club being what it is, some other member will probably have the answer.

For the September meeting, the guest speaker will be **Tom Brodhurst-Hill** from the company, **T&B Brodhurst-Hill**, whose advertisement appears on page 13 of this issue. Of course there will be the usual tea, coffee and nibbles at "half time".

Never miss a meeting!

Meetings are great opportunities to rub shoulders with fellow Mac-o-philes. And look at what we offer at virtually every meeting!

- ✓ **Demonstrations!**
- ✓ **Hot & cool drinks, nibbles!**
- ✓ **Mac questions answered!**
- ✓ **Mac fellowship & chatter!**

Yes, we **know** we told you about the September meeting in our last issue. But did **you** notice?

Club Mac Special Interest Groups (SIGs)

■ **Beginners SIG**

Meets in the Geddes Room, North Sydney Municipal Council, 6:30 to 8:30pm, Thursdays, eight days after the regular Club Mac meeting.

■ **Database SIG (largely FileMaker)**

Also meets in the Geddes Room, also 6:30 to 8:30pm, but on the fourth Wednesday of the month.

■ **Omnis SIG**

Meets at 327 Sussex Street, Sydney (nice and central). Contact Reg Paling (telephone 9905 4405) for more information, including the date of the next meeting.

Club Mac has a Help Hotline

02 9960 5717



Fax or phone and leave your name, phone number and a description of your Mac problem. Another Club Mac member will get back to you and do everything possible to advise you! This service is free, but we are all volunteers. So please be patient! Sometimes we have problems too!

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Privacy on the 'Net



©1997 Raymond Yu

How secure do you think online communications are? Not wanting to be a pessimist, nor being unduly critical or paranoid, Raymond Yu nevertheless reminds us that the 'Net is not a very secure place. Compared with real life, communication on the 'Net is potentially much less secure. But there are ways to deal with this and, in this easily-understood but informative article, Raymond guides us gently through cryptography.

Prying eyes, confidentiality and cryptography

The Internet is an open system. The very means and protocols which enable it to interconnect different systems and users transparently become the source of the problem.

Information is bounced around dozens or hundreds of routers and then through numerous computers, organisations and countries before it arrives at your computer. In this journey, the message passes through parties you do not know nor have even heard of.

The message can easily be intercepted, sniffed or scanned – and all without you, the recipient, even knowing about it. Can you trust the message you receive?

How would you feel if you found out that your friendly local Post Office opened and read some or all of your mail and then sealed the letters again so that you never suspected a thing?

The scenario can be much worse on the 'Net. The privacy of the message you send via e-mail is much less than that for a letter sent via snail mail – for those who know how. The ability to intercept e-mail is too easy.

Another problem is that it is just so simple to forge the identity of the sender.

Say you have a fictitious friend, Fred, with whom you communicate regularly. How do you know the person whose e-mail you are reading is, in fact, Fred? Is it merely because the header information of the e-mail said it is from Fred? How do you know it is not me masquerading as Fred? (*Not that I know how to do this!*) After all, you cannot see or hear him as in real life or on the phone. You can never be sure!

There is a solution to these and many other problems: **cryptography**. In brief, cryptography can be used for:

- Transmission of secure information (eg., credit card details, personal information);
- Protection of privacy and confidentiality; and
- Evidence that the message was sent by the named person (and at a specific time).

Security – whoever wants it

Whereas in the past cryptography was the sacred domain of government spy agencies, with advances in computer technology, it is now economically available to the average computer user.

*"I am of the view
that cryptography
is so critical that
encryption technology
should be neither
dominated by nor
controlled by the
Government."*

Gone are the days when only big government had the ability to use cryptography to send top-secret information. With the power of modern computers, especially the Mac, everyone can make use of cryptography. This is why governments are a bit concerned... imagine... Big Brother is no longer able to spy on us – good news for us, but bad news for them!

With governments pushing for

the development of the "information superhighway" and with Internet commerce expanding rapidly, it is sad to say that security is still an unresolved online issue. The main limit to the potential of the digital medium is security.

I am of the view that cryptography is so critical that encryption technology should be neither dominated by nor controlled by the Government.

Basic Cryptography

Most people have heard of cryptography and maybe have played around with a simple **cipher** at some stage.

You start with a message such as "Apple is the best computer" and turn it (ie., "encrypt" it) into something unintelligible like "krratqvbpojtbedursbtc" where a=k, p=r, l=a, etc.

This is a simple cipher where the conversion code is referred to as the "key". The recipient, using the same key, then simply reverses the process to retrieve the original message. This assumes, of course, that the key can be delivered securely to the intended recipient.

More complex single key cryptographic systems use a very long random key, such as the one used in the **Data Encryption Standard (DES)** of the US. To boost security further, a triple DES can be used where the message is encrypted three times with different DES keys.

Many modern commercial transactions use an approach known as **Dynamic Key Exchange** that changes the key almost constantly during transaction. This effectively makes any cracking of the code

useless because, before that can be done, the key has changed.

Public key cryptography

Public key cryptography was first developed by Hellman and Diffie in 1975. Unlike previous cryptographic systems or techniques, the key used to encode and decode the message is not the same. The process is illustrated in Figure 1.

In public key cryptography there are two keys: the **Public key** (P) and the **Secret** (or private) **key** (S). These keys are generated only once by the sender. (Of course, you can generate as many key pairs as you want, provided you can keep track of them all.)

The public key is made available to anyone from whom you wish to receive an encrypted message. Either you can distribute the key personally or it can be placed on one of the many public-key repositories or key servers around the world (see later in this article). The person who wants to send encrypted messages to you then uses your public key to encrypt their messages.

Once encrypted, the message can only be decrypted by you, using your secret key. Notice that even the sender cannot decrypt the message again using the original public key.

The strengths of this approach are these:

- (i) Only your private key can decrypt the message encrypted with your public key; and
- (ii) The chances of the key being cracked are very low, especially when you use a key that is more than 1024 bits long.

One practical variation is that many cryptosystems use the public key to encrypt a **random session key**, which is similar to the single key cryptography men-

tioned above. This session key is used to encrypt the actual message. The technique is often used because public key encryption is a very time-consuming and processor-intensive process.

This random session key method is employed by the popular cryptographic program called *Pretty Good Privacy* (PGP).

How secure is it?

Modern crypto codes are, to all intents and purposes, not economically breakable – in the sense that the cost of breaking them would probably exceed the value of the information contained.

A crude estimate (based on 1995 technology) is that it would take an attacker up to \$25 billion to crack a 1024-bit RSA key. Indeed, nowadays it is arguable that electronic encryption provides **better** security than the paper environment.

In 1994, an international collaboration of 600 people, involving 1,600 workstations, mainframes, and a supercomputer took **eight months** to crack a 429-bit RSA key. A similar attempt in 1997 took a group of 14,000 people four months to crack a DES encrypted message. Yes, the code **can** be cracked, but the time and effort

involved mean encrypted messages are very secure in practical terms.

A caveat is that, at the end of the day, security is not just a function of the encryption system – how it is being used also affects the level of security.

A program like *PGP* requires you to use a password (or passphrase) to access your private key. If you adopt the insecure approach (one that many people follow) of writing down the password (or passphrase) in your diary, the security offered by encryption is that much weaker.

All this talk of technicalities is fascinating, but what can public key cryptography offer you and your fictitious friend, Fred?

Advantage – confidentiality

Because only your private key can decode the message sent to you by Fred (who has previously encoded the message with your public key), you can be pretty sure that the

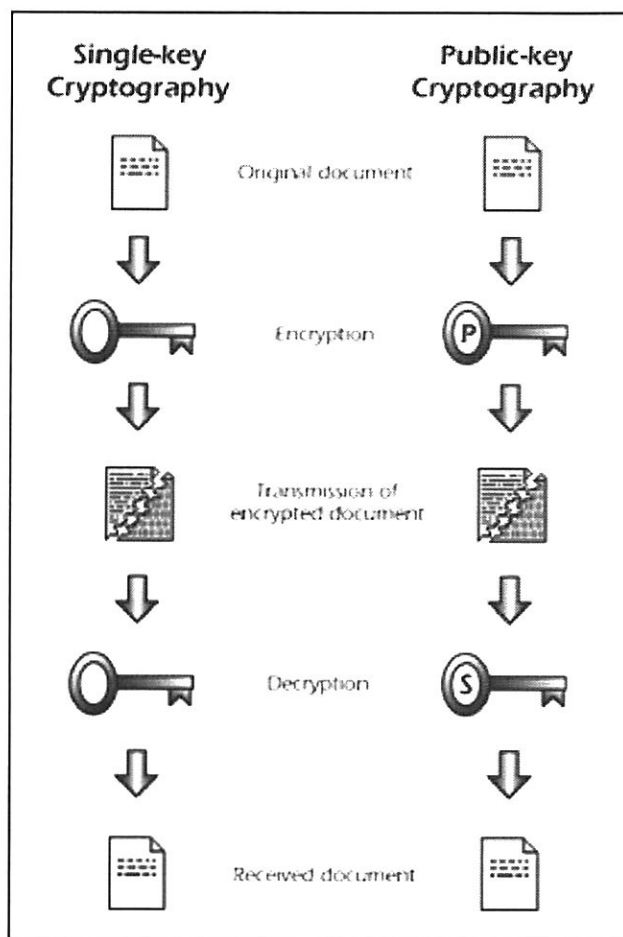


Figure 1. A diagrammatic representation of single-key and Public Key cryptography.

message you receive has not been read by **someone out there**.

Sure, the code can be cracked (as mentioned above), but, let's face it, who is going to spend at least four months with tens of thousands of computers trying to crack the message between you and Fred? It is not exactly top secret national security stuff!

The availability of privacy for our personal communications is a good thing. Indeed, if this is translated to a business context, confidentiality becomes even more paramount. Where private commercial negotiations are leaked, a competitive advantage could be lost.

Advantage - authentication

Because a message encrypted by Fred, using your public key, can only be decrypted by someone using your private key, you can be assured that the message really did originate from Fred.

Remarkably, the process works both ways. You can encrypt a

message to Fred using your private key and, when Fred receives the coded message, he can decode it using your public key.

This is not over the top. People authenticate, even in real life, but the authentication procedure is so simple that it is transparent. For example, in face-to-face communication you authenticate by looking at the person.

In a case where there is a doubt, the person's identity can be verified relatively simply. How often have you been asked to produce your driver's licence, student ID or some password?

The non-physical characteristics of the electronic medium make authentication more complex. While traditional authentication mechanisms work to some extent, they all fail in one important respect: in an electronic arena the unique identification traits can too easily be copied and used by an unauthorised person. Fraud is so easy to commit.

Cryptography comes to the rescue. It is useful to think of it as a "foolproof" (within limits) signature (see below).

Advantage - data Integrity

Now you know that the message is from Fred, how do you know it has not been doctored by some evil character, say Eric (another fictitious person) along the way? This is a less serious problem for personal communication but is a big problem for conducting business on the 'Net.

How can cryptography solve this? It does so by preventing the message from being read (and hence altered).

In addition, cryptography makes possible a technique called **digital signature**. This is essentially a unique string of characters that bears a mathematical relationship to the data contained within the document (see grey box overleaf).

Continued p.8 overleaf

Discount on Membership Renewals?

If you are a BBS member of **Club Mac**, then you already know the benefits of belonging to it. But did you know that you could get a whole month's extension on your membership renewal FOR FREE the next time it is due! All you have to do is introduce a new member to the Club who also signs up to use the BBS!

How do we know if you introduced them? Easy! Just get the new member to write across the bottom of their **Application Form** "Introduced by..." and then your name! That's it!

There is a **Membership Application Form** on page 34 of this and every issue (except the bumper December/January issue, when it is on a later page).

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Cryptography

The end result is that *any* change in the content of the document – or even a change in the scrambled code that makes up the original message – would prevent verification. This is known as a **checksum**.

Advantage – non-repudiation

Commercial deals depend to a large extent on certainty. In real life, when people enter into a deal (e.g., by signing a contract), they are certain that it is binding and that the terms are as written in the document. This certainty is supported by a legal framework.

If business-to-business transactions are to be conducted successfully on the Net, a similar assurance is needed. But, because the content of electronic messages can be altered so easily, either party can argue that they did not enter that agreement.

With cryptography the solution is simple and elegant: sign the document using a digital signature. The content of the document cannot then be tampered with unnoticed (**data integrity**) and the identity of the party is assured (**authentication**). Together, these prevent the document's originator denying the existence or origin of the document (**non-repudiation**).

In a situation where the timing of business deals is crucial, time stamping techniques can be adopted to complement the digital signature, providing solid evidence that the message was sent at a particular time.

Certification

The benefits of cryptography hinge upon one thing: Fred has a copy of your public key. But how did he get it?

Since Fred is your friend, you probably sent him your key directly via e-mail. But the e-mail containing the key could itself be intercepted and someone else's key substituted. Your public key can be tampered with. Remember the evil character, Eric!

Suppose Eric intercepts your e-mail containing your public key.

How does a digital signature work?

In simple terms, the process involves passing the data (the contents of the document) through a mathematical function (called a hash function) that generates a summary (hash code) of the data.

The hash code is then encrypted, using the sender's private key. The resulting code is the sender's digital signature for this particular document.

The recipient, using the same method, generates the hash code from the contents of the document that has been received.

This is then compared with the accompanying hash code (which the recipient decrypts using the sender's public key). If the two codes match, the document is verified.

He could replace it with another public key (to which he alone has the private key) but with your user ID attached.

He then redirects the e-mail to Fred, altering the header information to disguise its origin. So far as Fred is concerned, the public key is from you because your user ID is on it and the mail is from you (or appears to be).

ing appears to be wrong to you.

The scary thing is that this can be done without either you or Fred ever knowing about it!

There are two ways to avoid this:

- (i) Send the public key through snail mail (assuming that snail mail is safer!); or
- (ii) Verify the key your friend receives (a matter dealt with below).

In the above situation, you know Fred. What if you don't? Or what if you receive a public key on the Net, allegedly from Sue? How do you know the key really belongs to Sue and not to Eric, for example?

One way is to pass the key through a mutually trusted friend. Suppose Sue also knows Fred. Fred could pass Sue's public key on to you and vouch that it is indeed from Sue. (Of course, this process also hinges on trust. How well do you trust Fred?)

On a larger scale, this trusted person is referred to as the **Certifying Authority** or **Key Server**. Basically, a trusted organisation certifies the origin of the key by sign-

"These [techniques] prevent the document's originator denying the existence or origin of the document."

If Fred subsequently sends you a message encrypted with your alleged public key (actually Eric's substituted public key), Eric can decrypt the message.

Indeed, Eric could then re-encrypt the message with your original public key and resend it to you. You decrypt the message using your private key as usual. Noth-

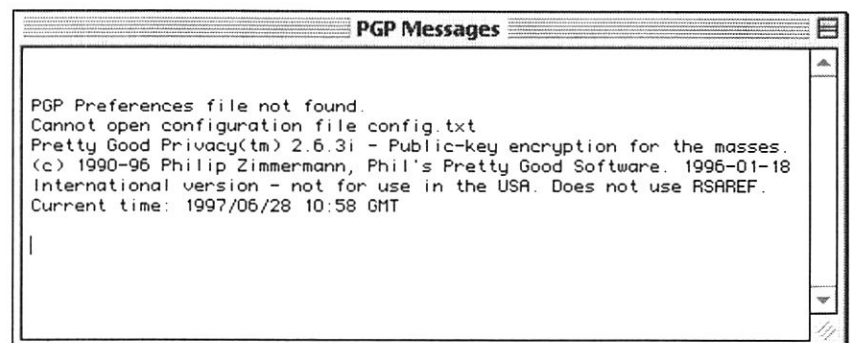


Figure 2. The disconcerting text-based startup screen when using **Pretty Good Privacy** software.

ing it with the server's signature. An example is *AT&T PathServer*, which is supposed to take a trusted key, plus a key you want to authenticate, and return to you an active graphical representation of the paths from the trusted key to the key you want to authenticate.

Using cryptography

Here are some practical steps to using cryptography in real life.

Step 1: Get a Cryptography Program.

You have two choices:

- (i) A simple encryption program; or
- (ii) A public key cryptographic program like *PGP*.

Only the latter can do what is described in this article, although, if your needs are minimal, the former has the advantage of providing a convenient way to encrypt sensitive or confidential files.

Pretty Good Privacy is a complete public-key cryptosystem for electronic messaging. It has been released as public domain soft-

ware (see box on page 10). It was originally designed by Phil Zimmerman and uses IDEA (a 128-bit key) for actual data encryption and RSA (with an up to 2047-bit key) for key management and digital signatures. The RSA public key is used to encrypt the IDEA secret

key as part of the message.

Because of the infamous US export restriction on cryptography, MPILIB is used instead of RSA in the international version of *PGP*. I have no idea how much (if at all) this

Continued p.10 overleaf

Figure 3. Generating a public and private key pair in PGP.

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Attention Grabber

approach weakens security.

MacPGP (or *PowerMac PGP*) version 2.6.3i is not the most user friendly program. On first sight it is rather easy to get confused, not least by the text that comes streaming across the window when the program starts up (see Figure 2 on page 8). This gives the impression that this is text based software – in this day and age! The reason emerges from the accompanying documentation – the program has been ported from a non-GUI operating system!

It should not be surprising then, that the program lacks the refinement we expect from a good Mac program. This is the one thing that stops me using it more frequently than I do. Supposedly, a GUI version is on the way – hopefully soon, but don't bet on it; it has been "on the way" for two years now!




This said, once you get used to the appearance, it is not too bad...at least everything is available from the menu bar.

Step 2: Generate a public and private key pair.

On the Mac versions of *PGP* this is simple enough. Choose **Generate Key** from the Key Menu. In the dialog box, select the number of bits you want and enter a user ID

Some useful Internet resources

- **AT&T PathServer**
<<http://akpublic.research.att.com:80/~reiter/PathServer/>>
AT&T is a key server company.
- **How secure is PGP?**
<<http://www.i-way.co.uk/~reality/sunrise/pgpsec.htm>>
This article by UK writer, Bruce Schneier, on a site managed by software designer, Keith Parkins, offers a very enlightening examination of the technical security of PGP and also has lots of other links.
- **Download PGP 2.6.3i**
<<http://rschp2.anu.edu.au:8080/PGP/download.html>>
You can download both **MacPGP** and **PowerMac PGP** from this site.
- **Cryptography Terminology**
<<http://www.efa.org.au/Issues/Crypto/crypto5.html>>
This is a handy reference to some often-used terms in cryptography.



that identifies you as the owner of the key (see Figure 3 on page 9).

Obviously, the more bits there are (maximum is 2048 bits) the stronger the key. But be warned – the longer the key the slower the key generation process and the subsequent encryption process – and the time it takes increases exponentially.

Step 3: Publish the public key.

On *MacPGP* you do this by extracting the key from your key-ring (a file where *PGP* keeps all your keys). From the Key Menu choose

Extract Keys and follow the instructions.

To reiterate, be careful how you distribute your public key. And, at the same time, be really conscious of the origins of your friend's public key (is it really *their* public key?) The fact that a public key can be tampered with is the weakness of this system.

Step 4: You are now ready to send and receive messages.

You can do so in the knowledge that your message contents are secure from prying eyes.



Letter to Editors

KISS!

Although I have been a Club Mac member for two years, I had no idea of the capabilities of the BBS. I had attended a number of Club meetings as well as the Beginners SIG. However, neither of the meetings addresses the day to day goings on as such and, particularly for beginners, it is a difficult task.

I had problems connecting to the BBS; it took *months* (I am not joking) until I finally connected. Letters to the Committee were of little help and, if it had not been for Darryl Chrisp, I would still be struggling.

And what was wrong? I had left *one blank space* in front of my name in the user name box.

However, such an article as the one written by Rosalie (May, 1997, *MACinations*, p19) should be updated and republished frequently. And/or copies of the BBS's capabilities should be given to new members.

Please, don't go into high tech, either at meetings or in *MACinations*. Computers are complex enough – in particular for beginners – the motto KISS applies very much.

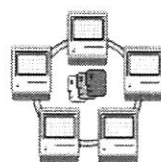
Peter Corella

Are you missing out on half the benefits of Club Mac?

If you have Club membership at the basic level (\$35 p.a.), don't forget that you can upgrade at **any time** during the year to full membership status (\$65 p.a.) which includes Bulletin Board access.

You don't need to wait until your renewal date. You can also upgrade to Premium level (\$95 p.a.) which includes space for your Web site at Club Mac. Simply send your upgrade amount, ie., \$30 or \$60, with your details to our postal address and we will calculate your new expiry date. It's as easy as that!

Networking with Macs



©1997 Rosalie Marshall, Lynda Kelly and Andrew Pavey

This is the third in our series of four articles on networking with Macs. In the first two articles, MACinations Co-editor, Rosalie Marshall, introduced readers to the general concept and then focused on the sophistication of Ethernet. In this article, Club Mac President, Andrew Pavey, discusses the practical application of networking by commercial operations, specifically in setting up an Intranet.

Part 3. Business Intranets

by Andrew Pavey

Basically, an **Intranet** is a collection of files stored on a server. A navigational layer is placed on top of this pool of content to provide structure, organisation, and searching capabilities. Needless to say, you need a network of computers and people who need access to some common information before an Intranet is worth setting up.

Like the Internet - but not

An Intranet is more than just a network of computers. The term arises from the analogy with the Internet, where a disparate group of computers can exchange information

because they used a standardised transfer system (*TCP/IP*) and common services like file transfer or web serving which can be used to/from each computer.

An Intranet is similar to the Internet with the difference that it only provides information within a closed network, ie., the organisation's own - it is a "private Internet". Information stored on an Intranet is not (generally) available outside the organisation.

The Intranet is also distinguished from simple file sharing on the local network in that it contains a structure, hyperlinking, the ability to search for information

easily and the ability to exchange information (eg., via e-mail or "chat areas").

Hyperlinking allows the user to jump from one part of the "server" to another more easily because of the navigation methods used - which are already familiar to those who use the Internet. Click on the underlined text and you are transferred to the new document.

Hyperlinking is much easier for the naïve or non-technical user than trying to find a file in a different folder structure on the same hard disk or on a different one (which could easily be a whole continent away).

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Benefits

An Intranet is primarily used to facilitate information sharing within a team or department. Intranets are built from simple components (like *HTML* docs) which can be managed easily by members of the group – without getting the corporate IT department involved in writing customised software or setting up some monolithic customised solution.

Because web pages (written in *HTML*) are in a universal format viewable by any Web browser, only one version of a given page need be made, even though users with different types of computers and operating systems (PCs running *Windows*, Macintoshes, *UNIX* workstations, etc..) may view it.

The ease with which people can create and view web pages helps make Intranets relatively inexpensive to set up. And then there's the low cost of software: not only is some server software free, but some Web browsers are also. The same is true for some Web authoring programs.

What you can do

Most Intranet web sites are used for basic information sharing. Here are a few examples I've accumulated:

Human resources: job listings, benefits information, internal phone directories, procedure manuals, training materials, leave requisition forms, staffing rosters, holiday information, career and job postings, job transfer forms, employee development programs, building facilities (an image map of the building showing who works where, what each section does etc.), the employee directory, commuting options and child care.

Administration: codes of ethics, members of boards and sub-committees, meeting schedules, corporate policies, company mission and goals, how to place purchase orders, how to get business cards and where safety equipment is located.

Communication: internal company memos, company an-

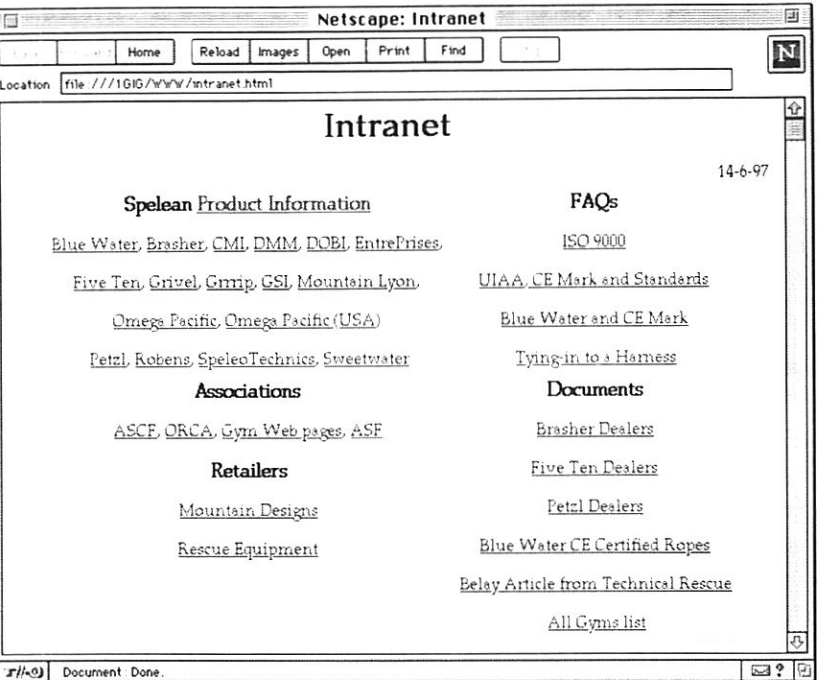


Figure 1. The highest level of the Intranet, showing the different areas of information available.

nouncements, recent award winners or anything which might previously have gone in a newsletter, interviews with the CEO, motivational notes, a daily news sheet, team member listings and responsibilities and the annual report.

Manufacturing: production schedules, safety information on chemicals stored on site, information on research seminars, research seminar summaries, quality control manuals, sales presentations, product specifications, designs, schedule milestones and changes.

Sales and Marketing: technical information resources for sales staff, product fact sheets, FAQs, calendars with marketing activities and sales forecasts, customer issues and features of key competitive products.

Information Technology: help for finding info on the Intranet, local search engines, online training materials, departmental and personal home pages and classified info on items for sale.

These are just a few examples of uses to which an Intranet can be put. Think about your own needs in your own organisation, and you will quickly come up with many more.

If your Intranet also has external links, it could include a jumping off page with useful links related to the organisation, eg., online libraries or related newsgroups.

More sophisticated Intranets are rarer, but there is no technological limit to enabling employees to fill out electronic forms, query internal databases, or hold virtual conferences over private webs.

Software and setup

Whilst a web server on the Internet is often run on a *UNIX* box, there is no reason why you can't use a Mac (or a *Windows* box) as your server. To set up your Intranet you need web server software, such as *Webstar* (which runs on a Mac) and a network which supports *TCP/IP*. This is easily achieved if you have *Open Transport* on a Mac.

Each computer on your network needs its own unique address. If you have no intention of connecting your Intranet to the Internet in the future, then it doesn't really matter which address you pick for your computer. However the **Internet Assigned Numbers Authority (IANA)** has reserved the following three

Continued p.14 overleaf

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blocks of the IP address space for private internets (*Address Allocation for Private Internets Request for Comments, 1918*):

10.0.0.0 – 10.255.255.255
(10/8 prefix);
172.16.0.0 – 172.31.255.255
(172.16/12 prefix);
192.168.0.0 –
192.168.255.255
(192.168/16 prefix).

You cannot select IP addresses at random or else the computers will not be able to find each other with the *TCP/IP* protocols. You must select a different address for each machine and you must do it properly. The best idea is to pick one of the number blocks above and increment the last number in the initial address eg., 192.168.0.2 for the second computer, 192.168.0.3 for the third, and so on.

I won't go into details of setting up the server software because individual circumstances (type of server software, network type, server type, internal administrative details – like who's got access to what on your internal network) quickly come into play at this point.

You will also need to assess carefully whether you want to make all five of the core services available on your Intranet: directory, e-mail, file, print, and network management.

Serverless Intranets

One of the little known features of popular browsers is that they can just as easily open an *HTML* page on a local hard disk as over the Internet. If you can read a web page from your hard drive, then anyone else on your network can read it, provided it's in a directory or folder that others can access.

If all you want to do is to display static web pages linked to one another, you can dispense with the dedicated Web server and *TCP/IP*. Make your web pages and put them on a hard

drive where everyone can access them and install Web browsers on each individual's computer. *Viola!* Instant Intranet in ten minutes!

Installing the browser on each computer is also easy. *Internet Explorer* is free if you don't want to pay licensing fees for *Navigator*. After you've installed the browser, make the Intranet site's **home page** the browser's **default startup page** so that it will appear whenever the browser is launched.

The current versions of *Navigator* and *Internet Explorer* each allow you to use "client-side image maps". These embed coordinate information within the web page itself, instead of making a Web server process it. Thus, a serverless Intranet can still have image maps. You could make a floor map of your workplace, for example, and set it up so that when users click on a spot on the map, they will be sent to a page with information on who or what is in that room or section.

You can configure *Navigator* (and other browsers that have this

ability) to launch a standard application like Microsoft *Word* or *Excel* when a link to a file with a particular extension is clicked. In *Navigator*, at least, the document comes up with a new, temporary filename so the user won't be inadvertently changing the original.

To illustrate some point you're making, you could have a link which, instead of changing to another web page, launches Microsoft *Word* and loads the document to which you have linked.

Organisation

The value of an Intranet is determined by the quality of the information it contains. The ease with which people can create and view web pages makes them quick and inexpensive to set up.

Intranets have often arisen from a work team having a particular need and just going ahead and implementing a simple system – which has then grown like Topsy.

As was stressed in the earlier articles in this series, it is much

better to sit down at the beginning and plan your Intranet, working with a development team created from those people who will be using it. The most important thing in the beginning is to identify the bottlenecks and the time wasting activities that need solutions. Nobody knows your operations better than you.

For example, taking existing policy manuals, procedures, and literature and making them available in *HTML*, has the instant impact of lowering demand for live support. It might seem self-evident, but the first applications to tackle are the ones that are easy and have high visibility and value.

It is critical that the development team settle on a good set of navigational tools and standardise the application of these tools as much as possible. They could be built into a "Tool

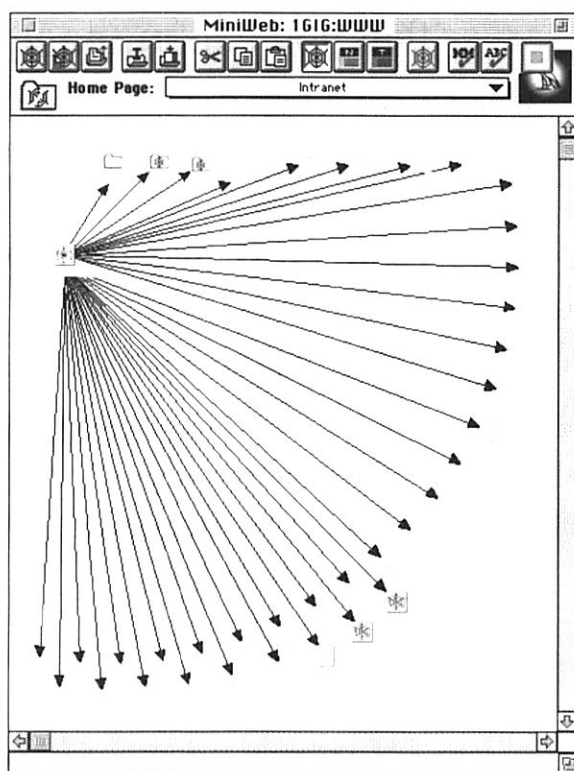


Figure 2. The page one down from top left is the master page. The other pages are the direct links from this page. Note, the entire Intranet is many levels deep and cross linked. This is only the first level down.

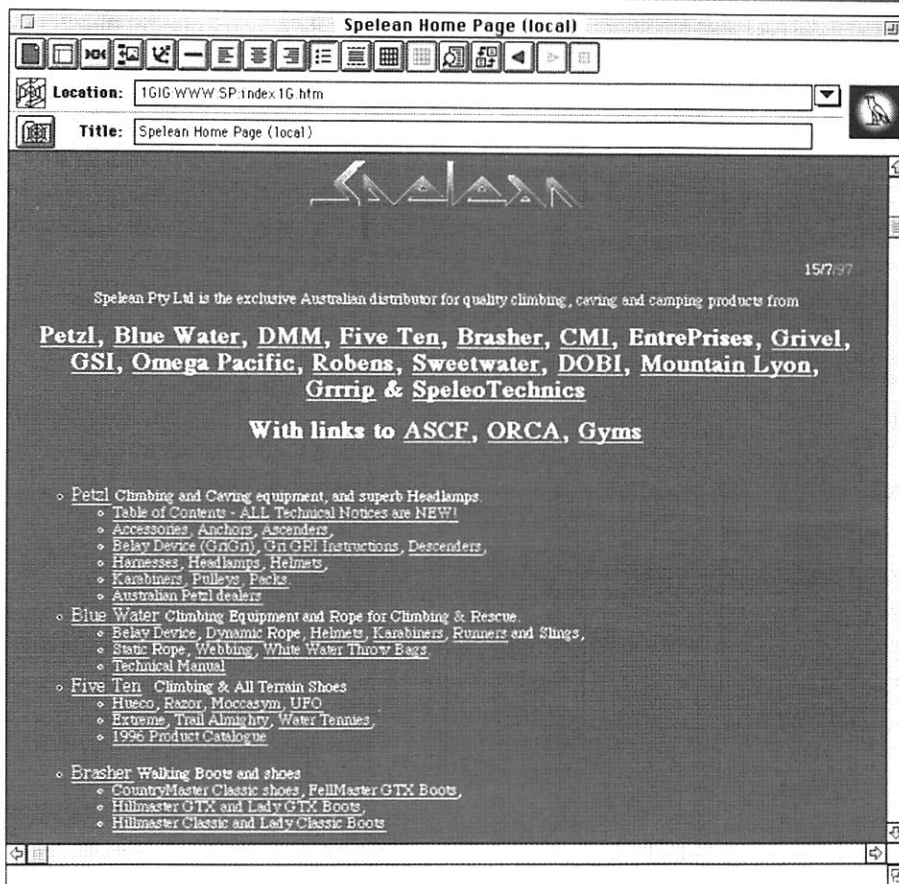


Figure 3. Detail from one of the lower level pages showing the depth of material available.

Kit" and disseminated to other teams of developers within the organisation to maintain a consistent look and feel throughout the Intranet.

Content standards need to be simple and enforceable. Adopt a guideline on guidelines – nothing more than two pages will be read by a typical employee. Your guidelines will need to cover:

- Permissible behaviour (such as language);
- What is prohibited use;
- How to handle trademarks and confidential information;
- Prose style;
- Location of the company logo and department logos;
- Limits on graphic size, etc.

You should ensure that individuals and groups are not distressed by images and messages that appear on company networks.

Make sure also that confidential company information is not published for wider dissemination, and that any organisation-wide stand-

ards (eg., affirmative action, equal opportunity and non-discriminatory directives) are followed.

A good idea is to make available online from the outset a "Tool Box" with a series of templates of standard page layouts, graphic locations, links, navigation buttons, interface designs, and scripts. This "Tool Box" should also be the basis of training programs for both users and authors. In fact, there's no reason why your training materials can't be some of the first things you put online!

You will also need to decide whether any person can change any other person's documents and whether people will be allowed to add material to existing pages or create new pages indiscriminately until the site is a mess!

On the other hand, a too severe approach will result in little natural growth in usefulness or use. It is best to make reasonably liberal guidelines at the start and to review them as experience grows.

Perhaps your Intranet won't

grow to the size of Silicon Graphics Inc., (which has 7,200 employees with access to 144,000 web pages stored on 800 internal sites), but it is almost certain that, whatever the size of your organisation, as the usefulness of its Intranet is appreciated, usage will grow very quickly and far beyond your initial ideas.

Case Study

In my own business, with under a dozen employees sitting at Macs and connected to a Novell file server, we have adopted a "serverless" Intranet. The basis of our Intranet is our external Website. This has been built over a period of a year or so and contains product information on the more than 3,000 products we sell.

The main contents page provides the jump off point for each of the brands of products we handle. All these pages have been loaded onto the central shared hard drive so that they are accessible from any Mac on the network.

Each Mac has been set up with a Web browser and the home page for each browser has been set to point to the main contents page on the file server. As soon as the browser is launched, the contents page loads. Thus each employee has access to all the material we publish on the Web, without having a live connection to the Web.

Supplementing this public information is further internal and private information which only appears on the Intranet. We have included further detailed information on products, customers, organisations we deal with, frequently asked questions (FAQs), photos from staff parties and farewells, trade show information and pictures etc. Currently, we have 52MB of information in 2,500 pages and graphics on our Intranet.

Most of this information has been accumulated from internal sources (like printed catalogues, manuals etc.), linked together us-

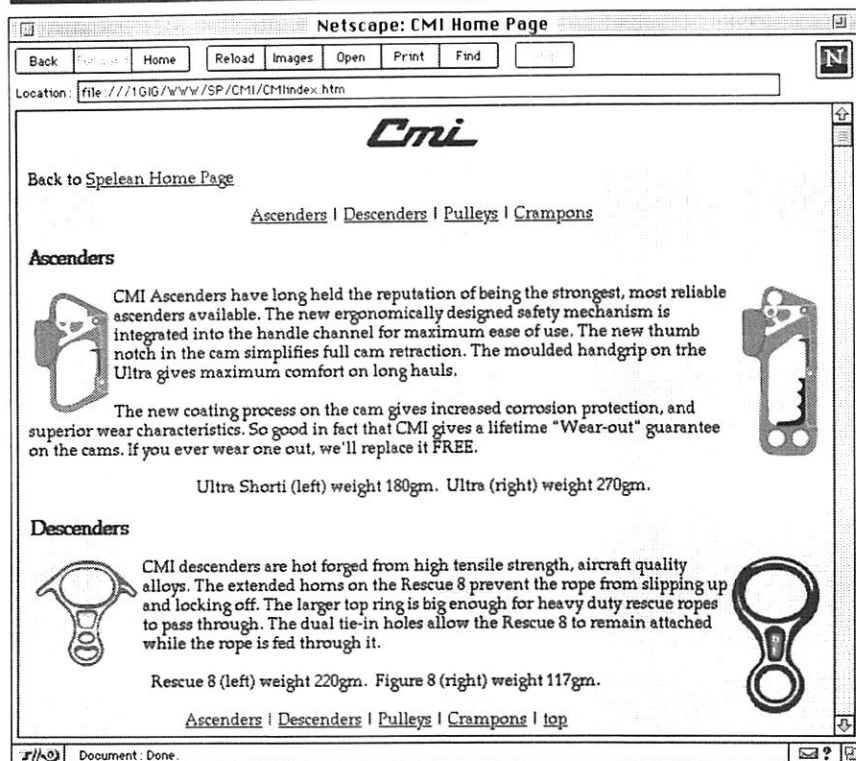


Figure 4. One of the lower level pages showing product information.

ing AOLPress to create the *HTML* pages and *Photoshop* for conversion of picture formats to GIFs or JPEGs. See the Figures in this article.

Although *HTML* pages load considerably quicker over an Intranet than they do from the Internet on a dial-up modem, nevertheless it is still important to restrict graphic sizes to something manageable. I use around 30K as a limit for graphics.

I use frames to make contents pages which provide quick access to smaller chunks of information, so I don't need to load large text files.

Breaking the original material up in this way considerably improves performance on the Intranet, just as it does on the Internet. You can look at the public face of my handiwork at:

<<http://spelean.com.au>>

or

<<http://rescue-equip.com.au>>.



From the President

The July Club meeting was a corker with Steve Vamos holding the floor for the whole time (see page 23). He had a lot to say about Apple's current strategy and direction but, unbeknownst to us all, Gil Amelio was preparing to leave Apple, as we discovered the following morning.

Shortly thereafter Apple announced a quarterly loss – not much – but enough to encourage the journos to rush in and again predict Apple's demise. Having been wrong every time for the last ten years, you'd think they'd learn.

Right now, Apple needs our support, not just in telling others why the Mac will survive and how it is better and more productive, but also through active support.

A recent report on the Internet suggested that the less ethical types who normally post commercial software for free download, have formed the view that Apple needs support and have removed most of

the pirate copies of *Mac OS 8* from their sites, encouraging their "customers" to buy a legit copy!

I recently replaced my Mac. I toyed with the notion of buying a clone but, in the end, I decided that the financial difference wasn't sufficient and got a 9600MP (with 2x200MHz 604e processors) and loaded it up with 288MB RAM. Whilst RAM may be "cheap" now in comparison with a few years ago, that much still adds up to a hefty number of dollars.

I wanted a Mac which would really speed up *Photoshop* and this one does. *Photoshop 4* is one of the few current applications which makes use of multi-processors. In addition to a couple of fast 4GB drives, the biggest speed hike I see is from the use of a large (150MB) RAM disk as the "scratch" disk.

Photoshop is very disk intensive and, for large pictures, needs lots of free disk space to keep the current picture, the previous version

(for the Undo) and space to store selections, channels, masks, layers etc. *Photoshop* needs between three and five times as much disk space for scratch files as the size of the picture being edited.

I also use the RAM disk to store temporarily large database files I'm working on. I use a copy of my database on the RAM disk so that, if there is a power failure or crash, I won't lose anything important. Large data analysis routines which used to take overnight now whiz by in less than an hour!

Even without a huge amount of RAM, you can easily create a RAM disk using the Memory Control Panel. The main benefit comes from those activities which require a lot of disk read/write like data analysis or the *Photoshop* example. The computer can retrieve information from a RAM disk in perhaps a thousandth of the time it takes to get it from a real hard disk.

Andrew Pavey

A Rhapsodic Adventure

Rhapsody



©1997 John Norstad

John Norstad, author of *Disinfectant* and *NewsWatcher*, was one of the many Macintosh software developers who attended Apple's recent World Wide Developers' Conference. Norstad sees enormous potential in Rhapsody – the product Apple must deliver on time. With his kind permission, MACinations proudly presents a slightly abridged version of the final section of his Report. See the August, 1997, MACinations for Part 1 (p.5)

Part 2. It will be a Mac!

The human interface of *Rhapsody* will be based primarily on the Mac interface, with new ideas incorporated from the *NeXT* interface. Contrast this to the internal "guts" of *Rhapsody*, the *Yellow Box* and the *Core Operating System*, where the situation is the opposite: the foundation is *NeXT* technology, with additional elements incorporated from Apple technology.

Rhapsody will have the familiar Mac Menu Bar across the top of the screen. At a Conference demo which showed the Menu Bar, the audience cheered loudly and let out a collective sigh of relief – yes, it *will* be a Mac! Most *NeXT* users think this a terrible travesty because, in their opinion, *NeXT*-style menus are clearly superior.

Rhapsody will let you drag icons to the Desktop, just like the *Mac OS*, using Mac-style windows and controls – with the new appearance of *Tempo* – and it will have aliases. In the *Finder* List View, columns can be resized and reordered.

Enhancements include im-

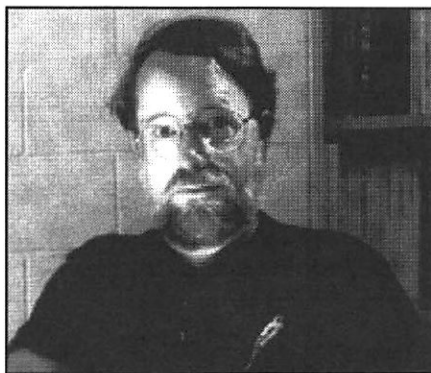


Figure 1. John Norstad.

proved scroll bars with proportional thumbs and rearranged scrolling arrows, live scrolling, live window dragging and the ability to resize windows from any corner or side. A *NeXT*-style "browser" *Finder* Window View will be added to complement the Mac Icon and List Views. *Rhapsody* will use Mac-style 32x32 large icons, not the larger *NeXT* 48x48 icons.

The *Finder* in *Rhapsody* will be extensible and replaceable, although it will be just another application in the *Yellow Box* – not such an integral part of the *System* as the *Mac OS Finder* – and it will support

plug-ins. The Icon, List and Browser views will be standard views other programs can use to display and permit manipulation of their own collections of hierarchical data.

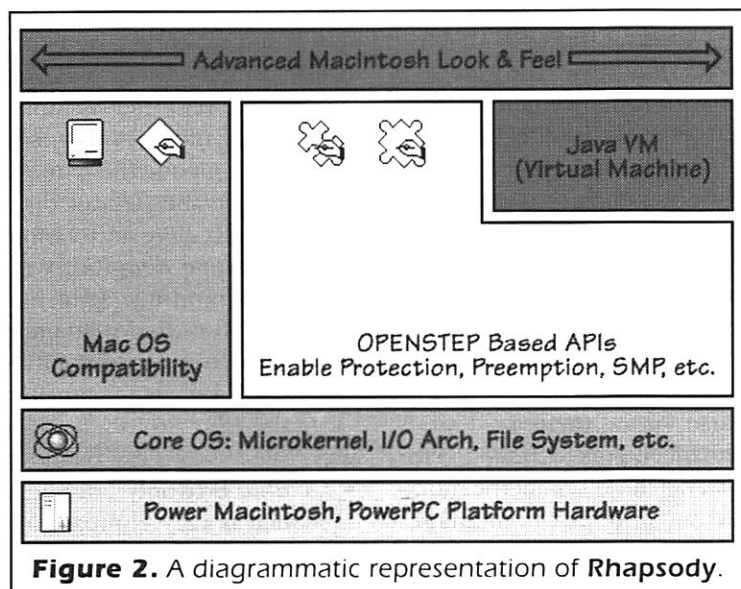
Rhapsody will retain the *Mac OS* type and creator experience. However, some File Systems can't support this (eg., *NFS*). In these cases, filename extensions (*.txt*, *.html*, etc.) will be used as a fall-back. We'll be able to put applications anywhere we wish in a File System – as in the *Mac OS* – and we won't be restricted to special directories as in the current *NeXT OS*.

The *Help System* will be *HTML*-based, containing links to Internet-located help and other sources. It will have powerful navigation with both linking and searching facilities. Although not the same as the *Mac OS Balloon Help* and *Apple Guide*, it will be similar and serve the same purpose.

Rhapsody will have Internet integration supporting Desktop URLs and Internet data types as first-class citizens. It will have a new *Installer System* which will include built-in uninstall and upgrader features.

Rhapsody can be set up as a multi-user *System* – each user will have his/her own Desktop, Preferences etc., similar to *Windows NT* – but much better, I hope.

One huge concern about this "advanced Mac look and feel" sitting on top of the *NeXT*-based *System* foundation – can Apple really hide the *UNIX*? There's something called the "Mom test" in the Apple world (like the Turing test in AI). The basic question is, "Could my Mom use this computer? Could she set it up out of the box, learn it and use it, install new hardware and software, troubleshoot problems, and keep it running all by



herself?" This is the acid test Apple must pass with *Rhapsody*.

I may be hopelessly naïve and nostalgic, but I still believe in the dream of the Macintosh as the "computer for the rest of us". This is a political dream. Originally it was about unleashing the power of computing from the control of the corporate MIS priesthood (people like me) and giving it to ordinary people (like my Mom).

That's what the "personal computer revolution" was all about, most especially what Steve Jobs, Steve Wozniak and Apple were all about in the early days of the Apple II and the Macintosh. And that's what the "Mom test" is all about.

Today's *Systems* are horribly complicated. This includes the *Mac OS* which, in my opinion, stopped being a *System* for "the rest of us" somewhere in the late '80s or early '90s (although it's still much better than the competition, especially *Windows*). We've let our insatiable appetite for more power and more features kill the dream – none of today's *Systems* come even close to passing the Mom test. *Rhapsody* has to address this problem.

Java

Rhapsody will have superb support for *Java*, including support for Sun's "100% Pure" *Java*. This encompasses compilers, byte code interpreters (JITs), the abstract windowing toolkit (AWT) and all three of the new "foundation classes" under development in the industry:

- Sun's JFC (*Java Foundation Classes*);
- Netscape's IFC (*Internet Foundation Classes*); and
- Microsoft's AFC (*Application Foundation Classes*).

The NeXT *Project Builder* and *Interface Builder* development tools will support *Java*.

Java Beans will be first-class

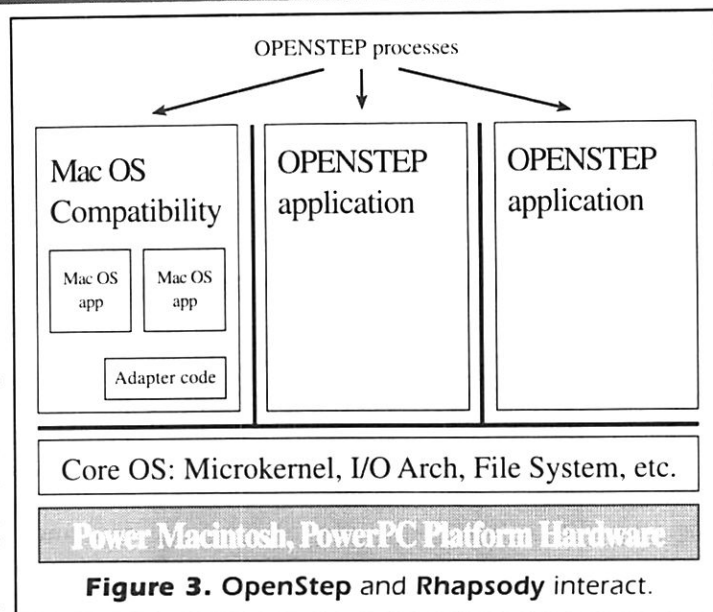


Figure 3. OpenStep and Rhapsody interact.

components in this environment. For example, you can place a *Java Bean* component on your *Interface Builder* palette, then use it in your *Objective-C* and *Java* applications as if it were a regular *Objective-C* palette object.

We saw a demo of a *Java* application built with *Interface Builder* and *Project Builder* which used OpenStep's *Application Kit* and *Foundation Kit*. This stuff actually works! Apple is working closely with Sun on *Java* development and they promise simultaneous releases in *Rhapsody*, with Sun, of new *Java* versions.

Core OS

The *Core OS* includes the *Mach* kernel, I/O services, File Systems and networking protocol stacks.

Mach: *Rhapsody* uses the *Mach 2.5* kernel with enhancements. *Mach* is a modern, small (30K of code), proven kernel that is used in several current commercial Operating Systems. *Mach 2.5* provides the usual full set of kernel services:

- pre-emptive multi-tasking;
- memory protection;
- inter-process communication;
- threads; and
- sparse virtual memory.

The enhancements to *Mach 2.5* for *Rhapsody* include symmetric multi-processing and power management (for PowerBooks).

The *Blue Box* runs as a single

pre-emptively scheduled *Mach* process within a single shared memory address space. Within *Blue*, the traditional *Mac OS Process Manager* does the usual co-operative multi-tasking between *Blue* applications.

I/O Services: The *Core OS* device drivers run in the kernel's address space and provide I/O services to both the *Blue* and *Yellow Boxes*. They support true plug-and-play, have integrated power management, can be loaded

and unloaded dynamically, and are modular and extensible.

They are programmed using object-oriented techniques in *Objective-C* or *C++* using the *I/O Kit*. Writing drivers is fairly easy. For example, Martin Minow of Apple reported that it took him only about three weeks to port the *Copland* SCSI driver to *Rhapsody*.

File Systems: Apple is working on an enhancement to the current *Mac OS HFS* File System named *HFS Plus*. This new File System will be released as part of the *Mac OS* in a maintenance update later this year and, it will also be part of *Rhapsody*.

HFS Plus fixes the small allocation block size problem, so small files will no longer waste such large amounts of space as in *HFS*. It also removes the limits on the number of files per volume and the sizes of files – and it uses 255 character Unicode file names. *HFS Plus* will be the default disk format for both *Blue* and *Yellow*.

For servers, *Rhapsody* will also support spanning, striping and mirroring for disk management, performance and reliability. File names will be case-insensitive.

In the *Blue Box*, there are three ways File Systems can be mounted:

- A *Blue Box*-only volume, which is very compatible with old *Mac OS* software, even software which patches

File System traps.

- A *Yellow Box* disk image file mounted as a *Blue Box*-only volume. This is for convenience (you don't have to partition your disks) and for compatibility.
- *Blue* and *Yellow* shared volumes.

Yellow files do not have resource forks but *Blue* files do. To solve this problem on shared volumes, Apple has decided to use the *AppleDouble* format. The resource fork and *Finder meta-data* (type/creator, icon position etc.) are stored in a separate file with a tilde (~) in front of the file name. These extra files are invisible in the *Yellow Box* and are automatically copied and moved along with their partners.

Some Mac users have expressed concern about the lack of resource forks in *OpenStep*. Don't worry. *OpenStep* has something even better called "nib files".

These files are built with *Interface Builder*, the NeXT tool which corresponds to *ResEdit* in the Mac OS. Nib files contain archived user interface objects, target/action connections and other object relationships. *OpenStep*'s "NSBundle" class implements the notion of a "group of application objects" and offers facilities akin to the *Resource Manager* in the Mac OS.

Nib files, application binary files and other files used by a program (e.g., picture files) are gathered to-

gether in an "application wrapper" – a directory that appears to the user as if it were a single file. This is quite different from how application packaging is done in the Mac OS, but it accomplishes the same goal and is considerably more flexible.

Networking

Rhapsody will support at least the *TCP/IP* and *AppleTalk* protocols in both the *Blue* and *Yellow Boxes*. The *Blue Box* will use *Open Transport* for both *TCP/IP* and *AppleTalk*. The *Yellow Box* will use *BSD 4.4* sockets for *TCP/IP* and a port of the *AIX Workgroup Server AppleTalk* stack for *AppleTalk*. Rhapsody may support Novell and *Windows NT* networking, but the plans are not firm and we don't have any promises.

Rhapsody will also support 10 and 100 megabit per second Ethernet; PPP and *FDDI* will be supported soon. *LocalTalk* support is

planned, but there's no token ring or *ATM* support yet.

Yellow Box will not use the *Chooser*, but Apple promises that we will be able to change network configurations without rebooting, using a friendly "Mac-ish" user interface.

Networking is clearly one area where Apple needs to do more planning and work. There has been quite a bit of controversy over the decision to drop *Open Transport* in favour of *BSD 4.4* sockets in the *Yellow Box*. This was a frequently asked question at the Conference and the subject of much debate. Amelio stated (before his departure) that the decision to drop *Open Transport* was being reconsidered, based on feedback from customers and developers.

Cross-platform strategy

Apple has a cross-platform strategy as part of the *Rhapsody* product plans.

- *Rhapsody for Intel Processors*;
- *Yellow Box for Windows*; and
- *Yellow Box for Mac OS*.

Some people have questioned the wisdom of this cross-platform strategy, especially the *Rhapsody for Intel* product. Why buy an Apple PowerPC hardware product when you can run *Rhapsody* on a cheap Intel box?

One clear advantage of *Rhapsody for PowerPC* is the *Blue Box* for running Mac OS software. It also seems very clear to me that *Rhapsody for Intel* will never have the same kind of plug-and-play benefits, nor the same level of hardware and software integration as *Rhapsody for PowerPC*.

In his keynote speech, John Rubenstein, Apple's Vice President of hardware engineering, said that Apple's strength is its ability to unify hardware and software. He said that Apple is a **Systems** company, not a hardware company nor a software company. I think this is the primary reason *Rhapsody for PowerPC* will be more attractive than *Rhapsody for Intel*.

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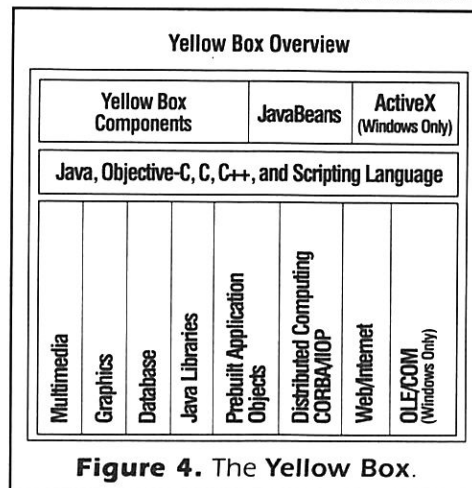


Figure 4. The Yellow Box.

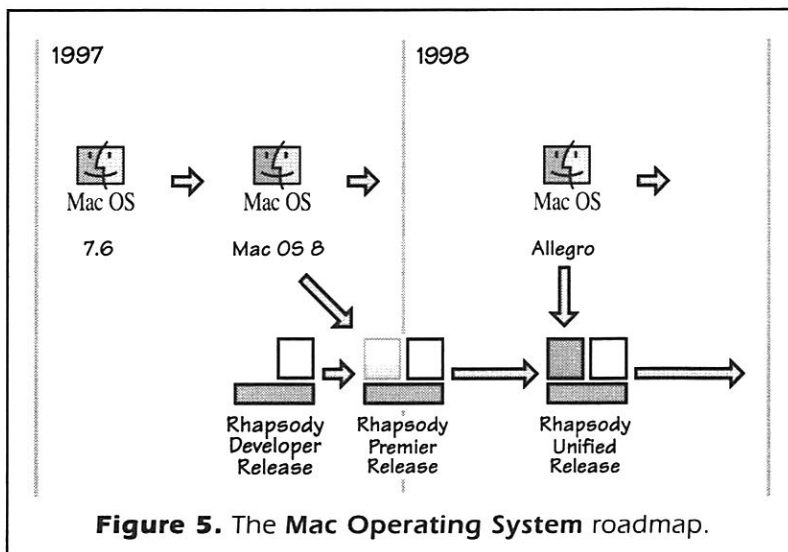
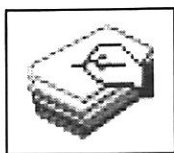


Figure 5. The Mac Operating System roadmap.



Drag-and-drop in HyperCard

©1997 Jonathan Cooper

Recently, I was creating a visual database in *HyperCard* with a card that listed, in a scrolling field, images that the user had "bookmarked". I wanted to provide a way for the user to rearrange the lines in that field.

Originally, I required the user to:

- click a line to select it;
- click a button "Reposition...";
- enter a new line number; and finally
- click "OK".

What I really wanted to do was allow the user to re-order the

lines just by dragging – like *File-Maker Pro's* Sort Records dialog (see Figure 1 opposite).

Even though this is not actually built into *HyperCard*, I have discovered that, with a little scripting, even *HyperCard* fields can have this feature.

The trick is to create a one-line field (**Moving Line**), normally hidden, that produces the effect that the selected line is moving (see Figure 2). The text of the selected line is put into it, while the selected line itself is temporarily deleted from the main field. When the mouse button is released, the line is placed in its

new position and the one-line field is hidden again.

The field **Moving Line** is made to look like the selected line because its one and only line is permanently hilited by having its "Auto Select" property turned on.

However, the selection of the clicked line in the main field is achieved *without* turning the "Auto Select" property on. This is because the selected line of an **autoSelect** field insists on reverting back to its original value, even after you set it in a script. (Is this a bug?) Instead, a few extra lines

Continued p.21 opposite

Rhapsody – cont from p.19

Write once, deploy everywhere

With this cross-platform strategy, software developers who use *OpenStep* and don't use any platform-specific features can write their programs once and deploy them everywhere, on 100% of the modern PC market! ("Modern" excludes *Windows 3.1* PCs and 68K Macs.) The target market for these "pure" *OpenStep* applications includes *Windows '95*, *Windows NT*, *Mac OS* and *Rhapsody* users. That's a **big** market!

Using a technique my friend Leonard Rosenthol has dubbed "obese binaries", it is even possible to ship a single properly packaged application which can run on **all** the target platforms. Basically, all you have to do is recompile your program multiple times and, if you use *Java* to write your *OpenStep* application, you don't even have to recompile!

Conclusion

Rhapsody has the potential to be a superb *System* which leapfrogs the competition. If Apple delivers this *System* on time, executes it well and manages to solve the very difficult problem of passing the "Mom test", I think the result will make today's Macs and *Windows*

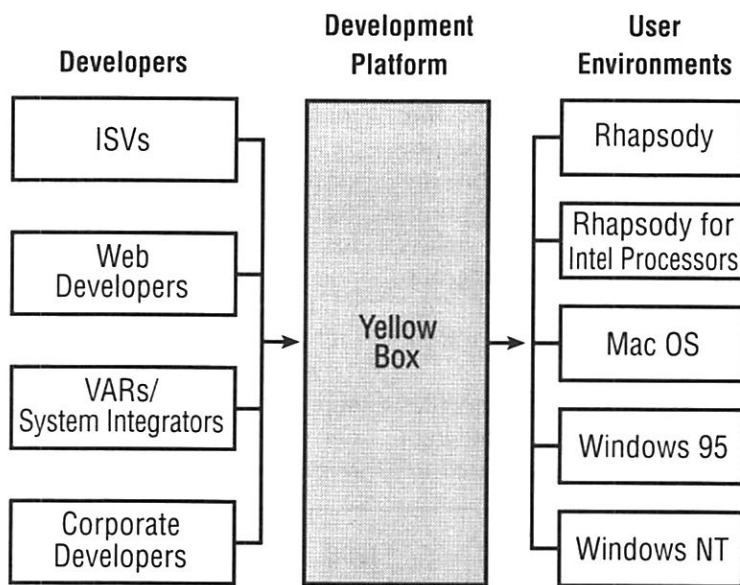
PCs look like toys.

With *Rhapsody* we get three complete and mature *Operating Systems* in one package: *Mac OS*, *OpenStep* and *UNIX*. We get close to 100% compatibility for old Mac programs and the best *Java* platform on the planet. We get a superior object-oriented environment for

rapid application development. We get great tools for enterprise computing, distributed computing and Web development. We also get a sensational cross-platform strategy!

I'm excited about *Rhapsody*, more excited than I've been about any Apple technology in years, and I hope you are too. ■

Development Options for Developers



Apple's Yellow Box Development platform will enable developers to create robust, media-rich applications for a variety of operating systems.

Figure 6. The choices for developers in Yellow Box.

of script achieve (almost) the same result by selecting the desired line plus its final return character.

The handlers are on `mouseDown` and on `mouseStillDown` (both in the field's script).

Taking it further

If you wanted to extend this idea, how about trying to allow the moving of lines *between* fields? Or the moving of text other than whole lines (as in many word processors)?

The immediate difficulty with this second suggestion is how do you trap `mouseDown` and `mouseStillDown` messages when the field is unlocked?

Normally the only messages sent to unlocked fields are `mouseEnter`, `mouseWithin`, `mouseLeave`, `openField`, `exitField` and `closeField`.

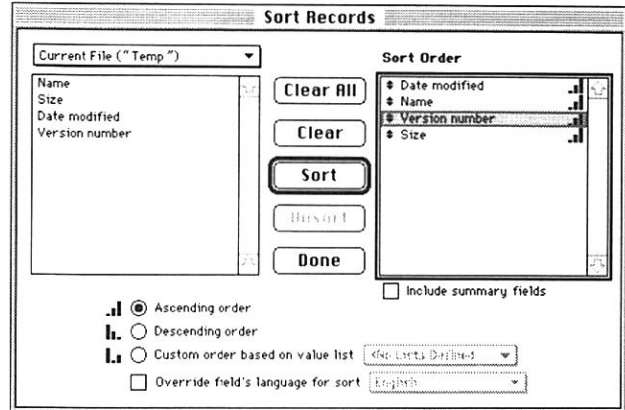


Figure 1. The Sort Records dialog in FileMaker Pro 3.0.



See also **SpellChecker** correction on page 22 overleaf

Figure 3. Cursor "Line up/down".

```
on mouseDown
  put word 2 of the clickLine into lineNumber
  — just the line number

  put the value of the clickLine into theItem
  — the text of the clicked line
  if lineNumber=1 then put -1 into a
  else put the number of chars in line 1 to -
    lineNumber-1 of me into a
  — Select the line plus its final
  — return character:
  select char a+2 to a+length(theItem)+2 of me
end mouseDown

on mouseStillDown
  set cursor to "Line up/down" — Fig. 3
  — This line is included if you want to create
  — (or borrow) a special cursor. (Make sure
  — you install "curs" resource in your own
  — stack)

  put word 2 of the clickLine into lineNumber
  — just the line number
  put the number of lines in me into lineCount
  put the left of me into myLeft
  put the right of me into myRight
  put the top of me into myTop
  put the bottom of me into myBottom
  — ahem! :)
  put the TextHeight of me into myTextHt
  put the scroll of me into myScroll
  put min(myBottom, myTop + -
    (myTextHt*lineCount) - myScroll) into -
    lastLineBottom
  — base of last line (or bottom of field if text
  — scrolls)

  get line lineNumber of me
  lock screen
  delete line lineNumber of me
  put it into cd fld "Moving line"
  put the mouseV into MV
  — vertical position of mouse
```

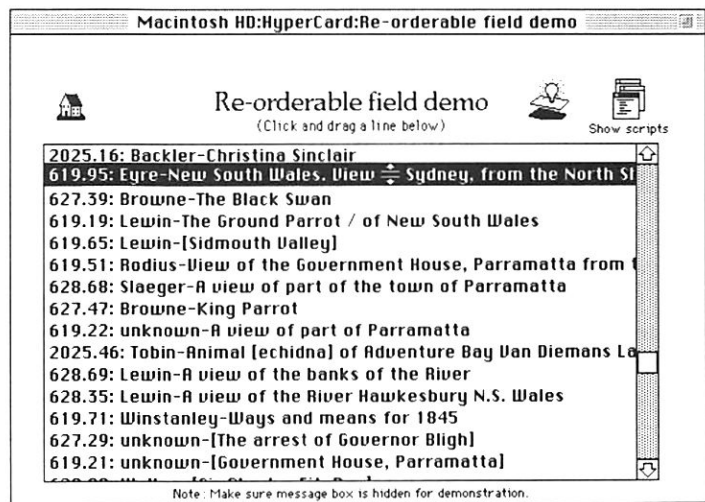


Figure 2. Re-orderable HyperCard field demo. Note: This stack is available on the Club Mac BBS.

```
put myTop+myTextHt div 2 into minLinePos
put lastLineBottom-myTextHt div 2 into maxLinePos
— These next lines prevent the Moving line field going beyond
— the text in the main field:
if MV<minLinePos then put minLinePos into MV
else if MV>maxLinePos then put maxLinePos into MV
put MV-myTextHt div 2 into movingLineTop
set rect of cd fld "Moving line" to (myLeft & "," & -
movingLineTop & "," & myRight-17 & "," & -
& movingLineTop+myTextHt)

show cd fld "Moving line"
unlock screen

— Keep it going (incl. adjusting scroll):
repeat until the mouse is up
  put the mouseV into MV
  if MV<minLinePos then
    put minLinePos into MV
    add (myTop-MV) to myScroll
    set scroll of me to myScroll
  else if MV>maxLinePos then
    put maxLinePos into MV
    subtract (MV-myBottom) from myScroll
    set scroll of me to myScroll
```

Box continued p.22 overleaf

Box continued from p.21

```

end if
put MV-myTextHt div 2 into movingLineTop
set rect of cd fld "Moving line" to (myLeft & "," & ~
movingLineTop & "," & myRight-17 & "," & ~
movingLineTop+myTextHt)
end repeat

```

```

— Calculate where the line should be now:
put ((MV-myTop+the scroll of me) div myTextHt) + 1 ~
into newLineNumber
if newLineNumber > lineCount
then put lineCount+1 into newLineNumber
if newLineNumber ≤ 1 then

```

```

put it & return before me
else
put return & it after line newLineNumber-1 of me
end if

```

```

hide cd fld "Moving line"
unlock screen
— Select line newLineNumber of me:
if newLineNumber=1 then put -1 into a
else put the number of chars in line 1 ~
to newLineNumber-1 of me into a
— Select the line plus its final return character:
select char a+2 to a+length(it)+2 of me
end mouseStillDown

```

Corrections to the Spell-checker stack (July)

In the July, 1997, *MACinations*, I wrote an article about using a word processor's spell-checker to correct spelling in *HyperCard* stacks.

The technique (as used by my *Spell-checker* stack) was to create a temporary file consisting of every piece of text (including formatting information if desired) **plus details of the fields and cards they come from**, which would then be automatically imported back (once corrected) into all the appropriate places. Since writing the article however, I discovered that, by saving and restoring formatting infor-


mation on a character-by-character basis, the restoration of formatting would fail if characters were added or deleted (which is quite likely) and that the whole process was unnecessarily slow.

Although I originally chose the character-by-character method for greater flexibility (i.e., to allow words with mixed formatting), the disadvantages were too severe.

So I have rewritten the two handlers *styleData* and *setStyles* as indicated on the next page. New code is indicated in **bold** (Again, rather than listing the actual *HyperTalk*

code, I have broadly indicated the processes, using "pseudo-code".) Now all you have to worry about is **not** adding or deleting words within the word processor.

If a word needs to be deleted, replace it with a unique and conspicuous "word" (e.g., "•delete•") and find and delete it later from within the stack. Of course, if a word needs to be added, you will just have to make a note of it and add it later within the stack.

The version of the *Spell-checker* stack currently on the BBS incorporates these changes. 

Function *styleData* domain, fldNum

If global variable *retainFormatting* is not true then return empty

Put the text of the field into original

Put empty into soFar¹

Put the *textStyle* of char 1 to 30000 of the field && ~ the *TextFont* of char 1 to 30000 of the field && ~ the *textSize* of char 1 to 30000 of the field into temp

If **charFormatting** ≠ **fieldFormatting** ~ and "mixed" is not in temp then return empty

— *TextStyles*:

Put the *textStyle* of the field into *fieldStyle*

Put empty into *prevStyle*

For each **word** in original:

Put empty into *styleRange*

Put *textStyle* of the **word** into **wordStyle**

If **wordStyle** = *fieldStyle* then try the next character

Put the number of this **word** into a & into z

If **wordStyle** = *prevStyle* then: — (from previous loop)

Put the number of this **word** into 2nd last word of soFar

Else put "STYLE" && **wordStyle** & "." && a && " " && z && "• " into *styleRange*

Put **wordStyle** into *prevStyle* — for next loop

Put *styleRange* after soFar

— (Do the same for *TextFont* & *TextSize*)

...

Return soFar

On *setStyles* domain, fldNum, theStyles

Put the *itemDelimiter* into *savedDelim*

Set *itemDelimiter* to "•"

For each item in theStyles: — e.g. «STYLE bold, — italic: 24 - 36»

Put the bit before the colon into what

— e.g. «STYLE bold, italic»

Put the first word of what into property

— e.g. «STYLE»

Put "text" before property — e.g. «textSTYLE»

Delete word 1 of what — e.g. «bold, italic»

If what is not a number (i.e. not a point size) then:

Put quotes before & after what

— e.g. «"bold, italic"»

Delete everything up to & including the colon

— e.g. «24 - 36»

Put first word of it into a — e.g. «24»

Put last word of it into z — e.g. «36»

Set property of **words** a to z of domain field ~ fldNum to what²

Set *itemDelimiter* to *savedDelim*

1. This line isn't strictly necessary, since *HyperTalk* doesn't require variables to be declared. However, it's a good idea to initialise a variable if you will be adding to it later.
2. This must actually be done with a "do" statement:


```

do "set" && property && "of word" && a && ~
"to" && z && "of" && domain ~
&& "field" && fldNum && "to" && what

```




From the Editors



"A lot of people are worried sick about Apple and it's recent stock price decline and quarterly losses. Apple has problems, but it has had them before." Sound familiar? John C. Dvorak wrote that in *Dvorak Predicts*, McGraw-Hill Inc., 1994, p.75.

That year, Apple released the Power PC, the most successful technology it had ever spawned. It continued to offer 68K machine support – past customers weren't left behind.

Should we be worried now? About Apple's software and hardware strategies and development – No; about Apple's marketing strategies – Yes. Apple's refusal to promote its superiority over the competition, and its almost apologetic stance in the market place is foolhardy.

In his *20 Years of Apple* article

(June 1997, *MACinations*, p.2) John Brogan, long time Club Mac member, pointed out that Apple is too slow in getting machines into the business community. Last month, Committee Member, Marshall Ahern, wrote about gross margin and unit sales. "Helping gross margin is tougher. It smacks of altruism and altruism scares people. It needn't."

In this issue, Committee Member, Jill Riddiford, herself a marketing consultant, brings to the *Get Info* column (see page 28) her experience and suggestions for Apple to get tough and market itself proudly.

Members were somewhat nonplussed at the July Club Meeting when they learned that the marketing was to be left – in the main – with loyal users, that Apple had many reasons for not promoting itself. In the August, 1997, *MacUser*, editor Steve Noble urged readers

not to apologise when somebody suggests that "Apple is going belly-up", "Get narky. Get particular. Get the facts."

The facts are that *OS 8* has been released on time and it's good. *Rhapsody* shows every sign of meeting its release date. The Internet, Intranets and Java, which are changing computing from a client-base to a network structure, are all to Apple's benefit – it's plug-and-play components are unparalleled.

Apple has the highest brand loyalty in the industry – 81% – unheard of in other industries and for other computer products. We need marketing, evangelism can do only so much. It's time to urge Apple to market itself – 1,200 Club Mac member e-mails would be a good start.

Tom Parry and Rose Marshall
Co-Editors

More on the July Meeting



By Rose Marshall

Without projecting a single pixel onto the screen, **Steve Vamos**, CEO of Apple Asia-Pacific and **Andrew Rallings**, Apple Systems Engineer, alternately enthralled, enlightened and astounded around 100 members at the July Club Mac Meeting.

We gave you pictures last month. But what was said?

Steve began by outlining Apple's business directions. He acknowledged the difficulties of the last year, the restructuring and the new licensing program.

Six companies now sell Apple products – some argue those sales are taking away money in the short term – but add those sales to Apple revenue and Apple is profitable. Things have gone wrong, there have been some bad decisions – but the future is brighter!

In the Asia Pacific region – not

including Japan – Apple has \$500 million worth of business and an increase of just 1 percent in the next year would see revenue double.

Apple, Steve said, must move out of the closed space it has existed in...not be locked into its own environment.

The lynchpin of **Rhapsody** is the cross-platform – the compatibility bridge. Developers will be better motivated to write applications for a broad based Operating System. Apple will be positioned in the mainstream, not isolated as it is now.

Already number one in multimedia, Apple must work towards that position in other areas as more and bigger applications are written for the new **OS**.

System 8, (Tempo), is leading the charge with better 'Net integration and better stability and

performance. The planned releases of **Allegro**, **Sonata** and **Rhapsody** must be delivered, Steve affirmed, on time and on target.

The development of the **e-Mate** for the school market should help Apple regain market share in education – Malaysia and Singapore are keen to bring the **e-Mate** into schools as a base product with one computer per student.

Software is looking more exciting that it has in years. There is a move from the early '90's broad base, to a focussed, specialised, customer-oriented approach. The release of **Virtual PC** is a fine example of this. For \$300 **Virtual PC** will run **Windows NT** or **Windows '95** on your Mac, offering smooth access to the **DOS** world while retaining the

Continued p.28



August Meeting Report

By Andrew Pavey

The meeting was held on 13th August and the guest speakers for the evening were:

George Ellis, who spoke about genealogical research and the application, **Reunion**. Demo copies were distributed and are available for download from the Club Mac BBS.

Steve Smythe from Sound Devices in Sussex St, Sydney, who did a brief demo of some shareware applications for music writing and then moved onto **Music-Shop** and a couple of other more specialised applications.

Steve gave a very animated and enthusiastic talk, including writing a song on the spot and demonstrating how to change the beat and lots of other musically fantastic things, using a MIDI keyboard and **QuickTime Musical Instruments**. We were really bopping along at this meeting!

Thanks to MacWarehouse, and Steve Vamos we had heaps of raffle prizes and some happy winners.

Sadly, because of severe technical difficulties, only one photograph of the evening survived (see below). As you can see, we were not in the usual Fred Hutley Hall but in the Council Chambers.

The Q&A Session made up the first part of the evening. Here is a sample of the questions asked and the answers given:

Q: My CD-ROM used to work, but, now I have a Zip drive, it won't.

A: The ZIP drive needs to have the termination switch on the back turned off. Also ensure that the SCSI IDs of the CD-ROM and of the ZIP don't clash. The Zip can only be ID 5 or ID 6. By convention, CDs are usually ID 3.

Q: I'm having problems with my internal drive. When I boot from the external I can't scan all of the internal drive using Nortons, it gets so far and then just stops.

A: It sounds like a serious problem on the internal drive. Back up the internal drive, reformat using Apple's latest HD formatter and then restore the files.

Q: How can I boot from the Mac OS 8 CD? Holding down the letter "C" doesn't work.

A: There is a problem with the current batch of **Mac OS 8** CDs. You can either boot from the CD, with the Shift key down (stops Extensions loading), or try rebooting with Delete-Option-Command-Shift keys held down. This will force the Mac to look down the SCSI chain to find a drive with a "blessed" System Folder (one with both a System and a Finder in it), and boot from that drive.

Q: What is the selling price of MAC OS 8?

A: \$149.95 is the RRP, although the Campus Computer store at Sydney Uni is reputedly selling at \$120. You can get a rebate of \$50 from Apple if you can prove you bought **System 7.6**. If you've bought a new Mac since 1st June, it costs only \$19.95 plus a \$10 courier fee from Claris Upgrades. You have to provide proof of purchase (eg., invoice or receipt dated after 1st June).

Q: Where can I buy a TV Tuner card for an LC 630?

A: Choice Computers in North Sydney sold one to a member just last week.

Q: What is the Club's position now that Spider Island, who writes the TeleFinder software, has closed?

A: The latest version was released before the closure and will continue to work with current **OS** for some time – so the Club BBS will continue to use it. At some stage in the future, it is possible that there may be problems with newer **Operating Systems**. We'll have to wait and see. The Club will evaluate its options and has a number of possibilities, including moving to a Web-based service.

Q: What is the position re the newly announced 9600/350 models?

A: Apple is expecting stocks fairly soon. If you want one, it is best to get your order in early or you may have to wait.



Figure 1. The one surviving photograph of the meeting – George Ellis with **Reunion** (genealogical software) – which doesn't even show on screen!

The guest speaker at the September meeting will be Tom Brodhurst-Hill of the networking company, T&B Brodhurst-Hill. Then the October meeting (on 15th October – note later date) will be our Annual General Meeting. Be there!

FileMaker Pro Corner

©1997 Hilton Brown



A tip for using field filters

The tedious entry of surnames with a variety of upper and lower case letters and apostrophes, can be simply overcome in FileMaker Pro 3.0 through the use of field filters, as Club Mac member, Hilton Brown, explains...

Data entry into certain types of fields can be significantly automated by using field filters to supply standardised formatting. Two examples of these fields are first names and family names.

Such names might start with special groups of characters such as "Mc", "O'", "-", "de " and "van der". It's desirable that each name start with the upper and lower-case letters as shown in these examples, and the following part of the name start with an upper-case letter. For example, an entry should be "McDonald", rather than "Mcdonald".

Previous to *FileMaker Pro 3.0*, field filters were difficult to create because of the lack of a variety of text functions. Now field filtering can be supplied transparently to the data entry layout. It's a simple matter of creating a **Calculation** field that supplies the formatting, placing the Calculation field directly over the data-entry field, and setting the Calculation field so that entry is not permitted.

This combination of fields allows data entry either by tabbing or clicking into the field, and shows the formatting as soon as one tabs to the next data-entry field.

For example, let's create a family-name field filter. The steps are:

1. Create two fields as shown in Figure 1.

Family Name, a text field;
Corrected Family Name, a Calculation field resulting in text, with the formula shown in Figure 2.

2. Place the two fields on a data-entry layout as shown in Figure 3. The option to **allow entry** into the field in the Field Format dialog should be checked for the field **Family**

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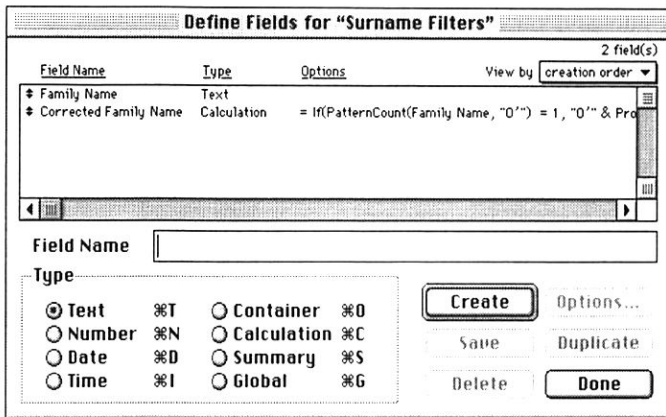


Figure 1. You'll need to define these two fields.

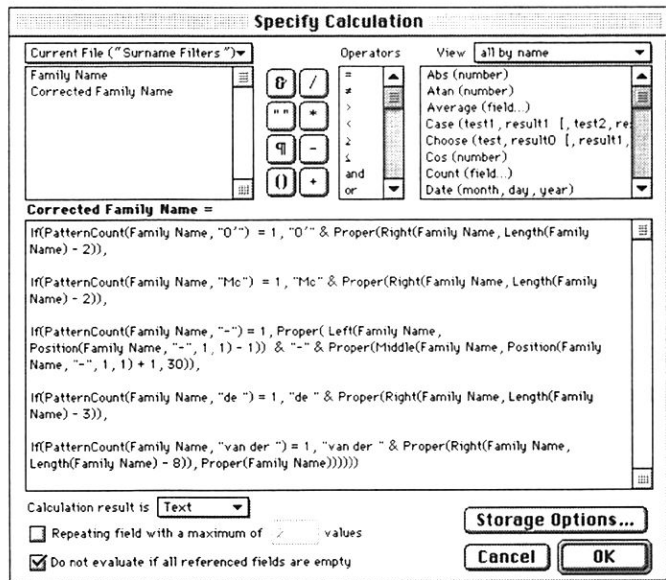


Figure 2. The definition of the field **Corrected Family Name** is complex – copy it carefully!

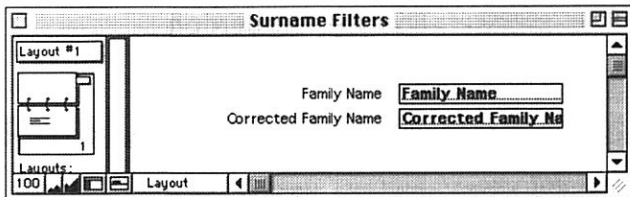


Figure 3. Put the two defined fields on the one layout.

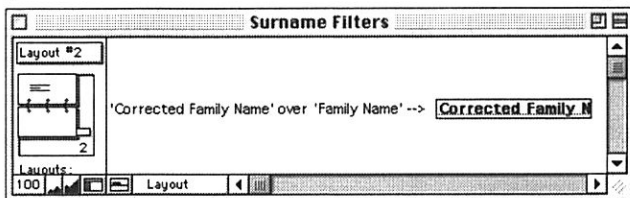
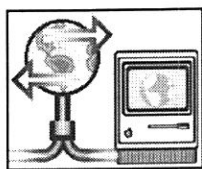


Figure 4. Overlap the two fields so that the **Corrected Family Name** field is exactly on top of the **Family Name** field.



Browser Wars

©1997 Paul Kneipp

Loyalty to particular Web browsers seems to be as passionate as loyalty to computer platforms or religious denominations! Club Mac member, Paul Kneipp, has adopted a commendably empirical approach and examines the claims of the main contenders in a practical way.

Long ago and far away...there was a land called The Web. And *Navigator* was Lord of the Web. And so it was that King Bill of Gates saw this and sent out the word – “Get ‘em!”

Perhaps it was my imagination, but Netscape seemed to be in a mild state of panic as I bounced around the world, trying to find a simple upgrade for *Navigator Gold*. The *Communicator* suite was on offer everywhere. But, after my first go at downloading the binhexed 13MB file failed, I went to *Anarchie*, typed in `<ftp.netscape.com>` and found *Navigator Gold v3.0.2* in a folder which was *not* the one marked “Gold”.

I had come in search of a new browser, in particular one that would support the editing of frames, those page-within-a-page type URLs which are now so popular. Here’s what I found.

Netscape Navigator Gold

It’s still a good program. Still loves memory! Easy to install and configure. Initial caching is quite slow but, if you have lots of RAM

Netscape Navigator	
Version:	3.0.2
Download size:	4MB
Where:	<code><ftp.netscape.com></code>
Drive space:	8.9MB
68K version available.	
Suggested memory:	8.4MB

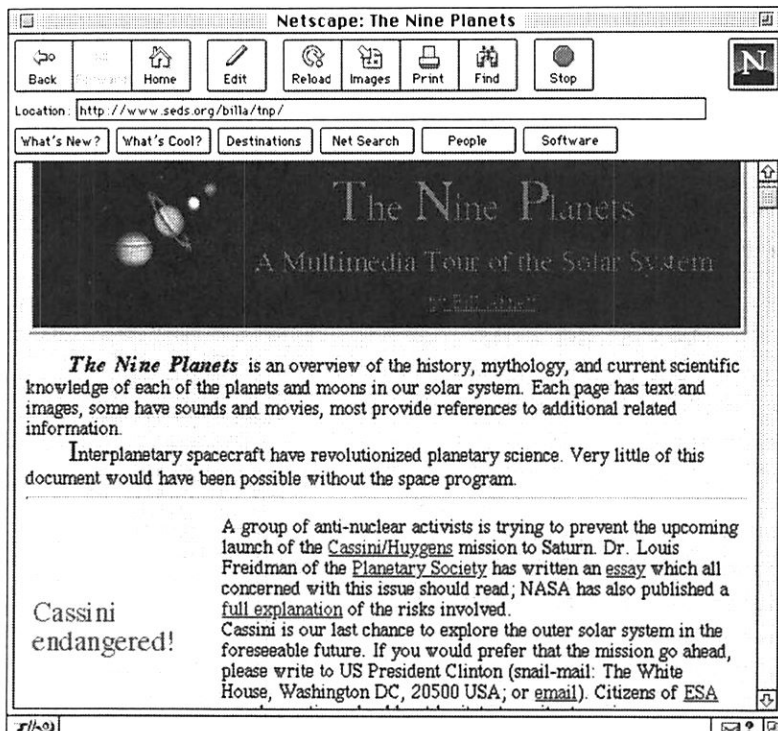


Figure 1. Netscape Navigator Gold – if it ain’t broke...

and drive space, you can speed things up. Mail is easy to use and can be set to check automatically.

Plug-ins (small software components which allow the viewing of proprietary files such as *Shockwave* and *QuickTime* movies) are well supported and load quickly (unlike the files). But! No frames!

Off we go...

Cyberdog

Apple make a browser, you say? Darn tootin’ – and it’s a beauty.

Apple Cyberdog	
Version:	2.0
Download size:	2.6MB
Where:	Club Mac BBS
Drive space:	1MB
68K version is available.	
Memory:	2.5MB (with plug-ins)
System requirements:	16MB RAM, OS 7.5.3 or later, OpenDoc 1.2.
For more info, see	
	<code><opendoc.apple.com></code> or <code><cyberdog.apple.com></code>

Continued p.27 opposite

FM Pro Corner – cont from p.25

Name but *not* checked for the field **Corrected Family Name**.

- Set the fill colour for the field **Corrected Family Name** to the same colour as the background behind the field (including white if the background is white). In the example in Figure 3, the fill colour of the field and the

colour of the screen background are both the same grey.

- Move the **Corrected Family Name** field so that it is exactly on top of the **Family Name** field, as shown in Figure 4.
- Return to Browse mode.

Now try entering or changing some names, eg. “mcdonald”, “MCDONALD”, “o’grady”, “de

visser”, “van der wyck”, and “milton-connell”. Note that clicking into the field is just like clicking into a standard data-entry field and that the required formatting is automatically supplied as soon as the field is exited.

Remember that any report layouts which include the family name should use the **Corrected Family Name** field.

Cyberdog was written to demonstrate *OpenDoc*, a cross platform software architecture.

OpenDoc installs *System* components which then do the basic work of the browser – *Cyberdog* itself is a 48K application.

It's a bit of a strange program, but it's fast and easy to use, with some great features – multiple mail accounts, for one thing.

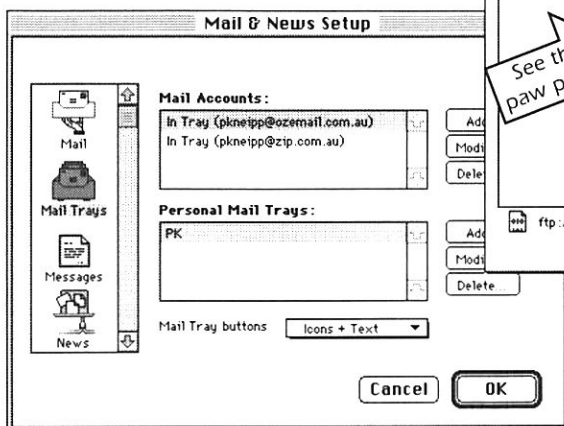


Figure 3. Cyberdog's easy e-mail.

I also found it to be a good **ftp** application. Plug-ins are a bit sad – there is a beta plug-in adaptor available but I couldn't get it to work properly. Love the paw-prints! Sadly, *Cyberdog* is no longer supported by Apple.

Internet Explorer

Microsoft Internet Explorer	
Version:	3.0
Download size:	5.3MB
Where:	Gatesville, USA
Drive space:	5.7MB
System requirements:	
Power Mac,	
OS 7.1 or later	
(NB: vs 4 out now for Windows)	

Trouble starts on install. My computer reacts to this program like a case of food poisoning. After I explain to it that it's all in a good cause, things settle down.

Explorer is small, fast and very ugly. Version 4 is vastly improved. Just as well! Considering they had *Navigator* to copy from and the largest R&D department in the universe, this is a rather pathetic effort. Plug-ins? Not really.

Shockwave offers me a plug-in

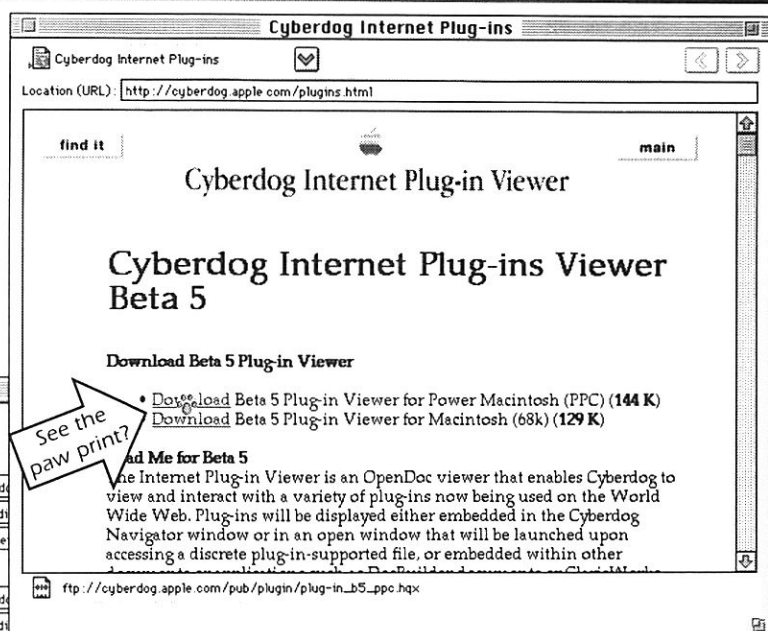


Figure 2. Cyberdog's main window – love those paw prints!

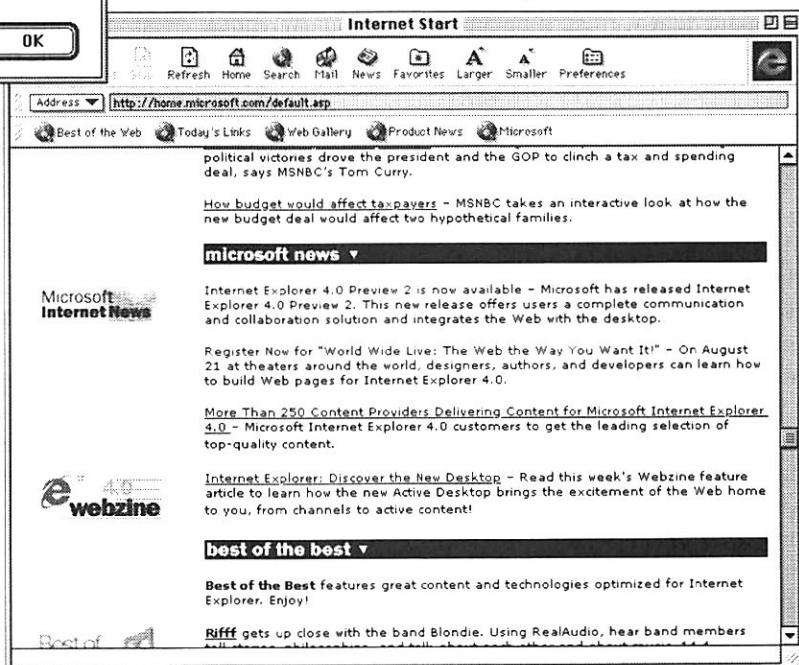


Figure 4. Microsoft's Internet Explorer – Excel as a browser?

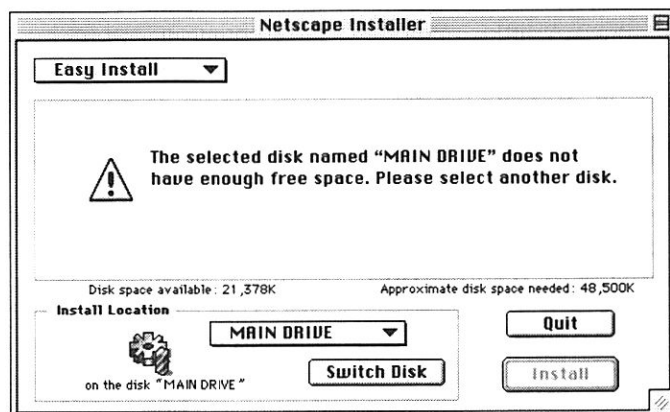


Figure 5. How much disk space does it need? (see p.34)

Continued p.34



Get Info

The monthly column of the Club Mac Committee

Why can't Macintosh be more like McDonald's? No, I'm not suggesting that the Apple Macintosh should be the McDonald's of computers, but Apple can certainly learn a thing or two from McDonald's marketing.

One could say that McDonald's is the opposite to Apple – lousy product (some of you may disagree!) – but fantastic marketing. Like or loathe them, no one can doubt that McDonald's has an unparalleled ability to cater to all market segments, no matter the age, income or lifestyle – it's always Mactime.

Like many Mac users, I find that Apple's marketing ranges from inconsistent to non-existent. This has been particularly frustrating in recent times when it seems it is under siege and doing little to fight back.

Steve Vamos, who spoke at the July Club Meeting, justified Apple's lack of promotional effort by saying that, until the company's financial situation improved, there was little point in spending up big on advertising and that it was hard to compete in dollar terms against Microsoft and Intel.

This all sounds very well until you realise this is often the problem – companies cut back on their marketing budgets in troubled times, *precisely when* prospective and existing customers need to be reassured.

Effective marketing doesn't necessarily equate with huge budgets – look at some of the award-winning television commercials and films. A little imagination and creativity can often beat big dollars and special effects.

In the absence of any obvious campaign, Apple is unashamedly relying on existing users to carry the flag. This is a dangerous strategy when some loyal Macintosh users are starting to have doubts.

Apple's positioning in the market is confusing. Not every company can (or would necessarily want to) have the mass market appeal for their products that McDonald's has. But the narrower your target market, the more successful you need to be!

Recently Apple appeared to be targeting the more profitable top-end of the market with their advertisements for the Power Mac 9600 and Powerbook 3400. The margin may be greater in these models but there are probably too few users. Apple's foothold in traditional areas, such as education and the domestic market, appears to be languishing, yet it is here the momentum is building as the computer becomes an everyday appliance.

Steve Vamos conceded that Apple had problems targeting the lower end of the market, that they were better at designing the "functionality" of the Macintosh and then pricing it, rather than the other way around. What this amounts to is a common marketing problem, focusing on the product and finding a market for it rather than making what the customer wants.

In the compatibility quest, Apple is forgetting another crucial factor for successful marketing – differentiation. Apple should keep emphasising what makes its products unique as well as its cross-

platform capabilities. Differentiation goes hand in hand with branding and I think one of the positive developments from Apple recently is its plan for Apple-focused retail outlets. I believe that this "lifestyle" type of store, like the Nike stores for example, would be well suited to the Apple brand.

Finally, let's not forget the first-time computer users. Reading *Icon*, the computer supplement in the Saturday *Sydney Morning Herald*, one could be forgiven for not knowing that Macintosh computers exist or, if they do, only as an oddity. However, once a potential customer does manage to track down a Macintosh, Apple could do more to make the buying decision easier.

Simplifying the model numbers would be a good start. Whilst the advantages of Macs may be obvious to us, many new buyers, wanting to make basic comparisons between Macs and PCs, face a difficult time. Computers are complex and expensive products. Buying one doesn't need to be the confusing and daunting experience that it is for many people – consumers like easy decisions.

For the upcoming generation, using a computer will be as natural as breathing. But, in the meantime, the people who are buying computers could be catered for much better. Less emphasis on chip speeds and RAM and more on "How this machine will improve your life", and it could be Mac(intosh)time much more of the time.

Jill Riddiford

See **MACinations** comment, page 23.

July Meeting more – cont from p.23

Mac base that you know and love. **Virtual PC**, unlike **SoftWindows**, needs no tweaking and includes a full licence for **Windows '95**. 603 and 604 chips will support **VPC** and, with Level 2 cache (up to 1MB), performance is superb.

Steve pointed out that Apple and Macintosh are two separate things – a revolutionary concept that left some of the audience gasping and some nodding as he outlined how the Apple brand is under-utilised, how it could be placed on many products – not just Macs.

While the computing industry may be getting tougher, with an 81% brand loyalty and the release of **Mac OS 8** consolidating the stability of machines like the **9600** and **7300**, the answer to many of Apple's problems may have arrived.

Web Weaver's Corner



©1997 Charles Cave

The World Wide Web is like a vast, fertile garden. Web sites sprout and blossom in cyberspace, move, or shrivel up and die. The challenge for the Web designer maintaining links to the outside world is to check them regularly to ensure they remain current. More frequently and sadly, people visiting your site will send you e-mail when they encounter broken links.

Big Brother to the rescue!

A utility for checking links

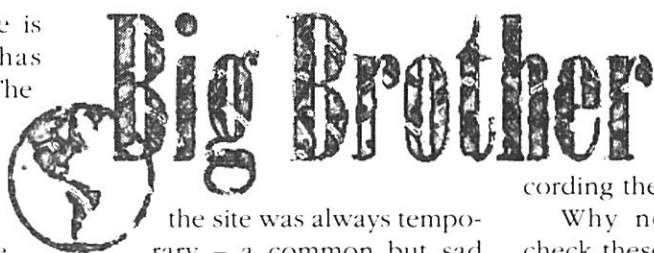
A frequent occurrence is the "this site has moved" message. The web site has been relocated and a link is left behind at the old location to give the new address (see Figure 1).

Often, the reason is that the Web site has obtained its own domain name. For example, a hobbyist or small company may start with a link (URL) such as <http://www.isp.com.au/~boomerang>.

These names are not too easily remembered or marketed, and the Web designer may choose to purchase a domain name such as www.boomerang.com. Obviously, any links on other Web sites to the original URL will need to be changed to the new one.

A more serious problem is the one where a Web site disappears and the browser displays the "404 Not Found" message (see Figure 2). Perhaps the Web designer has moved the Web site to another machine and no forwarding link has been created.

The more likely reason is that



the site was always temporary – a common but sad trait of Web sites produced by university students.

The hard way to check these links is to browse through all your Web pages, click on each of the

links, and make notes of the bad connections. This is a time-consuming task and prone to errors in recording the changes.

Why not let the computer check these links and make a report? *Big Brother* is the solution!

Written by François Pottier (author of *Disk Wizard* and *Décor*), *Big Brother* does only one thing, but does it very well. It starts with

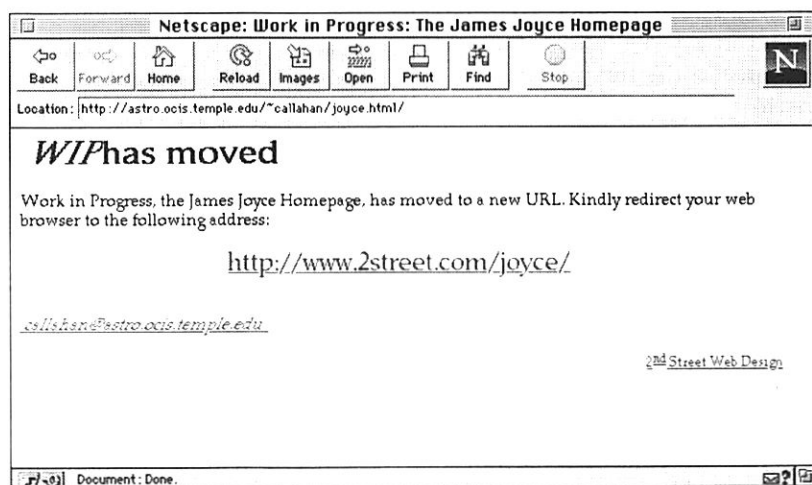


Figure 1. When a site has relocated, its author may (or may not) redirect you to the new site.

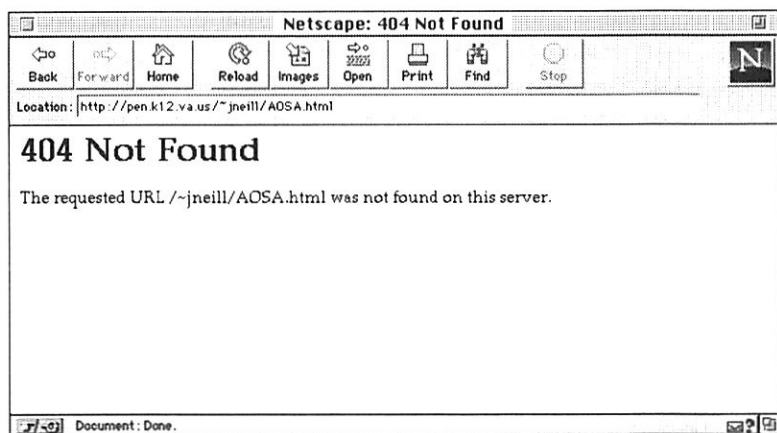


Figure 2. When the author fails to redirect you, well... we all know this message!

a given Web page (on your computer or at a Web site) and connects to each of the URLs referenced on your pages. The results of the connection are reported in a window (see Figure 3).

Big Brother has a multi-threaded architecture (utilising the thread manager component of the Mac OS), allowing multiple connections to be made concurrently. This gives the benefit of minimum connection time to the Internet and fast results.

As the program makes its connections, a barber-pole is dis-

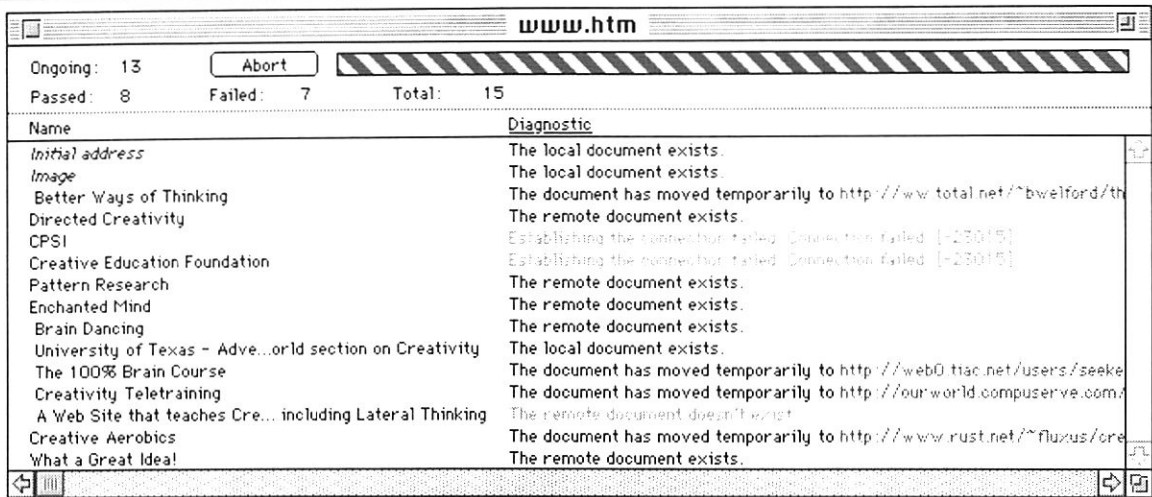


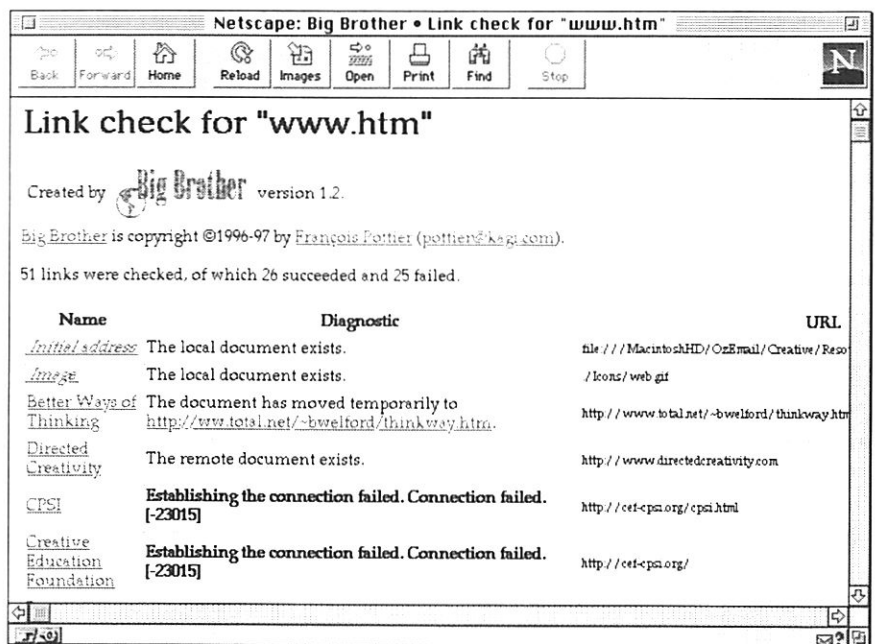
Figure 3. Big Brother in action.

played, and counters of passed and failed links are updated, as well as the number of currently open network connections.

Once the test is completed, the information can be exported into an *HTML* document and viewed with a browser (see Figure 4). These results are displayed in a table, and there are columns for the link name, diagnostic message, URL and the source document (the page containing the link).

Links in documents are divided into two categories: remote and local links. The former can only be accessed (and tested) by establishing a connection to the remote machine, so an active connection to the Internet is required. Local links represent files or folders on your own hard disk.

Big Brother can be configured to check only local or only remote links. Checking the internal structure of your Web site by disabling the checking of remote links is a

Figure 4. The final report is presented as an **HTML** document.

very useful feature. Remote links are more likely to change over the course of time.

The program has some other important features, including scripting, mapping local files to

URLs, defining default index files and patterns for *HTML* file names, and case insensitivity of link names. *Big Brother* is a useful and worthy addition to the Web designer's tool kit.



That's right! The great **Club Mac Garage Sale** will form part of the legendary December meeting (scheduled for 10th December). It is shaping up as a wonderful buy, swap or sell occasion.

Bring along your pre-loved or unwanted hardware and software. Strike a deal or grab a bargain!

More details next month.

Non-Committee Job Descriptions



Following last month's description of Committee positions, here is a set of potted position descriptions for all the appointed (non-Committee) positions within Club Mac. The fact that a position is listed does not mean that that position is vacant; nor that the Committee necessarily wishes to change the present incumbent. However, all positions are re-appointed at the first Committee meeting following the AGM. If you wish to be considered for any of the positions named, please contact the Secretary, Piers Dunkley, prior the AGM.

Meeting Convener

Responsible for ensuring that the Club has a meeting place for all meetings and that the meeting place has adequate facilities (including audio, power, seating, kitchen, lighting and air conditioning). Has to lay out tables and make sure there is at least one speaker for each meeting. Whenever Club Mac takes part in any outside function, any necessary displays or equipment are this person's responsibility.

Administrator

This person is responsible for keeping the members' database up to date at all times; for liaising with the SYSOP to ensure that the database of BBS members and premium members is always up to date; and that all entitled members have the correct access. They are also responsible for banking all monies received from any source and accounting for it to the Club Treasurer.

As the first line for most correspondence, this person has to see that communications are recorded and distributed quickly.

Public Domain Acquisitions Officer

Responsible for ensuring that the latest versions of software are downloaded from the most efficient source; that all software is checked for virus and other faults; that description files are properly decoded and made available on the BBS; that all files are properly uploaded to the BBS in accordance with the current Club Mac practice. This person is also responsible for the preparation of the Club Library listing of PD files available on disk.

Canteen Officer

Responsible for ensuring that enough food is available for everyone at each Club meeting; and that enough volunteers are on hand to provide refreshments, and then heat and serve those refreshments to the members.

Public Domain Librarian

(This position is under review at the moment.)

This person is responsible for ensuring that all PD offered on disk is properly catalogued, that disk images are prepared for all PD and that all such material is archived annually and is available for sale to members.

Help Desk Supervisor

This person is responsible for seeing that questions asked by members are answered promptly. If questions are about areas in which this person has no expertise, they must transfer them to an appropriate Club member and advise the member asking the question accordingly.

Please note, these descriptions have not been arranged according to any real or imagined order of priority – simply to balance the page!

As was explained at the top of the page, all these positions are appointed or re-appointed by the Committee at its first meeting after the **Annual General Meeting**, which is to be held on **Wednesday, 15th October, 1997**.

Please note that this is NOT the usual meeting night.

BBS Sysop

The System Operator (Sysop) is responsible for ensuring that the Club's Bulletin Board Service (BBS) is functioning correctly, including the maintenance of hardware and software and negotiations with relevant providers and authorities.

This person must monitor chat and the message threads to ensure that flaming, obscenities, racial or other attacks are kept to a minimum. In such cases, this person takes disciplinary steps against offenders and advises the Committee of all disciplinary steps taken.

MACinations Editor

At the moment there are two Co-editors but the Constitution speaks of the Editor. This person is responsible for ensuring that **MACinations** is published each month (except January). The Editor must gather copy from members and other sources and prepare it for publication. The Editor needs to liaise with the type-setter and with the printer.

Marketing Officer

Responsible for ensuring that the Club is properly marketed to the general public and that all public relations matters are carried out efficiently and promptly. Duties also include the preparation of programs to increase membership.

Club Mac



MACcess Report

compiled by Colin Lee

By the time you read this, Apple should have a new CEO. At the time of writing, Steve Jobs had denied it was going to be him – but that didn't stop the rumours. Other reports being posted were that Jobs' long time friend and head of Oracle, Larry Ellison, had invested a large sum of his personal funds in Apple shares. (Shares have increased quite considerably as I write, as a result of the "Jobs as CEO" rumours circulating). The other astonishing talk emerging as this column was being compiled was the "Apple to withdraw OS licensing from clone makers" rumour. This smacks of madness! But something that shouldn't be rumour by the time you read this is Mac OS 8, which many readers, no doubt, have already installed. Early discussion on the BBS indicated a mixed reaction. Cheers, Col.

To: All
From: Paul Kneipp
Subject: **Mac OS 8**

Just thought I'd venture the opinion that unless you have a 604 processor or higher, you might find OS 8 to be a little disappointing and thus be wasting money buying it. I have tested it on quite a few machines and, it seems to perform many functions on 601 type chips noticeably slower, compared with System 7.6.1 and Speed Doubler. The nicest bits – I think – are several of the new desktop patterns, which I have cut and pasted into my existing Control Panel.

To: Paul Kneipp
From: Robert Naccarella
Subject: **Mac OS 8**

I found it quite different. I love Mac OS 8 because it does not crash as often as 7.5.x or 7.6.x. In fact, the only crash I have had was due to a piece of software which has a bad history of crashing. Mac OS 8 will run perfectly smoothly on 601 chips. The slowest machine I tested on was a 7200/75 and, if there was any retardation, I didn't feel it. In fact, the Power PC-native Finder should make it faster. The only word of warning is that I found it very slow on 68040 LC 630s, otherwise I give it the thumbs up. I'm sure most people will be surprised by the stability.

To: Robert Naccarella
From: Carl Vine
Subject: **Mac OS 8**

What worries me, as Paul mentioned, is that SpeedDoubler (which has a massive effect in 7.5.x on a 601) **will not** work on System 8. Until Connectix releases Speed Doubler 8, I would expect us poor 601 owners to feel the speed crunch of OS 8.

To: Robert Naccarella et al
From: Joe Mithiran
Subject: **Mac OS 8**

In a recent issue of TidBITS, they reported on tests on several machines – used by people with varying degrees of experience – and said they found it **seemed** faster although, benchmarking was the same as previous Systems on older machines. Inexperienced users didn't have much of a problem either (except for being confused because About This Computer shows temporary memory as well as application memory set in Get Info).

To: Carl Vine
From: Andrew Pavey
Subject: **Mac OS 8**

As I understand from a report on www.macintouch.com the 68K emulator bit of Speed Doubler still works in OS 8, but the faster file copying bits don't. This is no huge loss as OS 8 has implemented faster file copying anyway. A new version of SpeedDoubler called SpeedDoubler 8 is supposedly due for release in August, in the States.

To: Andrew Pavey
From: Carl Vine
Subject: **Mac OS 8**

Speed Doubler 4.0.3 is said to "disable" itself under OS 8! It might be necessary to re-install just the Emulator portion of SpeedDoubler from a version earlier than 4.0.3.

To: Carl Vine
From: Matthew Godden
Subject: **Mac OS 8**

As someone using a 601/66 and OS 7.5.5 and no SpeedDoubler – with Kaleidoscope on top – I'd have to say that I have had no problems with speed.

To: Keith Jeeves
From: Rosalie Marshall
Subject: **AVR Scanner drivers**

KJ> Some scanners seem to work more reliably if allowed to warm up for ten minutes or so before attempting to use them (don't ask me why!)

RM> You're right there, Keith. Yesterday I picked up (in Dymocks, George Street) what seems to be an excellent book on scanning: *Scanning: Your Personal Consultant*, by Jonathan Hornstein, Ziff-Davis Press. In the chapter on Calibration, it says on page 123, "When the scanner is first turned on, the light source will vary in intensity. It usually takes about a half hour for the light and the rest of the components to stabilise. For consistent results, it's best to let the scanner warm up before it is used."

To: Tom Pardy
From: Carl Vine
Subject: **That new font**

TP> Quite a few screen shots I have seen of Mac OS 8 show a rather nice looking font that seems to have replaced Chicago. I think Carl Vine referred to it in his review of Kaleidoscope that you can read in the August issue.

CV> Why didn't you just ask me, Tom? EspiSans is the old Aaron replacement System font but I think the one you like (and so do I) is Tecton (supplied with Kaleidoscope).

To: All
From: Jonathan Gibson
Subject: **PowerBooks**

I'm wondering if anyone could shed some light on the following? I'm going to buy either a PowerBook 1400 (the "cheap" one) or a second hand PowerBook 5300 (with extra RAM, active screen and cheaper). I'm worried that there are inherent problems with the 5300 series (batteries, cases, screens). Can anyone advise? Is there anything wrong with the 5300 or indeed the 1400?

To: Jonathan Gibson
From: Glen Ryan
Subject: **PowerBooks**

I have been using a PB 1400 24/800 117 with a Netcomm

PC Card modem for about three months and found it very stable with System 7.6.1. The screen is large and clear but not bright in some situations. This was a big step up from the PB 180. The PB 1400 is easy to upgrade and can be attacked by anyone – I easily added extra RAM. One drawback is the lack of video-out, you need to install a card that only gives you 256 colours. But it's a very nice PowerBook!

To: Jonathan Gibson
From: Kim Kohen
Subject: **PowerBooks**

I have had both – a 5300 that was a nightmare no matter what System I ran on it and currently, a 1400c with 40MB. The 5300 crashed unbelievably often, causing me to consider drowning it in the sink! The case broke (twice) and it had a terrible passive screen. The 1400 is heaps more stable. I'm running System 7.6.1 and have few if any crashes. It does have one definite problem (it crashes) waking from sleep when the CD-ROM is installed (you swap the CD and floppy when you need them). I get around this by not letting it sleep.

Battery life on the 1400 is better and the screen is fine, although the active matrix I bought was not as far ahead of the passive matrix 1400s as I thought it would be (but still 500% on the 5300).

The video-out is not too big a deal. Newertech make a 16bit card that supports 17 inch monitors and allows for 640x480 screens (the only way the 1400 can display 640x480). You can get the card through the usual dealers – I got mine from AAPDA for a good price. It does prevent use of the piggyback memory slot, so you're limited to one extra chip (the biggest at present is 32MB which will get you to 48MB). You'll probably find memory more readily accessible for the 1400 and a bit cheaper. The 1400c is 133MHz with Level 2 cache and, whilst it's not a rocket, it's a nice little machine. For my money it's no contest – get the 1400!

To: Jonathan Gibson
From: Andrew Pavey
Subject: **PowerBooks**

We have a late model 5300. It is by far the most stable Mac I have had. It's currently running System 7.5.2 upgrade and it's never had a problem. Early 5300s got a bad reputation, I think Apple fixed them OK but the reputation stuck.

To: Jonathan Gibson
From: Philip Connor
Subject: **PowerBooks**

I purchased a 1400cs about four months ago – I do building inspections on site – and I have not had a beep out of it! Purchase without hesitation. I have a Banskia Modem 33.6 and have had no problems with that either.

To: Jonathan Gibson
From: Robert Naccarella
Subject: **PowerBooks**

Jonathan, Apple did a massive recall of PowerBook 5300s to replace flimsy plastic casing and the occasional self-combusting batteries. There is nothing wrong with my 5300 running System 8. I tried 7.6.1 and it ran OK but not great. If you have to run it over a network it is going to be slow, depending on the Ethernet card you use. Keep in mind, even though most problems are fixed in the 5300, the 1400 is faster and does have a 256K cache.

To: Robert Naccarella
From: Kim Kohen
Subject: **PowerBooks**

Only the 1400c has the Level 2 cache and that's 128K.

To: Jonathan Gibson
From: Darryl Chrisp
Subject: **PowerBooks**

I support the others' views on the 1400 – it's a great machine. My only criticism/observation is that it has only one serial port so, if you want to use a standard modem, you will need to switch cables to use a printer.

To: Darryl Chrisp
From: Andrew Pavey
Subject: **PowerBooks**

I'd just add that we have an Apple 28.8K PC Card modem and it not only works very well, it frees up the serial port for other use. The PC Card modem is really small and slim – twice the size of a credit card and a bit thicker. It's a very impressive piece of technology. I am currently installing software for a GSM mobile phone to work from a PC Card slot. I've got fax working, but data via ARA is a little more complicated. Another very impressive piece of technology.

To: All
From: Robert Beerworth
Subject: **PowerBooks**

Understanding the incredible difference in price between the 1400cs and 1400c, I'd still pay the extra \$1,400 and get the top PB1400c. I've had one since February and, having compared the screen to all types of laptops, the 1400c has an extraordinary screen – ghosting and cursor loss is never an issue.

To: Andrew Pavey
From: Rae Luckie
Subject: **Word 5 & 6**

Could you please explain how to get Word 5.1 to read Word 6 files? I've used the latter for a few months and then went back to v5.1 – it's a pain searching for and then saving old files I need to use again as Word 5.1! Waiting with bated breath!

To: Rae Luckie
From: Robert Naccarella
Subject: **Word 5 & 6**

Stick the converter, Word 6.0 for Windows & Macintosh, in your Word Commands folder.

To: Robert Naccarella
From: Rae Luckie
Subject: **Word 5 & 6**

Thanks so much, Robert – it will solve many problems. There was a similar question in MacUser this month and the reader was advised to use Word 6.01 as it had solved most of the problems. I use v.6 on Windows at work – there are a few things I like – but I still prefer v5.1.

To: Rae Luckie
From: Tom Pardy
Subject: **Word 5 & 6**

Rae, I have Word 6.0.1 (I used to be a member of Microsoft Communiqué at the time and got the upgrade cheaply) but do not use it. 5.1 is much more Mac-like in its operation, quicker to load, easier to use and as stable as any other application on my disk. Stick with 5.1. In fact, when I resigned from Communiqué, I wrote a bitter letter to Microsoft promising that, when Word 5.1 finally wore out or was no longer useable with the current System software, I would switch to some other word processor like Word Perfect or Nisus Writer. I got the standard "letter to irate customer" letter, thanking me for my response and assuring me that Microsoft values my input! Sheesh! So far Word 5.1 keeps chugging along.

for it and then doesn't recognise it as a browser. Hmm...

Oh well...

Netscape Communicator

Netscape Communicator

Version:

4.0.1 (Professional Version)

Download size: 11.4MB

Where: <ftp.netscape.com>

Drive Space: 21MB

System requirements:

something faster than
you have right now

Netscape is obviously planning on selling RAM to go with this program. After I find a way to do a small install and turf out half a dozen *System Extensions*, I finally get on line.

The first thing I notice is that they've moved the mail button and it's now floating around on a palette where you won't see it.

It handles like a whale on ice and you can't tell when you're downloading something. But – it does edit frames! Pity I've lost interest in *HTML*...

Verdict

Cyberdog for most days. *Navigator Gold* for groovy sites. They run together quite happily.

Netscape *Communicator* for those pesky frames you want to steal...er...study. *Internet Explorer* for demonstrating how not to design a program.

Not surprising, really. Happy browsing!

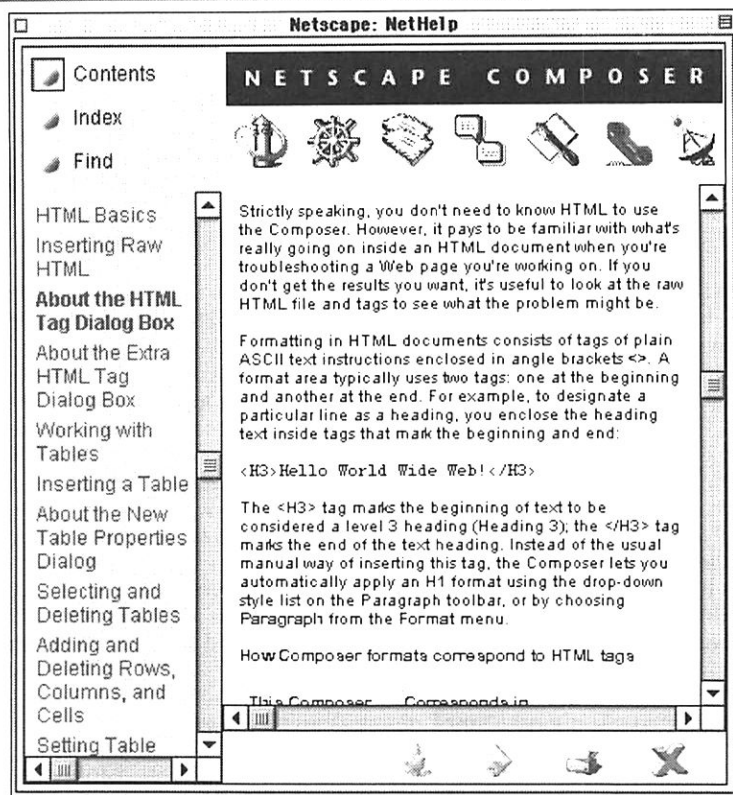


Figure 6. Netscape Communicator's Help window – handy stuff, if you need it.

Have you looked at some new software recently? What did you think of it? Why not write and tell us, so that others can consider your views? Take a few screen shots to illustrate your words. We'd love to hear from you!

Membership Application Form

Complete this form and send it, together with the appropriate fee, to **The Administrator, Club Mac Inc., GPO Box 4523, Sydney, 2001**. Please allow time for the Application to be processed.

Surname Given Name/s

Company/Organisation (if applicable)

Postal Address

Postcode

Phone (Home) (.....) (Work) (.....)

(Other?) (.....) (mobile etc.)

Method of Payment

(we prefer by cheque)

☐ Cheque ☐ Money Order ☐ Credit Card ☐ Bank Cheque ☐ Cash (meetings)

(BankCard, MasterCard & VISA only. The type of your card is indicated by its number)

Card number

Name on card Expiry Date

Signature Amount \$

New Member

(Not a current member)

☐

Renewal

(Membership soon to expire)

☐

Basic Membership \$35

(includes magazine subscription)

☐

Basic + BBS \$65

(90 minutes per day BBS access, incl. own Internet address)

☐

Premium M'ship \$95

(120 minutes per day BBS access, plus own WWW page – up to 2MB)

☐


How did you hear about Club Mac?

Dunk's Doodles



© 1997 Piers Dunkley

After the turbulence of the last couple of months, what with printing problems being finally diagnosed as a file corruption problem *and* the trauma of bedding in a new computer, this month was blissfully quiet.

The new system behaved itself and, apart from some slight problems getting *Open Transport* to talk properly to my ISP, there have been no hiccups. The problem with *OT* was that, after about ten minutes, my browser no longer wished to talk to the ISP. Enough memory had been allocated – most of the 32MB – and the physical connection had not dropped out.

I talked to the guys at Apple (under the 30 day scheme for assistance for new buyers) and a very patient Help Desk person took me through a series of checks, right through all my Control Panels and Extensions. "You have got it pretty right," was the response. "The only other thing I can suggest is that you turn off *Virtual Memory* when you connect".

I did this and have had no further troubles. Now I can connect using the ISP proxy server, something I haven't been able to do for ages. But I have to remember to turn *VM* on again before rebooting, otherwise some programs do quite alarming things (or so I have been told).

Telstra

For the past few months, Telstra has been trialing a new, free service which allows anybody calling STD (on Telstra) between 8.00pm and midnight on any week night to talk (communicate?) for as long as they wish for just \$3. On the basis of a 90 minute connection to the BBS, that works out at about \$2 per hour.

There are only three snags, as far as I can see: you must be using Telstra; this is available between 8:00 pm and midnight on *weekdays* only, (making week-

ends dearer than this) and; this is the busy time for the BBS.

Keep in mind that if your call goes beyond midnight, you drop back to the standard rates for that day and time. All you need do is ensure that you are connected through Telstra and dial the number. There are no forms to fill in – just dial. That's cheaper than your average ISP, eh?

The trial has been extended indefinitely, so all you STD users, come back to the BBS where communication and e-mail is included in the annual fee and where a hell of a lot of good PD is available.

"Following the great success of our BBS and WWW night last year, we are going to run another..."

Fred Hutley Hall

Fred is no more. It has been closed and is being refurbished as a one stop customer service area. Its replacement won't be available until the end of 1988.

At the time of writing (the last week in July) I didn't have any idea where our August Meeting was going to be – I was still negotiating with the Council for a meeting room.

If any of you knows of a place in the North Sydney area that has similar facilities to the Fred Hutley Hall – parking, audio-visual and catering – please let me know. We have had to move already.

BBS and WWW

Following the great success of our BBS and WWW night last year, we are going to run another this year at the same place as last time. This will be the **November Meeting** (at the usual time of 6.30pm) and the venue is Andrew Pavey's business address at Level 2, 327 Sussex Street, Sydney. Bring all your questions and que-

ries and we will try to have most, if not all, of the answers.

Swap Meet

On page 30 of this issue you will find information about our proposed **Swap Meet**, which is to be held in conjunction with our Pizza night on **December 10th**. If there is sufficient enthusiasm from you, our members, this will be on, if not, it won't. So let us know what you think. (This was one of the items on the wish list from the **Survey**.)

Talking about the Survey – recently the Committee has been discussing a number of the suggestions and we think we are on the brink of solving some of them. There are a few knotty problems to resolve first, but I am sure that, with goodwill on all sides, this will be done.

Watch this space!

Picnic in the park

This is another thing left over from last year. We don't have an official meeting in January, so it has been suggested that we have a social get together instead. The date proposed is the second or third Sunday (11th or 18th January, 1998). Let's hear some enthusiasm for it!

No venue has been decided, but suggestions include Centennial Park and Bicentennial Park. Bring your own food and drink. The Committee will arrange for barbecues and an area for us to congregate.

If you know of a better serviced location, please let us know. The alternative must be easily accessed by both public transport and cars, with good parking close by and, of course, barbecues, toilets and (hopefully) tables.

AGM

Next month is our AGM. Come along and let us know what you think of the Club and the Committee efforts over the last year. You never know, *you* may be elected or appointed to a Committee position!



Attention All Club Members

Dear Club Members,

We have decided to discontinue bundling The Mac Zone with your monthly newsletter. As it is our top priority to provide you with the best price possible on our products, we must watch our costs in other areas! We would rather offer you specials throughout the year. Therefore, you will continue seeing our name, but as an ad in your publication.

For those of you who would like to continue receiving our catalogue, please let us know. I have included a fax or mail back subscription form at the bottom of this page. By returning this information, you will continue receiving our catalogue on a bi-monthly basis.

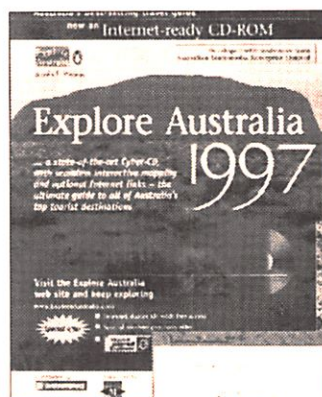
If there are any products you would like to see featured in your publication (and at our best prices), please let me know. I will be happy to establish special offers for you.

Kind regards,

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MACinations

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It's all a matter of style!

In this issue we look at style sheets on the Web;
the style of the new Club Mac Committee;
how Apple's style seems to be changing; and
the style you set yourself in your work.

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Teach yourself
Web design

**Apple
& Mac issues**
Part 2 of
Martin Blackman's
informative series

20 Years of Apple
Bob Pulsford's
encounter
with IT

Web Style Sheets

What are style sheets?

CSS Press clippings
DSSSL styled software
dynamic HTML dynamic style sheets?

Style Sheets on the Web –
Raymond Yu's article tells you how

Naturally, all these usual features:

- ★ **September AND October Meeting Reports**
(all the details)
- ★ **FileMaker Pro Corner**
(Find and Replace)
- ★ **Get Info Column from the Committee**
(This month by Joe Mithiran)
- ★ **Web Weavers' Corner**
(Introduction to animated GIFs)
- ★ **MACcess Report**
(Chatter from the Club Mac BBS)



The new Club Mac Committee elected and appointed by the Annual General Meeting on 15th October. From left to right: **Joe Mithiran** (PD Secretary), **Marshall Ahern** (Ordinary Member), **Piers Dunkley** (Secretary), **Robert Naccarella** (at rear, President), **Rosalie Marshall** (Ordinary Member and **MACinations** Co-editor), **Jill Riddiford** (Vice President and Club Administrator), **John Agapitos** (Purchasing Officer and BBS Sysop), **Darryl Chrisp** (at rear, Treasurer and PD Acquisitions) and **Hilton Brown** (Ordinary Member).

400 issues of TidBITS
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Web style for it!

Cary Lu Remembered
A tribute to
a Mac pioneer

Software Review
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worries over?

**Members
have their say!**
Matthew Godden
and
William Moppett

**Club
Mac**



My encounter with IT

20 Years of Apple

©1997 Bob Pulsford

Bob Pulsford is one of our older Club Mac members who regularly attends Club meetings. His experiences with computers, particularly Macs, illustrate the "wired and retired" attitude of many seniors who are embracing computer technology and culture.

After returning from World War II, I began a University course. I bought a **Royal Portable** typewriter and quickly learned to touch type. When my first assignment was returned, it was marked *I find it difficult to distinguish between your spelling mistakes and typographical errors*. I yearned for a typewriter that would correct spelling. It was 1945...it was a dream!

In 1987 at 72, I had been retired for thirteen years from a career in Papua New Guinea. For more than ten years I had been crippled by a sleeping disorder – sleep apnoea – and then found a life-recovering treatment so I was looking around for something challenging to do.

I was given the opportunity to write up my research work, conducted while I was a Lecturer in Sociology at UPNG's Medical School. This was a study of the beliefs held by the original inhabitants of Port Moresby about disease and illness. The work gained me a Masters Degree (MA in Studies in Religion). I found that illness was only one form of misfortune, and all misfortune had a religious or magic explanation.

As I faced this task, a nephew looked at my old typewriter and lent me his **Microbee**, suggesting I join a Users Group to get into the "computer culture".

The discovery of the Microbee and learning how to use it to assemble my field notes and bibliographical material – then launching out into writing the chapters of the thesis – was exciting indeed! *Word Star for Microbee* was a very advanced word processor for its day. With Macs these things are now taken for granted but, in those days, Macs cost an arm and a leg!

Sydney Microbee Users Group met at Strathfield Girls' High on a Saturday afternoon each month and

we had great times there. I learned how to unsolder the faulty key switches from the motherboard, pull them apart, clean the contact surfaces with an ink rubber eraser, put them all together again and solder them back in place. I received help with hardware and software solutions, including how to connect three floppy disk drives together as **Drives A, B and C**.

When I eventually got a **Mac**, one member showed me how to build a cable to connect the two machines, but there was a hardware problem. The parallel port on the 'Bee was not "standard".

The signal coming from the **send** connector, instead of being an alternating current running from plus through zero to minus, stopped at zero and returned to plus and so on. By removing one end of a certain resistor and putting into circuit a small 9-volt battery, miraculously, the Mac thought it was a true **parallel** signal. Files transmitted this way were useful but required a lot of correction.

Another friend designed a program which he called *BEETOMAC* and, with this program and the cable, I converted my thesis and other writings from the 'Bee floppy disks to my Macintosh. It is very sad – but also inevitable the way development has progressed – that the Australian-centred 'Bee folded.

In 1990, when I finished at the University, I bought a **Mac Plus** and joined the Sydney Macintosh Users Group. I am most grateful to all those there who got me over the trauma of learning to cope with this new system.

Then I heard of Club Mac and have been here ever since. Club Mac and our BBS are now my computer home and I want to thank all those active Committee and Non-Committee officers who make our Club and the BBS such a good place to be.

During the seven years I have used Macs, I have divided that time between first a **Mac Plus** and then an **SE/30** with 8MB of RAM, which has been adapted to run a 14" colour screen (NEC/MultiSync 3D). I have an **Epson LQ-500** printer, bought for the Microbee, which works well with the Mac – if slowly – through an **Icecable**. In addition, I have a **Zytech CD-ROM** driver and an **Avtec MegaPlus Fax v32** modem, bought second hand from Club Mac. All my gear is somewhat old now and I dream about the latest **Power Mac** and a cable modem!

Apart from my creative writing and genealogical research, I spend lots of time on the Internet. Through e-mail (using *Eudora*) I have a running conversation with my son's family in Canberra and my daughter's in Perth. I also keep in touch with friends in Canada, USA, Cambodia and around Australia.

On the World Wide Web, using *Microsoft Internet Explorer 2.0* for 68K, I am able to follow the thinking in Papua New Guinea and the Pacific, as well as Science and Religion topics and an ever expanding spectrum of interests.

Are you missing out on half the benefits of Club Mac?

If you have Club membership at the basic level (\$35 p.a.), don't forget that you can upgrade at any time during the year to full membership status (\$65 p.a.) which includes Bulletin Board access. You don't need to wait until your renewal date.

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MACinations

Co-editors

Tom Pardy pardy@ozemail.com.au
& Rosalie Marshall rosmar@ozemail.com.au
 macinations@clubmac.org.au

Imagingsetting

Everysize Typeart Services The Print Connection

Printing

Club Mac Admin.

Club Mac Inc.
GPO Box 4523
Sydney 2001
NSW Australia

committee@clubmac.org.au

PD Software

PD Secretary
GPO Box 4523
Sydney 2001
NSW Australia

World Wide Web Pages

Club Mac: <http://www.clubmac.org.au>

MACinations: <http://www.clubmac.org.au/~macinations>
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November Club Mac Meeting

Club Mac meets on the second Wednesday of each month from 6:30pm to about 9:00pm. The November meeting will be held at a **different venue**. Meet at Andrew Pavey's place of work in the city, **327 Sussex Street, Sydney**. There are several parking stations nearby and the nearest railway station is Town Hall.

The November meeting will be on Wednesday, 12th November, 1997. At this meeting Andrew Pavey and Rose Marshall will demonstrate the Club Mac BBS, getting the most from *TeleFinder* and using the Internet. Every month the meeting starts with a Q&A session when members are able to ask almost any Mac-related question and, the Club being what it is, some other member will probably have the answer. And there is, of course, the usual tea, coffee and nibbles at "half time".

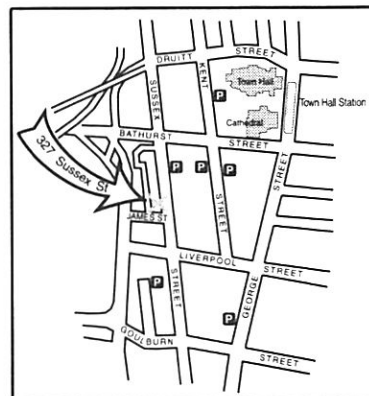


Rose Marshall and Andrew Pavey will demonstrate our own BBS and the Internet at the November Meeting.

Never miss a meeting!

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- ✓ Mac questions answered!
- ✓ Club Mac Ware PD disks!
- ✓ Mac fellowship & chatter!



Club Mac Special Interest Groups (SIGs)

■ Beginners SIG

Meets in the Geddes Room, North Sydney Municipal Council, 6:30 to 8:30pm, Thursdays, eight days after the regular Club Mac meeting.

■ Database SIG (largely FileMaker)

Also meets in the Geddes Room, also 6:30 to 8:30pm, but on the fourth Wednesday of the month.

■ Omnis SIG

Meets at 327 Sussex Street, Sydney (nice and central). Contact Reg Paling (telephone 9905 4405) for more information, including the date of the next meeting.

Club Mac has a Help Hotline

02 9960 5717



Fax or phone and leave your name, phone number and a description of your Mac problem. Another Club Mac member will get back to you and do everything possible to advise you! This service is free, but we are all volunteers. So please be patient! Sometimes we have problems too!

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Style sheets on the Web



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Imagine this scenario...you are responsible for maintaining a Web site, say your personal site, with a modest ten Web pages. Trying to ensure all these pages have a uniform look is not easy – such a task is not technically complex, but it is time consuming and mundane. It doesn't have to be!

Suppose you want to change all occurrences of **Heading 1** tags colour (ie., those tags with `<H1></H1>`) to red. You would need to go through each and every page to alter the *HTML* code. What if you wish to change the headings to a different font, size and style? To further improve your presentation, you may also choose to create an indented paragraph effect.

Although these improvements can be accomplished using plain *HTML* code, the very thought of having to go through all the pages to make the tedious modifications is not a pleasant one. With the help of Web authoring programs, the task is made a little easier but it is still rather inefficient. A style sheet streamlines the process – just insert the change into the style sheet and all the Web pages that rely on that style sheet will then display the new style. Simple.

Advantages

You may be familiar with word-processor style sheets. Those who have used these will know that they greatly streamline one's work. They are a tool that any serious writer/publisher cannot do without as so much time and effort is saved. Style sheets are also absolutely essential for Web publishing.

As with a style sheet on a word-processor, a style sheet on the Web allows you to specify how text, headings, paragraphs etc., will display. It allows you to modify the presentation of documents without laboriously adding new *HTML* tags. Best of all, a style sheet offers the convenience of defining the formatting instructions **once**, instead of manually applying them to all the elements on each of the pages at your site.

A site that is visually uniform and continuous is now a manageable

reality with a style sheet. Style sheets also speed up the performance of your site – by grouping style definitions into one file, Web pages become smaller. And, if you use a single style sheet for your site, that file will be downloaded only once, resulting in a quicker download time.

This article aims to introduce you to the basic syntax of style sheets. I am assuming that you have some familiarity with the core elements of *HTML*.

A simple style sheet

To illustrate how simple it is to create a style sheet, study the following three lines:

```
<STYLE TYPE="text/css">
H1 {color: RED}
</STYLE>
```

Already, you may have guessed the effect of the change in the above scenario. All **Heading 1** headings (ie., those tags marked with the `<H1></H1>`) will now be shown in red.

The line **H1 {color: RED}** is referred to as a **rule**. A rule is a style definition. The part in curly brackets { } is called a **declaration**. A declaration is made up of one or more **properties**. In the example above, **color** is a property. Think of a property as a characteristic of the *HTML* tag that you are defining – the word "RED" is the **value** of the property in this case. Notice that the syntax is:

property name: the value

If there is more than one property, each property is separated by a semicolon, as shown in subsequent examples.

Attaching a style sheet

There are two main ways of attaching a style sheet to your *HTML* documents.

1. Embedding

This involves the use of a new

HTML container tag as in the above example: `<STYLE></STYLE>`. Typically, this goes between the `<HEAD>` container and the `<BODY>` tag of the *HTML* file.

TYPE="text/css" is browser information about the type of style sheet you are using. Yes, there is more than one type of style sheet. The type which will be illustrated here is called the **Cascading Style Sheet (CSS)**.

The other type is called the **Java Script Style Sheet**. This will not be covered here. [As the name suggests, this approach requires the use of *Java* script. It is based on **CSS**, the difference is the addition of **objects** that permit you to manipulate the style sheet elements with *Java* script. This introduces an element of interactivity into the style sheet.]

2. Linking

Embedding is nice and simple if you only want to apply the style to just one Web page. However, if you want to apply the style to more than one page, **Linking** is a better option. This offers you the real benefit of style sheets – the ability to define the style once for all your Web pages.

This is done through a `<LINK>` tag. An example would be:
`<LINK REL=STYLESHEET HREF="http://url.address.of.the.style.sheet.file" TYPE="text/css">`

This tag tells the browser to go to the **URL** specified to download the style sheet file. The principle is the same as downloading an image file from any other source. Again, you need to specify the **Type** using the same syntax as in the embedding approach.

The target style sheet file is a plain text file containing the same code that you would have put between `<STYLE>` and `</STYLE>` tags

A style sheet in action

```

<HTML>
<HEAD>
<TITLE>An Example of Style Sheet in Action</TITLE>
</HEAD>

<!-- This is an example of an EMBEDDED STYLE SHEET-->
<STYLE TYPE="text/css">
<!--
H1 {color: navy;
    font-size: 32pt;
    font-family: helvetica;
    font-weight: bold;}

H2, H3, H4 {color: gray;
    font-family: "sans serif";}

H4 {font-family: helvetica;
    font-size: 22pt;
    font-weight: 800;
    border-color: red;
    border-left-width: 0.25cm;
    border-right-width: 0.25cm;
    border-top-width: 0.2cm;
    border-bottom-width: 0.2cm;
    border-style: ridge;}

P {marginLeft: 20;
    marginRight: 30;
    color: red;}

BLOCKQUOTE {line-height: 1.2;
    color: #253C76;
    font-size: 20pt;
    border-color: green;
    border-width: 0.3cm;
    border-style: inset;
    padding: 1.0cm;
    background-color: gray;}

OL {color: #253C76;
    list-style-type: lower-roman;}
-->
</STYLE>

<BODY BGCOLOR="#FFFFFF">
<H1>Heading ONE</H1>
This line of text is not enclosed by a paragraph tag. <BR>
<P>This is a block of text enclosed by a paragraph tag. If
style sheet is enabled on the browser this paragraph would
appear indented. Without a style sheet this effect would
require the creation and manipulation of tables. </P>
<H2>Heading TWO</H2>
<BLOCKQUOTE>"This sentence is enclosed by a
<B>blockquote</B> tag."</BLOCKQUOTE>

<H3>Heading THREE</H3>

<H4>Heading FOUR</H4>

An ordered list:<BR>
<OL>
<LI>First item;
<LI>Second item;
<LI>Third item.
</OL>
</BODY>
</HTML>

```

Figure 1. This is the HTML code used in Figure 3.

under the embedding approach.

Unlimited possibilities

The best way to understand *HTML* and style sheets is by working through an example. The *HTML* code for such an example is shown in Figure 1.

To illustrate the difference a style sheet can make to Web pages, compare Figures 2 and 3 on pages 7 and 8. Figure 2 shows a Web page without any style sheet elements and Figure 3 shows the same Web page based on a style sheet.

Fonts and colour

As in the simple example at the beginning of this article, the first part of the declaration for the rule **H1** began by defining the **color**. Here, the **color** property assigned is the value "navy". An alternative way to specify values is to use the hexadecimal approach commonly used in *HTML* code.

Next comes the declaration for the **font**. The syntax is fairly self-explanatory and easy to learn – **font-size** specifies the size of the font. The value in this example is given in points (pt), but it can also be given in pixels (px), centimetres (cm), or inches (in) – it is fairly flexible.

Font-family specifies the name of the font that you want to use. Whilst technically you can use any fonts that are available on your computer, practically speaking, the choice is often limited because you can never be sure what fonts are available on the user's computer.

You can specify multiple fonts in order of preference, from left to right, separating them by commas. Just in case the first font is not available, you then have a backup. One of the backup fonts should be a generic one such as serif, sans-serif, fantasy, mono-space or cursive. For example:

font-family: Helvetica, serif

Font-weight specifies the thickness of the font. In this example, the value is **bold**. Other values are **normal**, **bolder** and **lighter**. You can also use numbers (100, 200...900).

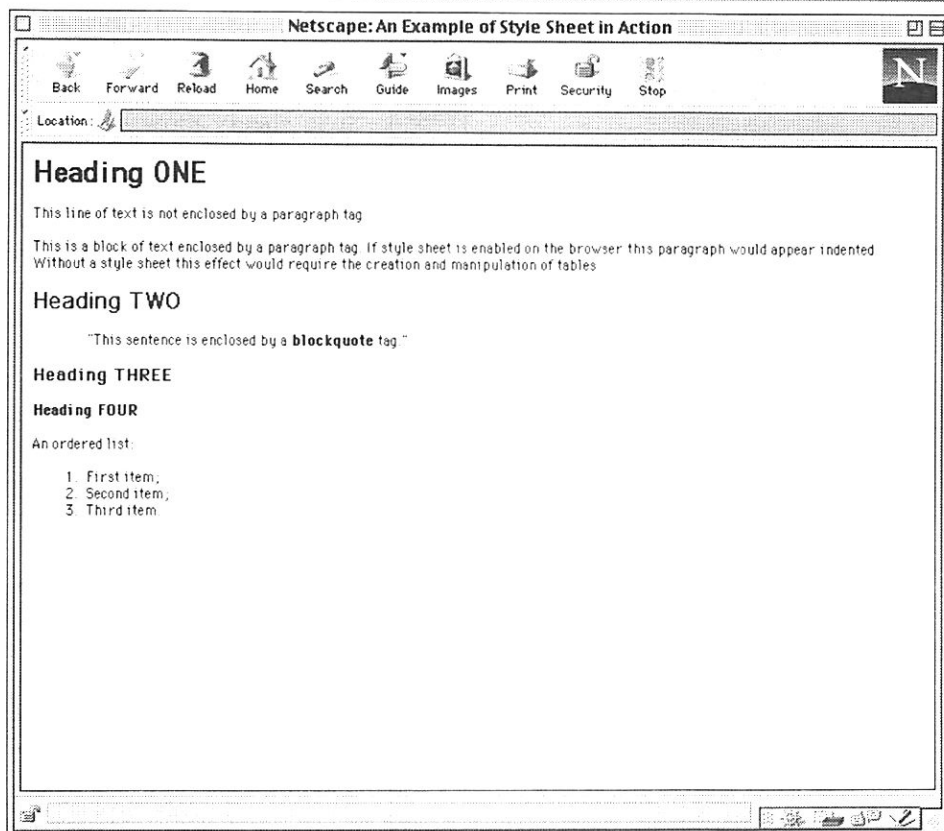


Figure 2. A Web page without style sheet elements.

Overriding

You may wonder what happened to the default definition for the **Heading 1** or **<H1>** tag. Normally, without a style sheet, **Heading 1**, **Heading 2** and so forth each have a certain font size associated with them, such that **Heading 1** is bigger than **Heading 2** and so on. Each **Heading** is also given a font family property by the browser. What happened to these and the other default values? They are still there, the style sheet declaration simply overrides them.

In the **H2** and **H3** declaration, only the **color** and **font-family** are specified. In Figure 3, **Heading TWO** and **Heading THREE** appear grey in a

Continued overleaf

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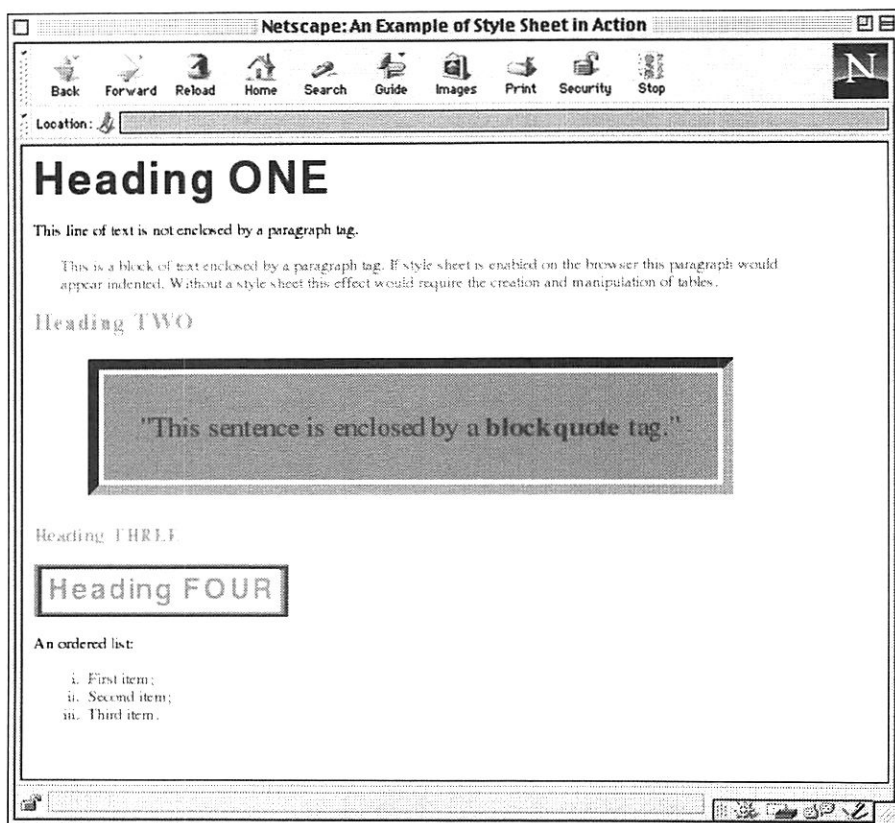


Figure 3. Style sheet elements applied to the Web page shown in Figure 2.

sans serif font. Because the font size is not specified here, the default font size value is used.

This declaration also introduces a quick way to define multiple tags when you want to have properties with the same values. This is achieved by putting the tags – such as **H2**, **H3** and **H4** – in a row separated by commas as shown in the example in Figure 1.

Not only does the style declaration override the default value, a subsequent style declaration will

override a previous declaration in relation to the same tag – if there is any inconsistency. The next example may help to explain this.

Consider the first three lines of the declaration for **H4**. Remember that **H4** was previously defined as a **color** “grey” and a **font-family** of “sans serif”. In this declaration, **font-family** is given the **value** “Helvetica”. As can be seen in Figure 3, **Heading FOUR** is displayed in the Helvetica font. Notice that it is still grey because this property

has not been overridden.

Indenting text

Style sheets allow you to indent your text. In the example, the block of text enclosed by the paragraph container **<P></P>** is indented relative to the rest of the Web page. This is achieved through the use of the properties **margin-Left** and **marginRight** which specify the left and right margins respectively.

You can quickly change the margin size by changing the values of these two properties. Previously, a margin-like effect could be created only through the use of tables with blank cells, which are rather cumbersome to work with, particularly in a lengthy page.

Border and background

With style sheets you can easily apply different **border** effects around a block of text.

Look at the border around **Heading FOUR**. The **color** of the border is specified by the property **border-color**. The properties **border-left-width**, **border-right-width**, **border-top-width** and **border-bottom-width** specify respectively the width of the left, right, top and bottom of the border. As with the font size, the values can be given in points (pt), pixels (px), centimetres (cm), or inches (in).

The **border-style** property specifies the style of the border.

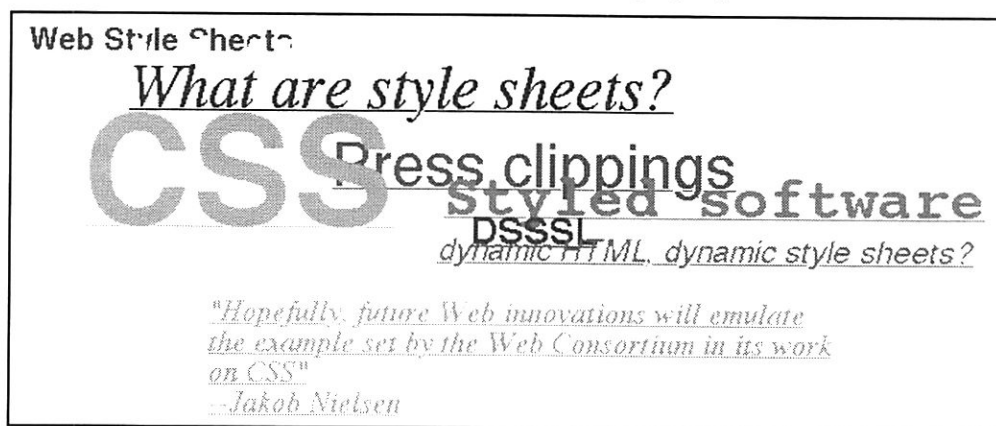


Figure 4. An example of the properties that can be manipulated using style sheets. This image was captured online from <http://www.w3.org/Style/>

The values that can be used are: **ridge** (used in **Heading FOUR** in this example), **inset**, **dotted**, **solid**, **double**, **dashed**, **groove** and **outset**.

Technical note

In the above example, the properties within the declaration are written on separate lines because this approach provides a clearer style sheet. However, this is not a mandatory part of the syntax. You can write it all on a single line if you want, it is a matter of personal taste.

There are also different and simpler ways of writing some of the codes. The border definition in **Heading FOUR** can be written as: **border: 0.2cm ridge red**. The values after the **border** property are values for the **width**, **style** and **color** properties, although they do not have to appear in this order. The style sheet syntax is flexible enough so that you can

specify these values in any order you wish. Notice that there are no commas between the values. If you want to specify different widths for the top, right, bottom and left border, use:

**border-width: 0.5cm
0.2cm 0.5cm 0.2cm;**

The order of the values *are* important here, they are in the order of top, right, bottom and left. This approach is much more concise than the six statements used in the original example. However, this method sacrifices clarity.

For a novice like myself, I prefer the longer form because it makes the meaning of the statement self-evident and it also makes subsequent modification much easier. Again, this is a matter of personal taste.

Remember older browsers

So as not to confuse browsers incapable of handling style sheets, it is best to put the style sheets in-

side *HTML* comments. The *HTML* comment codes `<!--` and `-->` can be placed before, after and in-between the statements.

Cascading Style Sheets

The Cascading Style Sheet (CSS) approach described in this article is a style sheet standard defined by the **World Wide Web Consortium (W3C)**. This is an industry consortium that develops common protocols for the evolution of the World Wide Web.

At the time of writing, CSS is supported by both *Microsoft Internet Explorer 3.0* and *Netscape Communicator* (ie., *Navigator 4.0*). But, as with most so-called standards in relation to the 'Net, the implementation is not necessarily uniform.

Why is it given a fancy descriptor like "cascading"? Because the browser follows a specific set

Continued foot of p.10

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Apple and Mac Issues

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In the concluding part of his series on the issues in which the computer press was either misinformed, failed to tell everything or just plain got it wrong, Club Mac member, Martin Blackman, investigates the Power PC and what the Common Hardware Reference Platform (CHRP) alliance means, Game Sprockets (a technology it appears Apple must pursue) and clones. Martin begins with clones and their effect on Macs...

Part 2 – Clones, PPC and Game Sprockets

Apple's failure to allow Mac clone development from the earliest days has been cited as one of its greatest mistakes. Since Apple's decision to allow clones, the press has been sceptical about price, quality, negotiations with cloners and clones' effect on Apple's market share.

Various, the press has praised Apple for cloning the Mac and at other times has had no shortage of criticism. So, what really happened with cloning and what will happen when *Rhapsody* is added to the newly arrived OS 8?

Historically, Apple has been strong in some market segments and weak in others. From the Mac's inception, Apple executives rejected cloning, citing the IBM experience after its PC was cloned.

By 1994, Apple perceived that

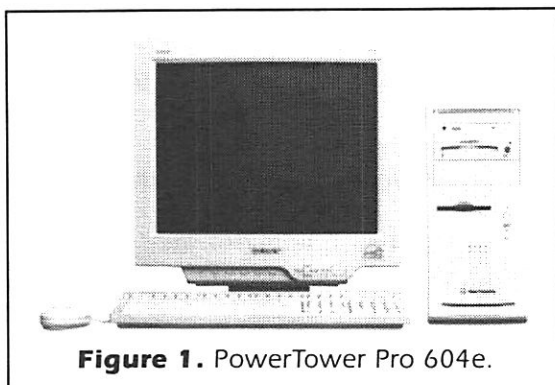


Figure 1. PowerTower Pro 604e.

it faced limitations in its product line. With its research and development budget and pricing structure, Apple realised it was never going to reach the low price segments of the market. It also knew that it had not been successful in penetrating the business market.

Apple had hoped that, by licensing the *Mac OS*, the Mac would expand into new markets (given that cloners could do things

Apple couldn't or didn't want to do) and would shrug off the label of being "proprietary". Talks proceeded with potential cloners.

Under the licensing agreements, Apple would license the *Mac OS* and cloners would attempt to expand the Mac market. A centrepiece of the agreements was that cloners would use Apple motherboards as the basis for their

machines. There were several reasons behind this:

- Apple wanted to avoid the compatibility problems of the first IBM clones and the variations in quality in the PC clone market. Using Apple's board certainly ensures a high degree of compatibility and quality, at least equivalent to Apple's machines.

Continued on page 12

Style sheets on the Web – cont from p.9

of rules (the cascading order) to resolve conflicts between multiple styles. You have already encountered an example of this cascading order in the example on the previous page. Remember how the style sheet declaration overrode the browser's default values for the *HTML* tags? That is an example of the cascading order in action.

In general, the overarching principle is that, the **most recent** declaration or style definition overrides any previous declaration if there are any inconsistencies. It follows that styles defined inline (ie., as part of the *HTML* tag) have precedence over an embedded style sheet, and an embedded style sheet has precedence over a linked style sheet.

Further details on the CSS standard can be found at:

<http://www.w3.org/pub/WWW/TR/REC-CSS1>

Authoring software

Software is beginning to appear that facilitates the writing of style sheets. Currently there are two programs available:

- *Cascade 1.0* – An editor that uses a series of dialog boxes to help you construct a style sheet using the CSS standard. A demo version can be downloaded online from:
<http://interaction.inprogress.com/cascade>
- *BeyondPress 3.0* – A Web authoring *XTension* that converts *QuarkXPress* documents into *HTML* and CSS. (Additional information can be found at:
<http://www.astrobyte.com/About/BeyondPress3.0Release.html>

[com/About/BeyondPress3.0Release.html](http://www.astrobyte.com/About/BeyondPress3.0Release.html)

Conclusion

Style sheets have introduced a whole new dimension to Web publishing. They provide a simple way to manipulate the appearance of a Web page and an easy way to synchronise the appearance of multiple Web pages within a site.

This introduction has only touched the surface of the large and expanding range of properties that can be manipulated using style sheets. Figure 4 on page 8 shows you one possibility. The overlapping text effect in different colours, fonts and styles is created purely using a style sheet. Very impressive! The limit is your imagination.

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Note: Events have moved on considerably since Martin wrote this article in early September. We considered asking him to rewrite several sections but decided this was unfair to him. Readers who have followed developments will be aware themselves how accurate Martin's comments have remained.

- If cloners could use Apple's board then they would not need to produce their own to start off, reducing time-to-market for the first clones and lowering initial costs.
- Apple is a business – out to make money – which it does from selling motherboards to cloners. This also enables Apple to retain greater control and Power Macs to remain competitive.

Having accepted restrictions early on, cloners were promised more freedom when the **Common Hardware Reference Platform (CHRP)** aka the **PowerPC Platform (PPCP)** arrived (see below).

Since the first licensing agreements were reached with **Power Computing** and **Daystar**, there has been debate about the advantages of cloning. Apple and clone makers have undertaken several initiatives to introduce new technologies and to expand the Mac's market share.

To sell Macs into the enterprise, **Motorola** has leveraged its reputation and offered an extended warranty on its clones. Power Computing is going to sell *Windows NT* servers in the hope that a Mac client/*Windows NT* server combination will be more appealing to IT managers and departments, boosting Mac sales – contrary to what the press would have you believe.

Daystar has brought **multi-processing** (albeit limited) to the current *Mac OS*. Daystar licensed its multi-processing software back to Apple and other clone makers and, as a result, we now have multi-processor Macs from Apple and the majority of cloners.

Apple and Power Computing have also been working jointly on research and development projects aimed at speeding up PCI and processor caches which use inline caching.

The press has hotly debated

whether the clones have gained market share at Apple's expense. To an extent this is likely to be the case, Apple knew that clones would have **some** effect on its market share. However, there is **no way** to substantiate any claims made by the press that clones have cannibalised Apple's market share.

Given that cloners are currently using Apple motherboards, it is hard for them to differentiate their products in order to target different markets. Whatever the case, clones have made Apple more competitive. Today's Power Macs are faster and cheaper than they otherwise would have been – which can only benefit Apple.

Apple has been locked in negotiations with cloners. CHRP and *Rhapsody* will dramatically change the licensing landscape. CHRP will mean that cloners no longer buy motherboards from Apple, and *Rhapsody* is an entirely different OS to the *Mac OS*. Apple has taken this opportunity to re-negotiate all aspects of license agreements.

Negotiations are likely to have been somewhat troublesome (as has been over-reported in the press). Apple is in the red and wants to make more money from clones and cloners want the cheapest and most flexible agreement they can get from Apple. Neither extreme would be an acceptable agreement to all parties, hence they are aiming for compromise. Any differences are likely to be settled prior to the release of

Rhapsody so that cloners can bundle it with their machines.

What is CHRP or PPCP?

As part of the **Power PC Alliance**, a standard for hardware based on the PPC was created.

Machines designed around this standard were meant to provide a range of peripherals (Mac and PC) and run multiple operating systems, including the *Mac OS*, *Taligent OS* and *Windows NT*. This standard was called **CHRP**, although it was revised and renamed the **Power PC Platform** or **PPCP**. In practice, the two terms are used interchangeably, even though this is not strictly correct.

Taligent OS, a fully object-oriented OS, meant to be developed jointly by Apple and IBM, never made it out of development. To allow the *Mac OS* to run on CHRP, Apple had to remove the hardware dependencies and it fell behind in doing so. As a result, *Mac OS 8* is the first version of the OS to support CHRP.

Although *Windows NT for the PPC* was finished and much fuss was made, last year Microsoft pulled the plug on it. The press called this the "death of CHRP" but, given the number of applications that ran under *Windows NT for Intel* and the small speed difference between the PPC and the Pentium, *Windows NT for the PPC* never really stood much chance as it provided little advantage over *Windows NT* running on Intel.

With only the *Mac OS* left, CHRP will become more Mac specific. Why bother? Put simply, CHRP uses standard PC components so it will enable cheaper and faster Power Macs and Mac clones to be built.

There has been much confusion over just what *Rhapsody* and CHRP will allow cloners to do. Under CHRP, cloners will still have a limited choice of motherboards – from Motorola or from Apple – meaning faster boards using newer technology. Cloners will also be able to vary greatly which components are used, although they will not have full freedom until *Rhapsody*

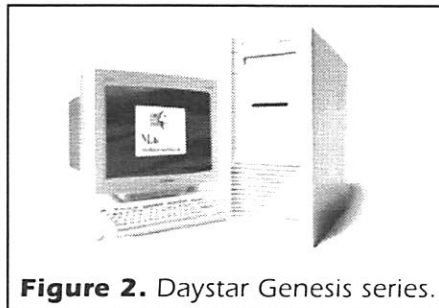


Figure 2. Daystar Genesis series.

is delivered, at which time they will be able to use whichever components they choose and write the drivers for those components.

Another area of confusion is the nature of the *Mac OS ROM* under CHRP. The initial plan was that ROM code would be moved into **RAM**. Apple got behind on this and the first CHRP systems will include hardware ROMs as do current Macs. The update following *Mac OS 8* (available now) eliminates the need for a hardware ROM, introducing a RAM-based ROM as originally planned.

In the future Apple is hoping to eliminate the need for a ROM completely. This will mean that cloners no longer have a problem with the availability of ROM chips, which are in short supply. Whether cloners will release CHRP machines with a hardware-based ROM or wait until the release of the update following *Mac OS 8*, remains to be seen. By the time you read this, the first CHRP machines will be starting to ship.

Apple, PPC and MMX

The press has made a lot of noise about Intel's **MMX** (MultiMedia eXtensions to the Pentium), and many comparisons were made between MMX Pentiums and Power Macs. What the press failed to tell you is what Apple and the PPC consortium are doing to counter MMX.

Apple (although they have been too slow in responding) will use the **Philips Tri Media 1000** processor, a separate 100MHz processor (capable of performing four billion operations a second), as the basis of PCI cards and directly on the motherboards of upcoming Macs.

Tri Media chips will accelerate *QuickTime Media Layer (QTML)* functions – *QuickTime*, *QuickTime MPEG*, *QuickDraw 3D* and *QuickTime VR*. Third party developers will also be able to accelerate their applications using Tri Media.

As Tri Media is a separate processor designed for, and dedicated to, multimedia related tasks, it will be substantially faster (up to ten times according to Apple) than

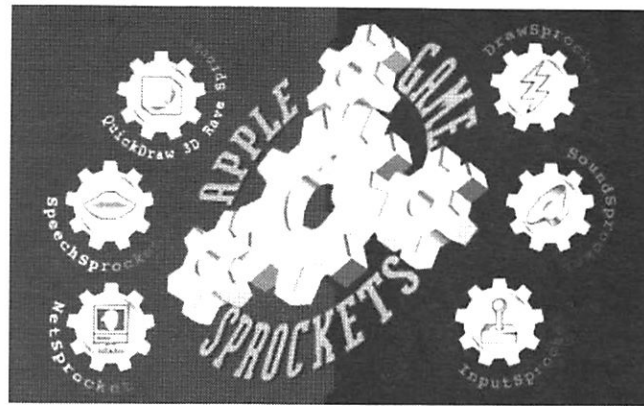


Figure 3. The Games Sprockets Logo.

MMX and will allow other tasks running on the main processor to be virtually uninterrupted.

On the PPC front, IBM and Motorola have been working on a set of instructions (to be added to the PowerPC architecture) to speed multimedia related processing. This enhancement, called **Video and Multimedia Extensions (VMX)**, will form part of the fourth generation of PowerPC processors (codenamed **G4**) to be released next year.

VMX follows the same concept as MMX but will have fewer limitations. It is unlikely to be faster than Tri Media, but will be cheaper than Tri Media and faster than MMX. When rumours of VMX first appeared and then were confirmed, the press implied that IBM and Motorola were simply following Intel – copying MMX. In deciding to include VMX, the PPC consortium may have been reacting to MMX, but there was no copying involved.

IBM had developed a set of instructions for multimedia processing for inclusion in the **POWER** architecture (the basis of the PPC), long before the Pentium existed. VMX is likely to be an advanced superset of instructions from the POWER architecture.

Game Sprockets

Games are important to any platform as they demonstrate the capabilities of a platform and push

Systems to their limits. We have hardware 3D acceleration thanks to the large number of 3D games available which provided a potential market for 3D hardware.

In the consumer market, the disparity be-

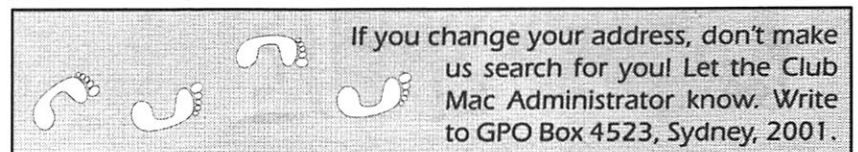
tween the number of games available for *Windows* and the *Mac OS* has worked against the Mac. In response to this and in an attempt to encourage game developers to port games to the Mac, Apple released *Game Sprockets*.

By providing developers routines for networking, handling input devices and drawing directly to the screen, *Game Sprockets* attempted to reduce the amount of work and (consequently) time needed to develop or port games to the Mac.

Game Sprockets was another Apple technology that got the chop. Games developers protested strongly and Apple was petitioned to maintain *Game Sprockets*. For whatever reason (presumably to maintain *Game Sprockets*) one engineer is left from the original *Game Sprockets* team. Since Apple's reorganisation, *Game Sprockets* has received minor updates and support for 68K Macs.

What Apple had forgotten to mention when they said *Game Sprockets* was not being ported to *Rhapsody*, is that the functionality of *Game Sprockets* had been included in various parts of *Rhapsody*, such as *QuickTime*.

If the functionality of *Game Sprockets* is spread around in *Rhapsody*, then the number of people maintaining games-related functionality is likely to be greater than if *Game Sprockets* is maintained separately to *Rhapsody*. ■





From the Editors



All of a sudden the computer revolution of the '70s is the twenty year old reality of the '90s. Jobs and Gates are now in their 40s, the chip revolutions have passed (for now), the software empires are established businesses, they are no longer the sunrise industries. Computing Studies has been a part of the school curricula for over ten years. It gives a baby boomer reason to pause.

Galling as it is to admit that the police are looking young, it is even more galling to admit that the computer industry gurus are getting even younger. A generation of users has grown up with computers as part-and-parcel of their school lives and they are now in their mid-late twenties. Younger still is the generation that does not remember a time before computers in their classrooms and, for a lucky element, in their homes.

Redundancy in software manifests itself in those tutorials of how to use a mouse, how to boot a computer and how to save a file. Looking through a telephone instruction booklet, you are hard pressed to find instructions on how to lift the handset and that is as it should be. Similar basics are superfluous in instructional software.

School education needs a revamp. The syllabi for computers still specifies teaching *about* rather than *with* computers. The senior school syllabus assumes no computer knowledge when many students bring up to eleven years of previous experience.

It is only because of the com-

mitment of many teachers that anything other than simplistic software skills and (mainly) irrelevant computer science is taught.

Your child, grandchild, friend, niece, nephew or neighbour who attends school, learns what s/he learns because of the knowledge and commitment of the teacher leading the class. If the Internet, Intranets and *Java* are a part of that experience, you can be guaranteed that is not because of a syllabus document.

Economic rationalism is closing down the traditional employment paths, just when the information age is switching demand from manual skills-based careers to the technology driven multi-pathway careers.

Whilst the cries of "traditional" literacy occupy the politicians and the media, a generation of kids deals with a new literacy which encompasses twice as much information than existed from the beginning of human knowledge until 1950. They enter strings in search engines, they make sense of what they discover, they create multimedia projects to demonstrate their learning. They use digital cameras, videos and networks as a matter of course.

The school-age generation accepts the overwhelming amount of information available. They search, they discern, far far better than we, the generations of radio and television-raised kids. They interact, they are not mindless vacuums.

Some of us remember learning to use a nibbed pen with ink. It was a traditional skill, valued by those

who learned to write that way. It was a part of the curriculum and, after we had learned it, we used – with much relief – ball-point pens, which functioned smoothly, *without* the use of blotting paper.

In classrooms around the nation, kids learn (on varying levels) computer skills. They are taught, in the main, by a group of teachers who grew up with fountain pens, radio and television. They are taught by people who value and measure in traditional ways, many of which are outmoded.

There is a juxtaposition in the computer industry and in education. The old and the young aren't phased by it. It is the baby boomers – caught in between – who question, who mourn the loss of traditional skills and the means to measure these.

As we accept the shift in paradigms in the computer industry, so we need to accept the shift in paradigms in education. Despite outmoded syllabi, strained resources and inappropriate "literacy" testing, we are producing the brightest, best educated generation of Australians yet.

The next step is to prepare them for the career paths and choices in industries that exist now and will exist in the future. Computer technology is here to stay. Our politicians and bureaucrats are yet to learn this. Perhaps the shutters can be raised in Canberra? A little light on the subject wouldn't hurt.

Tom Pardy and Rose Marshall
Co-Editors



GARAGE SALE

That's right! The great **Club Mac Garage Sale** will form part of the legendary December meeting (scheduled for 10th December). It is shaping up as a wonderful buy, swap or sell occasion.

Bring along your pre-loved or unwanted hardware and software. Strike a deal or grab a bargain!

Members have their say!



When things are going well with our Macs, we love them. When things go wrong, who hasn't wondered about the inner workings of all machines and gadgets? Do they have a life of their own? Club Mac member, Matthew Godden, is tempted to think so while, over the page, William Moppett finds Macs beautiful in their simplicity.

#1 – Black Magic?

©1997 Matthew Godden

Okay, I'm the first to admit it – well, no actually other people have accused me of it for a long time – I am a technogeek. I *love* gadgets and nifty hardware...the more blinking little lights the better.

I first had a fundamental realisation of just how deeply this particular personality disorder runs, when I sat back after setting up and networking a **Mac Plus** to my main machine. It occurred to me that I was spending all this time for no reason – other than to have a funky old Mac sitting and running life generators for hours on end.

Where is this ramble going? Simple. Although I love consumer electronics, I have an almost *paranormal* ability to attract the examples built at 4:40pm on any Friday. So here is a look at my wondrous and almost occult involvement with consumer electronics.

In 1993 I bought a portable CD player. It was a rather expensive **Sony Discman** which I used as my only CD player. Soon after I brought it into my home the weirdness began. The base levels in *any* music played on it would strobe up and down in strength, so that base lines would rise and fade in volume.

I took it back to the place where I had bought it and made a complaint. It went in for repairs. (Note: the tone of voice used here is the exact one you would use to indicate the passage of time in galactic travel, at sublight speeds and with only 47 cards out of a deck to keep you entertained.)

After checking out of cryogenic suspension and getting my CD player back, I noticed that the problem was still there. So I went back to the store – somewhat agitated – and said, “No I don't want it repaired

again, give me a replacement.”

The replacement soon developed the same problem. It was back to the shop, “@#\$%#! I want a *refund!*” “Well yes, but blah blah company policy.” “@#\$%\$\$! Consumer law states that...!” “Yes, well OK. We'll organise a credit right away.”

I have now had, for several years, a very happy **Technics** portable CD player, which behaves normally, except that sometimes... when no-one else is around...the disc will just spin faster and faster and, despite my best attempts, it *won't* play songs. Later it will work just fine.

I acquired a **Power Mac 7100 AV**. It has had the power supply replaced and the CD-ROM replaced – twice – under warranty, not to mention being rendered unusable twice by service technicians. (Possession would not surprise me.)

But my special love, that one piece of equipment which makes me so happy, so joyful that it's really an effort *not* to find the homes of the people who designed it and stake them out on the lawn, while running over and over them on a ride-on lawnmower until there is merely a stain on the grass to record their existence...ahem, sorry but it's easy to get worked up...

The piece of equipment I'm referring to is a **Syquest 270** drive. I bought my first one at Macworld, 1994. Since that time it has been repaired, repaired again, replaced and recently it broke down again.

I took it in for service hoping for a *gratis* repair or replacement which, given the unit's history, didn't seem unreasonable. The answer was a flat “no”. The distributor won't do repairs at all but they offered to install for free (how

big of them!) the replacement mechanism I was going to have to buy. This was going to cost about \$290. Mysteriously, I have also lost four cartridges...for no particular reason.

Determined not to sink any more money into appeasing the Syquest demon, I brought the drive home and, in the greatest of Hollywood endings, plugged it in to find that – it worked!

Good had triumphed and I was free to access my data...or was I? Now, some weeks later, the signs of a sequel are beginning. For one day I was unable to access *any* cartridge. The next morning others could be mounted but not the one particular cartridge that had first manifested the behaviour. It just *wouldn't* mount.

The following day it was fine.

There is only one thing which is worse than a machine not working, and that is when it starts working again all by itself.

The strangeness associated with SCSI is enough to convince many that using a computer is, indeed, a supernatural experience. Perhaps the multitude of spinning disks in our computers act as prayer wheels and, with our constantly spinning data, we have unwittingly opened a gate to somewhere else – somewhere where the basic order of things is fundamentally “different” – where there is “on”, “off” and “in-between” – where a machine can be “fixed”, “broken” or “something owned by me”.

On 6th October, the demon struck again, not only rendering the drive inoperable but causing my computer to tell me that the data on the cartridge may be damaged. Does anyone know the phone number of an exorcist?

#2 – Beautiful simplicity

©1997 William Moppett

The beauty of Mac is that you don't need to know the difference between Hurd of GNU and a herd of gnus. Because of the "metaphor" structure of the *Finder*, Mac users just unpack their hardware and get down to work. The manual is just there to impress visitors with the idea that you are literate. There is really no need to break the shrink wrap seal.

UNIX horrors

Life wasn't always so easy – many academics, who have invested huge amounts of time and effort into learning computer systems, are very reluctant to pass on their acquired skills and concentrate on the problem, rather than the computer. I spent three years at Sydney University wrestling with teachers who believe computing equals UNIX.

If you started with **Siliac** or **Pegasus**, UNIX is heaven. In the Design Science computer lab, faculty of Architecture, there are **Macs**, **Sun** workstations, **SGIs**, and – wait for it – an **IBM rs6000 AIX** with five dumb terminals.

Apple originally offered AUX as an alternative to the *Finder*, although a few years ago it was discontinued. To play with UNIX on my **Power Mac 9500**, I got *Tenon Power MachTen* and, more recently, I obtained *MkLinux*. This is where Hurd of GNU comes in.

Some years back Apple announced that **CHRP**, the Common Hardware Reference Platform – developed in conjunction with IBM, was to run **IBM UNIX, AIX**. The consortium behind this seems to have died and Apple now supports *MkLinux*.

Early computing

In the early days, computers were expensive, like £50,000, when wages were £5 per week. The idea was to use them as intensively as possible, running them around the clock to justify the costs. Real pro-

grammers used machine language and, if you want to see what that looked like, use *ResEdit*.

Input and output were done with punched paper tape with five rows of holes, and used **CCITT** teleprinters, tape-readers and punches.

Much programming code was copied and used over and over again, so that libraries of useful programs were developed and, as hardware correspondingly developed, languages which called these code segments evolved.

There were two languages for example, which had specific mathematical application, **Fortran** (Formula Translator), and **Algol** (Algorithmic language). Another language, **Cobol** (Common or Business Oriented Language) was developed for use by commercial organisations and government departments.

Then came a push for languages which contained calls that mimic English syntax. **Pegasus II**, specific to the Ferranti Pegasus computer, and **BASIC** (Beginners All purpose Symbolic Instruction Code) appeared.

Programmers used these languages to develop individual applications specific to their industry or research. However, since all word-processors need more or less the same facilities, a good deal of second-level software developed. If you used spreadsheets, for example, you could choose one of several software commercial packages rather than develop your own. One of the criticisms levelled at the Macintosh in the early days was that it had very few commercial programs available, compared with the Intel-based IBM clones.

The challenge for Apple

With the development of *PostScript* laser printers, Macs opened new fields of desktop publishing and typography which revolutionised the printing business. But, with *Windows '95*, the Intel world has chal-

lenged the Macintosh's supremacy.

It is my belief that Apple's current shaky financial position is due to the failure to optimise its software for **RISC**. It remains to be seen if the radical adoption of NeXT will save Apple – I hope it does. I lost my farm to the bank through failure to realise expected income...I know the signs of impending disaster, and the danger of borrowing to try some radical new scheme to recoup viability.

The *NeXT* cube – Jobs' answer to being thrown out of Apple – was fantastic. I saw only one and I remain impressed but, commercially, it never got off the ground, and only its *Operating System* survives.

Multiple operating systems

There is a lot of scuttlebutt about the acquired *Operating System*, but it is years away from getting into our Macs and six months is a long time in this dynamic industry. In some ways, the prospect of multiple operating systems may seem to offer greater flexibility, but does it? Think...if you were asked to design a vehicle, how could it travel on the road, fly through the air, and also function as a submarine?

One of my professors, advocating UNIX, said she could use any computer throughout the world (on the 'Net). This might seem a great idea, but one of the selling features of UNIX is the restriction of its access, the need for a password etc.

Did she mean that she could hack past the protection? I'm told it *is* possible. In fact, there is a *Perl* program which prints out the password to the root directory which, once acquired, bypasses all security blocks! UNIX administrators anxiously scan their networks to ascertain if this program has been run.

Another program called *SATAN*, intended for administrators' use, also puts them in panic mode. You

Continued foot of page 17

September Meeting Report

By Andrew Pavey

The guest speaker was Tom Brodhurst-Hill from **T&B Brodhurst-Hill Pty Ltd**. Tom is a consultant, specialising in network and Internet solutions, automation and software design.

The presentation on setting up software on a Mac for an Intranet was excellent and surprisingly interesting! Tom demonstrated how easy it is to setup **Quid Pro Quo** to act as a Webserver, **MacDNS** as a domain name server (both freeware), **Eudora Internet Mail Server** for e-mail (shareware) and **Rumour Mill** to handle newsgroups (shareware by Australian, Peter Lewis), as well as **Vicom Internet Gateway** (commercial software) which acts as a software router to handle translation from **AppleTalk** networks to **TCP/IP** correctly.

Tom also covered issues of assigning IP addresses to every Mac and other "device" (whether hardware or software) on an Intranet. He demonstrated how to have one Mac handling all the necessary tasks of a server for an Intranet and/or connecting to the Internet.

Tom also discussed the **Telstra BigPond** deal, which allows a small business to connect to the Internet as a Webserver for a once-only set up cost of \$500. Downloads cost 19c/MB while uploads are free!

A most impressive demonstration and members actively plied Tom with questions during the break and after the meeting. This was an excellent complement to our just concluded series on networking. He has promised to come back and cover **AppleScript** at a future meeting.

Here is a sample from the **Q&A Session**:

QWith System 8 I can't get the same information on available disk space in a Finder window that I could with System 7.

A According to Apple, this is a feature, not a bug!

To get the information, you need to use the **Get Info** command in the **File Menu**.

QCan I connect an A4 B&W monitor to a Macintosh IIsi?

A The key consideration when connecting a monitor is whether the Mac has enough VRAM to display the number of colours you want. In the case of an A4 B&W monitor, there should be no problem.

QIs DiskDoubler compatible with System 8?

A No. **DiskDoubler/AutoDoubler** is not compatible and shouldn't be used. Members have reported bad problems. Also note **Smart Alarms** and **Now Utilities** are also not compatible with **System 8**. There has been a recent release of **RAMDoubler** to fix compatibility problems, and **SpeedDoubler 8** is due out soon. **Norton Utilities** has a patcher available to fix problems (available on the **BBS**).

QHow do I change the default font in the word processing module of ClarisWorks Office?

A Create a document with your default settings and save it in the Stationery folder with the name **ClarisWorks WP Options**. Similarly named documents store defaults for other modules.



Tom
Brodhurst-Hill



Members have their say! – cont from p.16

can download it from the Web. Don't try it on your ISP provider – you may find yourself cut off!

It was disconcerting to find that the Sun workstation I was using at the university was simultaneously processing information for as many as six remote users. All of us were competing for the available RAM, sometimes with unhappy results. You can evict others by finding their process number using a *ps* command.

Simply beautiful

Happily, I have exclusive use of

my Mac. Apart from possible virus or Trojan horse infection, no outsider can pre-empt my enjoyment of exclusive access. In UNIX you can sometimes have a crash without losing your OS but, if anyone says UNIX is crash-proof – bollocks! Furthermore, when UNIX crashes, the half dozen commands that will "get you by" are useless. You need the handbook and, preferably, a UNIX aficionado at your elbow.

The Power Mac is handicapped by backward compatibility, as *Windows* is with *MS-DOS*. UNIX has

grown like Topsy. It is not quite standardised and is really only for touch typists, who can accurately and speedily enter text strings. If you can type 200 words per minute, without error, and learn Sumerian Cuneiform, Urdu, and Koiné Greek in a week, while still fulfilling your normal duties, then UNIX is definitely for you! It could even be fun. To me it's a pain in the rear.

Please God, if you are there, help Apple to survive. *Silicon Graphics Magic Window* is pretty good but, with all its faults, I love my Mac.

The Annual General Meeting

by MACinations Staff

Because the Annual General Meeting on Wednesday, 15th October, was held barely hours before this issue went to press, we are unable to offer you more than pictures at this stage. We plan to give you a full report on the meeting – including details of the demonstration of **Virtual PC** by the good folk from Firmware – in our bumper December-January issue!

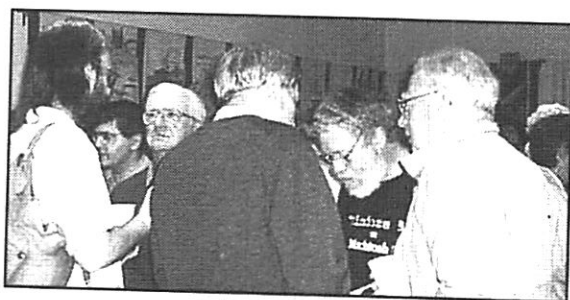
But we can tell you about Club Mac's new Committee of Management – portrayed in the first of our photos. The new **President** is **Robert Naccarella** and the new **Vice-President** is **Jill Riddiford**. **Rosalie Marshall** and **Hilton Brown** join the Committee as "Ordinary" members and **Joe Mithiran** changes from being an "Ordinary" member to being the Club's new **PD Secretary**. Other positions remain unchanged as shown on page 3 of every issue. More details in our next issue.



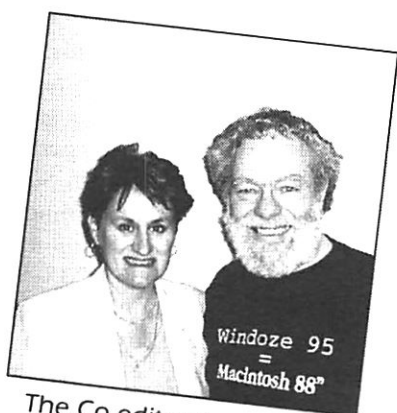
Here is the new Committee – a mix of "old" and "new" faces.



Retiring President, Andrew, in a reflective mood.



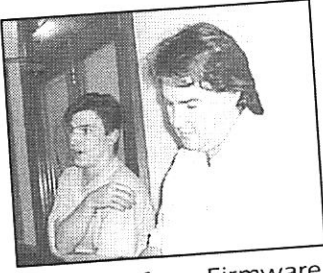
Some of the supper-time crowd in animated conversation – but who was listening?



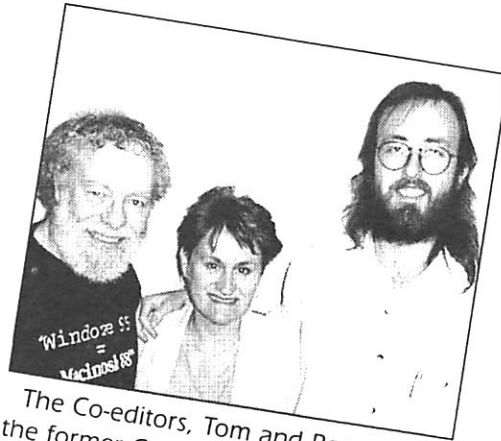
The Co-editors were both there.



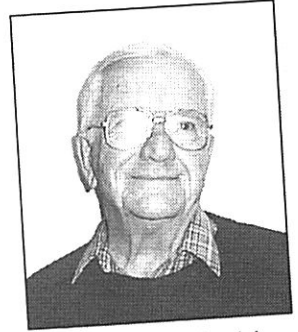
BBS Sysop, John Agapitos, with new President, Robert Naccarella.



The guys from Firmware who gave a **Virtual PC** demonstration.



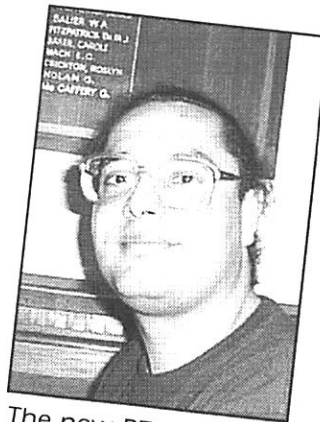
The Co-editors, Tom and Rose, with the former Co-editor, Sean McNamara.



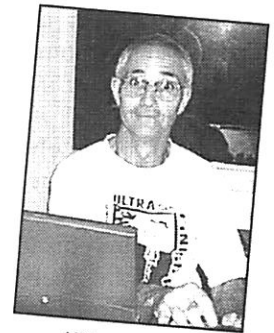
Bob Pulsford – his story is on p.2.



Cups of tea and coffee delivered with a smile!



The new PD Secretary, Joe Mithiran.



Why can't Treasurer, Darryl Chrisp, ever be serious?



Piers Dunkley.



New President, Robert, looking very pleased.

Mac Club



Web Weaver's Corner

©1997 Charles Cave

Animated GIF images allow you to create attention-grabbing Web pages without resorting to programming. This article describes GifBuilder – an easy to use shareware program for building animated images.

Animated GIF images – an introduction

Creating your own Web pages – including graphics – is now a feasible task for non-programmers with the aid of products such as Claris Home-Page, Adobe Pagemill and Microsoft Front Page. Graphical content can be prepared using a variety of programs, including GraphicConverter, ClarisWorks, clip2gif and Adobe Photoshop.

In order to make your Web pages “sizzle” and engage the attention of readers, you need to go beyond static text and images. Much has been written in the press about the power of the Java programming language, ActiveX from Microsoft, and ShockWave animations. Although these technologies are exciting, they can be slow to load and require considerable investment by the Web designer, both in software and in time to learn the products.

Non-programming options

Fortunately, a non-programming option is available to Web designers: animated GIF images. This is a relatively new extension to the

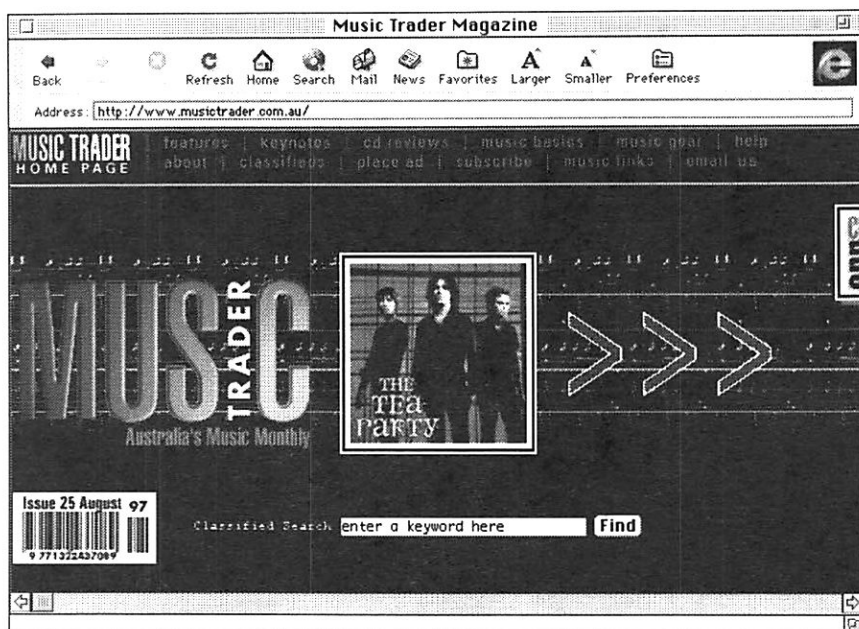


Figure 1. A Web site containing an animated GIF, the three right-pointing arrows. See article text for details.

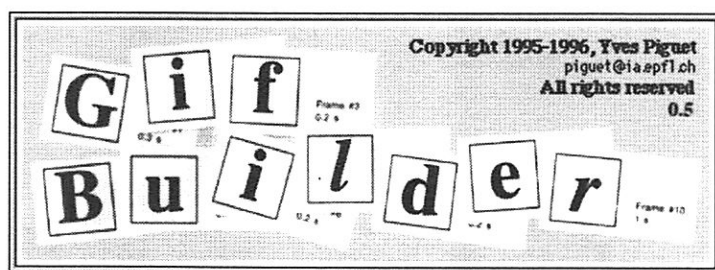


Figure 2. GifBuilder's splash screen.

Frames					
2 frames	Length: 0.20 s	Size: (292x76)	No loop		
Name	Size	Position	Disp.	Delay	Transp.
frame1.pict	292x76	(0;0)	N	10	-
frame2.pict	292x76	(0;0)	N	10	-

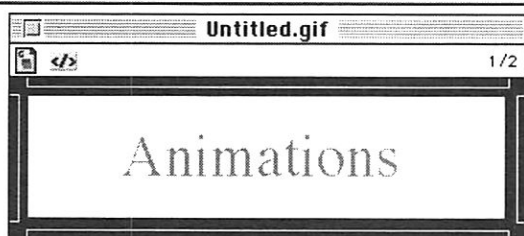


Figure 3. These are the three working windows within GifBuilder. The image itself is seen in the “Untitled.gif” window.

Graphics Interchange Format (referred to as GIF89a – animated GIF) and is nothing more than a set of images in one file with associated control information.

Why bother having animations? The most common use is to attract attention in the form of moving arrows, spinning balls, or billboard messages. Animation has to be properly designed and not overdone.

A good example is the home page of the Australian Music Trader magazine, shown in Figure 1. The image of the three arrows is an animated GIF image and serves as a pointer to further Web content accessible by scrolling the page. It is impossible to show movement in a static magazine like MACinations, but the three right-pointing arrows display sequent-

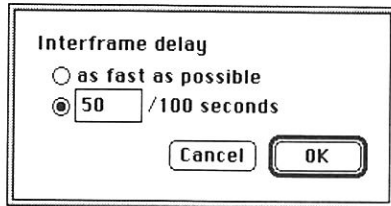


Figure 4. Setting the interframe delays.

ially, giving the impression of movement to the right.

GifBuilder is a small application that allows the creation of animated *GIF* images. *GifBuilder* is very easy to use. Figure 2 shows its splash screen and Figure 3 gives you the three working windows of *GifBuilder*.

Step 1: The images

The first step in creating the animation is to prepare the individual images. Any program capable of saving *PICT*, *GIF*, *TIFF* or *Photo-*

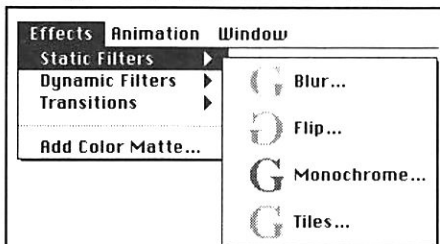


Figure 7. Select one or more frames and use the **Effects** Menu to control their appearance, either with **Static Filters**; or....

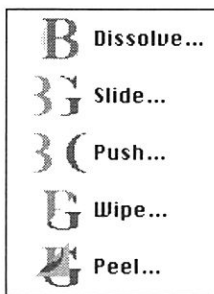


Figure 8. ... (if two or more are selected) through the **Dynamic Filters**, still under the **Effects** Menu.

shop format can be used. The next step is to add these images to the **Frames** window, either by dragging the files or by using the **Add Frame** Menu option.

Step 2: Animation effect

Once the images have been selected, animation effects can be ap-

plied. The first effect is to specify the time delay between each frame (see Figure 4). All frames can be selected and given the same time, or different times assigned to individual frames.

Step 3: Looping

The next option is to choose whether the animation should be shown once, repeated a number of

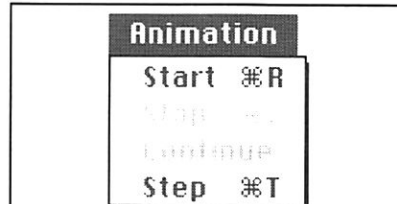


Figure 6. Check your work using the **Animation** Menu.

times, or loop forever – the most common setting. Figure 5 shows the **Looping Options** dialog box.

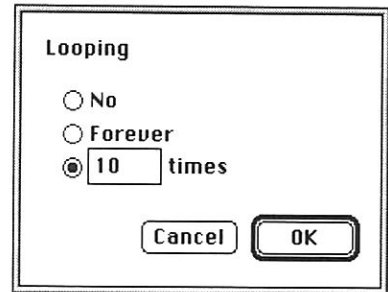


Figure 5. How many times do you want it to run through?

ple, I have used the two images supplied in the program's tutorial. The first image says "Animations" and the second, "are Cool". I selected the two images in the **Frames** window, chose the **Push Transition** effect from the menu, specified four transitions, and then the program created the additional intermediary frames.

If you wish, the **Frames** win-

Step 4: Check results

At this stage, the animation will be quite interesting, and the finished result can be checked using the **Animation** Menu (see Fig 6).

Effects and transitions

GifBuilder includes some great effects and transitions that can be used to make the animations more interesting and professional in their appearance.

The first group of transitions are **Static Effects** that work on individual frames (by modifying

them) allowing images to be blurred, flipped, or tiled (see Figure 7). **Dynamic Transitions** offer a range of effects by inserting extra frames to achieve the effects of dissolving, sliding, pushing, wiping and peeling of images (see Fig 8).

Figures 9 and 10 give an example of the **Push Transition** option. In this exam-

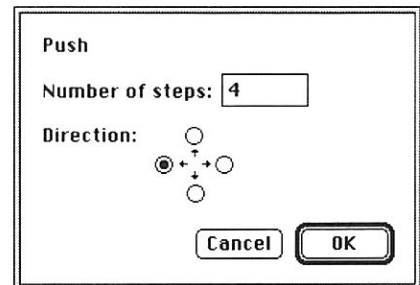


Figure 9. This simple dialog box controls the **Push Effect**.

dow can display each image as a thumbnail image instead of a file or frame name. The grey images

Continued foot of p.22 overleaf

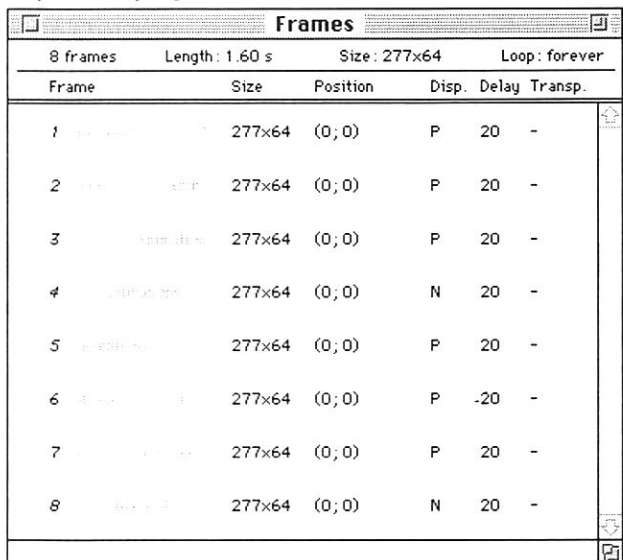


Figure 10. Small icons of the various frames can be seen in the **Frames** window list.



FileMaker Pro Corner

©1997 Hilton Brown

Invoking a **Find** command in a database usually results in a **Found Set** of records. It is somewhat trickier to enter a **Find** command for a particular string within multiple records. Club Mac member, Hilton Brown, describes a neat work around and offers a powerful script for the task.

How to "Find and Replace"

As I wrote in my article in the June, 1997, issue of *MACinations*, I perform as many of my computer tasks as possible using *FileMaker Pro 3.0*, including writing letters, faxes and e-mail. I use a specific file, **Standard Letter**, in which to compose these and then save them to another database for storage.

The **Standard Letter** file only ever has one record in it – the current letter, fax or e-mail. I make use of *FileMaker's* word processing facilities, including the text ruler and the buttons for font type, size, style, alignment and tabs.

However, now and again I'd like to be able to **Find and Replace** a word or phrase, particularly in a long document. *FileMaker Pro 3.0* doesn't have this facility. We know that we can perform a **Find** using the key combination **Command-F**, but this only finds the records matching the **Find** criterion. Wouldn't it be convenient to be able to satisfy a **Find** criterion *within* a record, and replace the text as necessary? Stand by, there is a work around!

One of the text functions in *FileMaker Pro 3.0* is **Substitute** (text, search string, replace string). If we think about this for a minute, we have to say, "Why can't we cre-

ate two new fields – **search string** and **replace string** – and use the **Substitute** function in a script which finds the search string and substitutes the replace string?" It sounds feasible, so let's try it!

If we put the new fields on a different layout from the **Standard Letter** layout but in the same file, we wouldn't be able to see both layouts at once as is usually the

case in a word-processing program. This suggests that we need to create a separate but related file containing only the search string and replace string fields. What will be the key fields for the relationship? I find that in these circumstances the most useful key field is the function "Today" because it can be common to all database files.

Figure 1 shows the definitions

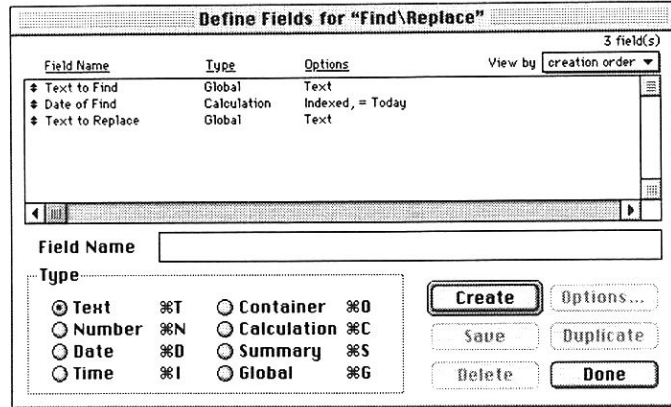


Figure 1. Defined fields in the **Find\Replace** file.

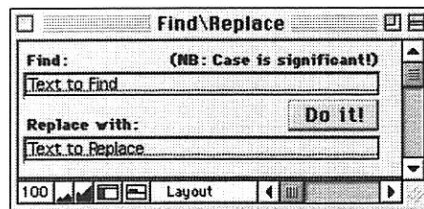


Figure 2. The fields and button in **Layout** mode in the **Find\Replace** file.

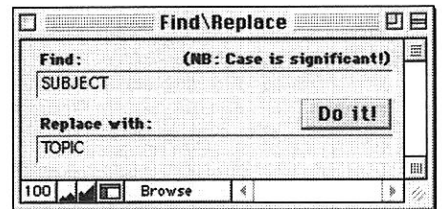


Figure 3. The fields and button in **Browse** mode in the **Find\Replace** file.

Web Weaver's Corner – cont from p.21

in Figure 10 (coloured in the original) show this. Clicking on any of these thumbnail frames will cause the image itself to be displayed in the **Preview** window.

Once the animated image has been created, it is saved with a file name extension of *.gif*. The *HTML* code required is the same as for a normal image, for example:

```
<IMG SRC="mygraphic.gif">
```

ALT="This is an animated image">

I can imagine a variety of uses for animated *GIFs*:

- Publishing your own cartoons;
- Demonstrating how things work or change over time;
- Depiction of choreography or movement;
- Storyboarding;
- Art techniques; or

- How to draw Chinese or other characters.

Animations could also be used in the classroom, both in teaching and in offering another avenue for student creativity.

GifBuilder includes an easy to follow tutorial, and full documentation. The program was written by Yves Piguet in Switzerland and is free of charge.

Script Step

Options/Parameters

```

Allow User Abort    Off
Set Error Capture   On
Refresh Window
If Calculation
    PatternCount(Text, Find\Replace::Text to Find) = 0
Beep
Show Message        Buttons:
    "OK", "", ""
Data:
    Sorry...that "Find" string does not exist!
Open                Filename: "Find\Replace"
Exit Script
End If
If Calculation
    PatternCount(Text, Find\Replace::Text to Find) = 1
Set Field Text
    Calculation
    Substitute(Text, Find\Replace::Text to Find, Find\Replace::Text to Replace)
Refresh Window
Beep
Show Message        Buttons:
    "OK", "", ""
Data:
    The "Find" string occurred in only one location and has been replaced!
Open                Filename: "Find\Replace"
Exit Script
End If
If Calculation
    PatternCount(Text, Find\Replace::Text to Find) > 1
Set Field Find Pattern Count
    Calculation
    PatternCount(Text, Find\Replace::Text to Find)
Beep
Show Message        Buttons:
    "Yes", "Not ALL", ""
Data:
    Do you want to replace ALL occurrences of the "Find" string?
If Calculation
    Status(CurrentMessageChoice) = 1
Set Field Text
    Calculation
    Substitute(Text, Find\Replace::Text to Find, Find\Replace::Text to Replace)
Refresh Window
Beep
Show Message        Buttons:
    "OK", "", ""
Data:
    All occurrences of the "Find" string have been replaced!
Open                Filename: "Find\Replace"
Exit Script
Else
Set Field Organisation Address 1
    Calculation
    1
Loop
Set Field Text
    Calculation
    Replace(Text, Position(Text, Find\Replace::Text to Find, 1, Replace Pattern Count), Length(Find\Replace::Text to Find), "[" & Find\Replace::Text to Find & "]")
Refresh Window
Show Message        Buttons:
    "OK", "", ""
Data:
    Click on "OK" to see the next location of the "Find" string, between "[" and "]"...and then click on the "Continue" button...
Pause/Resume Script
Show Message        Buttons:
    "Yes", "No", "Cancel All"
Data:
    Do you want to replace this string?
If Calculation
    Status(CurrentMessageChoice) = 1
Set Field Text
    Calculation
    Substitute(Text, "[" & Find\Replace::Text to Find & "]", Find\Replace::Text to Replace)
Set Field Find Pattern Count
    Calculation
    Find Pattern Count - 1
Else
If Calculation
    Status(CurrentMessageChoice) = 2
Set Field Text

```

(Script continued on page 24.)

of the three fields we need in the **Find\Replace** file. Figure 2 shows the fields and button in **Layout** mode, and Figure 3 the fields and button in **Browse** mode.

We need to define the relationship between the **Standard Letter** file and the **Find\Replace** file. To do this we define a new global field called **Date of find** as a calculation equal to "Today". Then we go to "Define Relationships..." in the File Menu whilst still in the **Standard Letter** file, and set up the relationship shown in Figure 4 (see next page).

To invoke the substitution, we create a script called **Perform Find\Replace** in the **Standard Letter** file. It consists of one step, namely setting the field "text" to the result of the calculation shown in Figure 5 (see next page). Note that the "text" field is in the **Standard Letter** file, whereas the **Text to Find** and **Text to Replace** fields are in the **Find\Replace** file.

Finally, in the **Find\Replace** file, create a script invoking the script called **Perform Find\Replace** in the **Standard Letter** file. Create a button called **Do it!** and assign this new script to it. Also in the **Standard Letter** file, create a button labelled **Find\Replace**, and assign to it a script with the one step, **Open ["Find\Replace"]**, which will cause the **Find\Replace** file to appear on the desktop.

To test-run the system, click on the **Find\Replace** button in the **Standard Letter** file which opens the **Find\Replace** file. Fill in the **Find** and **Replace with** fields with your requirements, click the **Do it!** button and all will be revealed!

Note that the case of the fields is significant. This is particularly advantageous when you don't want any real replacement to take place, such as in doing a **Find** only. You can type in the **Replace with** field the same characters as in the **Find** field except, say, using all upper-case to highlight the text.

For those readers who want a more sophisticated and selective

Continued foot of p.24 overleaf



400 Issues of TidBITS...

©1997 Adam C. Engst <ace@tidbits.com>

Adam and Tonya Engst's comprehensive weekly e-zine, TidBITS, has reached its 400th milestone. Improving the quality and ease of navigation of TidBITS has always been a priority for the Engsts and their team. Now, they have added some amazing changes to the familiar Web site.

...and a Dynamic Web Site <<http://www.tidbits.com/>>

like marking numerical milestones. *TidBITS-100* was the first issue formatted in **setext** (structure-enhanced text), a format that we've used for e-mail distribution ever since. For *TidBITS-300* we had a party for a few friends, and came up with 300 reasons the Mac is great.

<<http://db.tidbits.com/getbits.acgi?tbart=01283>>

We've had no time for such theories for *TidBITS-400* because

we've been busy launching *NetBITS* and working on our Web site, and it is our Web site I want to

tell you about here.

Continued page 30

FileMaker Pro Corner – cont from p.23

```
Calculation
Substitute(Text, "[" & Find\Replace::Text to Find &
 "]" , Find\Replace::Text to Find)
Set Field Replace Pattern Count
Calculation
Replace Pattern Count + 1
Else
Set Field Text
Calculation
Substitute(Text, "[" & Find\Replace::Text to Find &
 "]" , Find\Replace::Text to Find)
Set Field Replace Pattern Count
Calculation
Find Pattern Count + 1
End If
End If
Exit Loop If Calculation
Replace Pattern Count = Find Pattern Count + 1
End Loop
Beep
Show Message Buttons:
"OK", "Data:
All replacements have been completed!
Open Filename: "Find\Replace"
End If
End If
```

Figure 5. The **Substitute** formula which performs the **Find and Replace** operation.

Figure 4. Definition of the relationship between the **Standard Letter** and **Find\Replace** files.

Find/Replace facility, the script called **Perform Find\Replace** in the **Standard Letter** file can be replaced with the script shown in the table. If there are no occurrences of the **Find** criterion, it will cause a message on the screen to say so. If there are numerous occurrences of the **Find** criterion, it will permit all of them to be replaced in one step, or it will permit a message-driven selection or rejection of them one at a time.

You'll have to create two new global number fields in the **Standard Letter** file, viz., **Find Pattern Count** and **Replace Pattern Count**. The script steps are shown in the table on this and the previous page. Happy databasing!

Reviews & Previews



Learning about Web Design

Review © 1997 Charles Cave

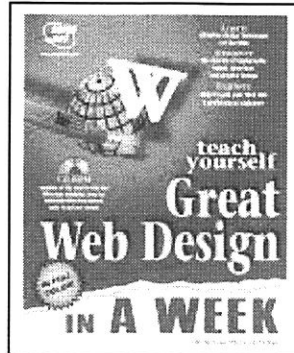
Book Title: *Teach yourself Great Web Design in a Week*
Authors: Anne-Rae Vasquez-Peterson and Paul Chow
Publisher: Sams.net Publishing
ISBN: 1-57521-253-6
Cost: \$59.95

Anne-Rae Vasquez-Peterson is President of AR&B Internet Site & Publishing Inc (their Web site is <http://www.arnb.com/webdesign/>), and Paul Chow is Vice-President and Chief Graphic Designer. The authors share their experience in Web design, Internet marketing and project management.

The book claims to teach great Web design in a week. Providing you can allocate a few hours each day, this goal can be met. The authors provide good explanations of the major issues of Web design (typography, layout, user interface, navigation, graphic design and use of white space), plenty of examples and colourful exercises. *HTML* examples are brief, so the reader won't be put off by technicalities.

Although I've been creating Web pages for a couple of years, I wanted to review the basics and gain some fresh perspectives by buying this book. I started working with plain text pages, viewed with the *lynx* browser. Making the jump to the latest in Web designs required some graphic design education.

A CD-ROM is included with software for both *Windows* and *Macintosh* – a pleasant change from the majority of books with *Windows*-only disks! There is a good selection of shareware and public-domain software, as well as examples from the book and the raw materials for exercises. It is handy to have the CD-ROM even though the software is



available on the Club Mac BBS.

The CD-ROM includes a self-contained Web-site of examples from the book, as well as the materials for the exercises. It is very useful having some of the pictures in electronic form, particularly to see the exact colours and effects. I was impressed by the image of the colour wheel (shown overleaf, but sadly, only in grey scale).

The remainder of the review will give you an outline of the book.

Day 1 – Web page basics and anatomy

Techniques for effective Web designs come from the basic principles of typography, layout, design and publication. A Web page con-

sists of three parts: a header, the body and the footer. This chapter focuses on the arrangement of text and use of appropriate graphics to build on this basic principle.

The body of the Web page is the most important section to design because this is where all the design elements – such as style, proportions, structure, dimensions and balance – come into play. The use of margins, spacing and white space, and shortening line length are all covered in detail.

Web design is challenged by the variety of machines used to display the pages. The issues discussed in this section include monitor size, colour depth and screen resolution.

A Web site should always be sketched out on paper before you approach your computer. Our eyes and minds need visual stimuli to attract our attention, and that is why a page layout needs rhythm and contrast to create interest. A two or three column grid (similar to a newspaper or magazine layout) can be used as a guideline. *HTML* tables can be used to implement the layout and for balancing the graphics and text.

Consistency is essential to the look and feel of a Web site. Navigational elements, text, headings, footers and graphics should be used consistently so as not to confuse the reader.

Day 2 – Beginnings of a great Web page

Before building your Web site, one of the first things you need to determine is the main audience of your site. What types of images and graphics would appeal to the audience? What is the best format to use? What is the best way to convey information?

A very important question to ask is what the attention span of the audience will be. You need

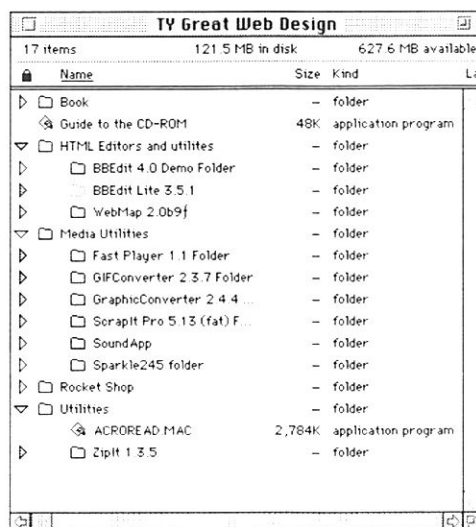


Figure 1. The software on the accompanying CD-ROM.



Figure 2. The CD-ROM Home Page.

to think like a marketing professional or television producer, as the ultimate goal in Web design is for the site to sell itself to the target audience (and beyond). If you can't keep your visitors entertained long enough, your site will disappear into virtual no-man's land.

The process of organising and collecting your information can be assisted by creating a story-board of your ideas. This will help you plan your layout and organise the structure by creating a visual foundation on which to build your Web design.

The authors suggest using a **metaphor** as the basis of your site design. A metaphor helps represent unfamiliar elements of your page by substituting those elements with the description and functionality of familiar objects. The metaphor is represented with graphical symbols that can be understood by different cultures. Remember that your Web site can be accessed from all over the world.

Frames are discussed in great detail but the author's recommendation is to use them only if really necessary. A framed site is hard to book-mark and often confusing to the reader.

If you have one set of information that remains constant (such as a table of contents) and a dynamic

set, then a simple two frame page could be appropriate. Don't use frames (or any other *HTML* tags) just because you want to. Every design element must have a valid purpose.

Day 3 – Tables, frames and typography

Tables are a powerful page layout tool and are explored in depth

including the **BGCOLOR** tag. The importance of white space is demonstrated with the use of non-breaking space (the ** ** tag), blockquotes to force indentation (**<BLOCKQUOTE>**) and using a small *GIF* image to control indentation and spacing.

Day 4 – Colours and spicy graphics

The basics of colour are reviewed with a detailed explanation of a six-sided colour cube (palette) used by Netscape. Explanations are given of primary and secondary hues, warm and cool colours, complementary and triadic colours.

Day 5 – Designing graphics and animation

Excellent coverage is given of the following topics:

- background images – tiled and seamless, working with a light background and dark type, creating stylish graphical banners, headers and logos;
- Creating bullets, icons, arrows and horizontal rules and issues relating to compression – *GIF* versus *JPEG*; and

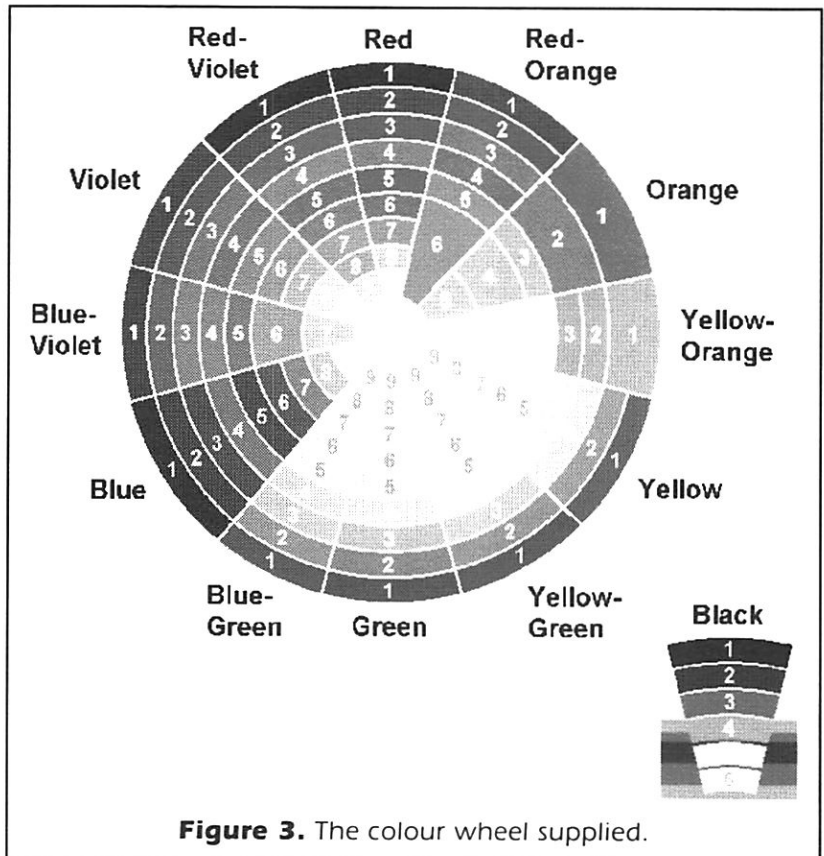


Figure 3. The colour wheel supplied.

- Transparent images, interlaced images, anti-aliasing and animated GIFs.

Day 6 – Putting it all together

This chapter focuses on choosing the correct elements for the page, choosing the metaphor, colour scheme and navigational elements. Tips are given on how to make your site as user friendly as possible.

I learnt a useful trick of building up a repertoire of graphic elements by storing them in individual directories for buttons, horizontal rules, navigation buttons, back-

ground images and subject matter. Collecting a set of layout templates is also suggested and the book (and CD-ROM) contains some useful formats, including two-column and three-column pages.

Day 7 – Multimedia and what the future holds

Adding interactivity to your Web page using sound and video files is the subject of this section. This chapter is a really useful introduction to video formats (*QuickTime*, *AVI*, *MPEG*), audio files (*AIFF*, *WAV*, *AU*, *MIDI*, *RealAudio*) and interacting with **Common Gate-**

way Interface (CGI) scripts, *Java*, *VRML* and *ActiveX*.

The book concludes with some thoughts on the future of Web page design and a wish list of “nice to have” features. An appendix includes a list of *Top 30 Design Tips*, *Colour Reference Guides* (the 6 x 6 x 6 colour cube and colour wheel), *Metaphoric Examples*, *Web Site Design URLs*, and a guide to the CD-ROM.

The book can be easily understood by all ages and would be a useful addition to the library of the beginner or intermediate level Web designer. □

The Final Font Frontier

Review © 1997 Matt Neuburg <matt@tidbits.com>

Product: *Font Reserve*
Category: Font utility
Publisher: DiamondSoft
Avail from: <<http://www.fontreserve.com/>>
Cost: \$US119.95 (electronic version).
 Extra \$US20 for CD with printed manual.

The irony of fonts is this – they helped create the Macintosh revolution of 1984 and have been a pain in the ASCII ever since. Fonts lie at the heart of much of what we do on a Mac yet, from the *Font/DA Mover* nightmare to *System 7.1* and the Fonts Folder, they have been persistently unmanageable.

Fonts **do** need management. I’m a mild font user, yet I’ve acquired hundreds of them, scattered all over my hard disk. There are too many types of fonts and too many versions of particular fonts. The distinctions can be crucial. Back when I was editing a magazine, opening a file with the wrong Garamond loaded could screw up the entire layout.

Different projects may require different fonts, some fonts I use constantly, others I want on hand for that rare moment that calls for them. Certain applications need certain fonts, some come with fonts that duplicate those I already have, some



Figure 1. The Font Reserve splashscreen.

install fonts without telling me.

FOND IDs can conflict. Fonts can become corrupt. Then there’s the problem of knowing what my fonts look like, and the arrangement of their characters – how do I type an *omega* in my Greek font, a *thorn* in my Old English font, or a *pentagram* in my Dingbats font?

Since the dawn of the Mac, third-party utilities have promised to rescue us. A roster of classics like *Suitcase*, *MasterJuggler*, *PopChar*, *KeyFinder* and *TypeTools* has

marched across my Desktop, and dozens of utilities have studded the firmament. Yet, despite my experimentation, none has possessed the ineffable rightness of a **real** solution, that quality that cries with the voice of truth directly into the drowsing ear of Apple Computer, “Like **this**, people! You should have implemented it like **this**!”

None, that is, until now.

A real solution

Font Reserve, from DiamondSoft, promises to solve all these font problems with a single stroke, using a paradigm of brilliant simplicity. You give *Font Reserve* your fonts, **all** of them, except for the minimal few required by the *System*, *Acrobat Reader* and the like. *Font Reserve* resolves ID conflicts, weeds out corruption and associates bitmaps with their *PostScript* partners. It acts like a database, listing your fonts sorted, filtered and in subsets. It also functions as the control centre from which you view fonts and dictate which are available to the *System*.

I was excited when I saw *Font Reserve* demonstrated back in January, and have been panting for its

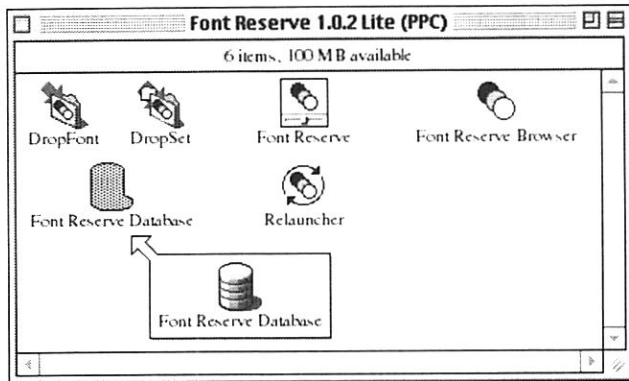


Figure 2. The Font Reserve folder window.

release ever since. With *version 1.0.2*, which fixes some *v1.0* bugs and runs on both PPC and 68K machines, *Font Reserve* has finally arrived. It's not perfect, but it's a magnificent product and I look forward to its continued evolution.

<<http://www.fontreserve.com/>>

The Vault

The heart of *Font Reserve* is the "vault," a folder where *Font Reserve* organises and manages fonts. This notion seems scary but there's no danger. The vault is invisible by default, but you can make it visible, you can keep it anywhere and it need not hold font originals – its contents can be copies or aliases.

In home use, you will probably

first have *Font Reserve* copy your fonts then, once you trust it, you will probably delete the originals. There's no need for multiple copies and, since the problem was that you couldn't organise your fonts, why not let *Font Reserve* organise them for you?

In a networked environment where multiple users need the same fonts, using aliases might be preferable, the fonts can live on a central server, the aliases take up less space on each user's disk, and a new feature makes it possible to "export" a master version of the vault to other

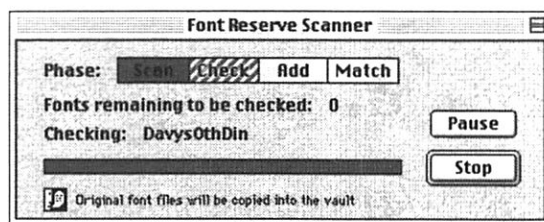


Figure 3. Font Reserve organises your fonts for you and stores them in the vault.

networked users. Boy, I wish we'd had this when I worked on the magazine!

The door to the vault is not one-way, you can always copy fonts outside the vault. That's valuable, because fonts used in a particular job might have to ship with it to a service bureau or be archived with it.

When *Font Reserve* opens a font (makes it available to the *System*), it doesn't open the copy in the vault, instead, it creates and op-

ens a copy of that copy. Thus, even if an accident were to corrupt an open font, the contents of the vault would be unaffected. This approach also keeps your open files count low, because *Font Reserve* stuffs the copies of fonts it opens into a small number of suitcases.

What You Get

Font Reserve is a set of applications, the most important being the one you're least conscious of – *Font Reserve Database*, which operates upon the vault and opens and closes fonts. It's a faceless background application, and runs all the time (unless you turn it off) thanks to an alias in the *System's* Startup Items folder.

Its suggested RAM size is 3,000K, a likely deterrent for some potential users. Still, I'm glad it's an application rather than an Extension: the *System* remains stable and, if you start up with Extensions off, you can still run *Font Reserve Database* and access your fonts.

Since *Font Reserve Database* is faceless, other applications provide its interface. One of these, called *Font Reserve*, masquerades as a Control Panel but is an ordinary application – here you start and quit the database, toggle the vault's visibility and change its location, and perform configuration tasks.

Font Reserve Browser is your window on the vault, here you examine your fonts and turn them on and off. The *Browser* window has two panes, one for sets and one for individual fonts. Sets are groupings of fonts that you create, they display like a folder list in the *Finder*, and they behave like folders of aliases – a font can belong to any number of sets or to none. You can turn on or off all a set's fonts at once, or drag a set to a *Finder* window to make a copy of all its fonts.

You add fonts (or folders or volumes containing them) to the vault by dragging and dropping them into the *Browser's* window – either into the lower pane, to add them individually, or into the Sets Panel

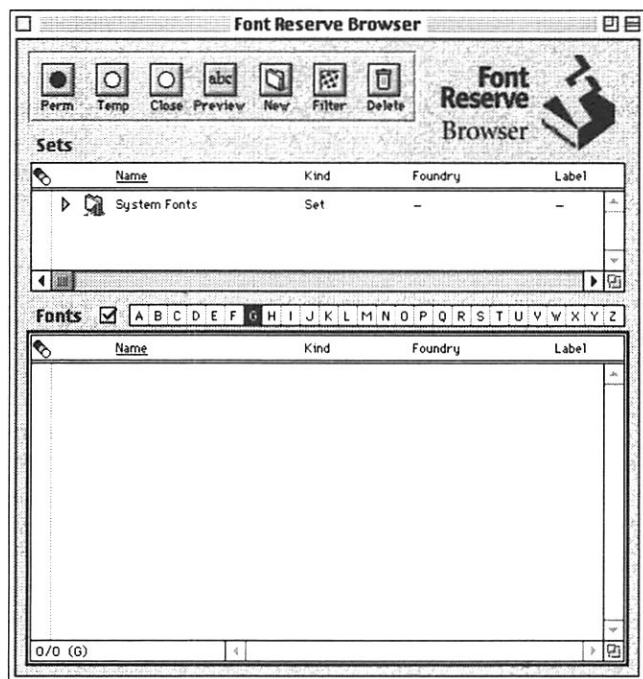


Figure 4. The Font Reserve Browser window when first launched.

to create a set automatically. (If that's too much trouble, you can instead drag and drop onto aliases of two utilities, *DropFont* and *DropSet* which are created for you on your desktop.)

A dialog lets you confirm how you want the dropped originals treated, the fonts are then examined and filed in the vault. A downside to adding fonts is that when *Font Reserve* encounters "problem" fonts (such as corrupt fonts or *PostScript* fonts without bitmaps), no dialog notifies you – you must check the log later. The log itself is uninformative when non-problem fonts are added, in that it doesn't list their names.

In the *Browser* window's lower pane, every line is a font. Information displayed can include a font's name, foundry, type, label, owner and more (owners and labels are user-configurable settings). You can sort on these categories, and generate filters based on them, plus you can filter alphabetically. Thus, you have extensive power to limit and arrange the fonts listed in the window.

The *Browser* window is also where fonts are turned on and off. A font may be turned on permanently or temporarily, meaning that the font will or won't open automatically when the computer and *Font Reserve* restart.

You also use the *Browser* window to learn about fonts. Command-clicking a font's icon pops up a large display of its name in that font. Double-clicking a font's icon opens a **Preview** window where you can get data about a font, see its character set, read paragraphs in that font, view short samples and different sizes and more. All this is highly user-configurable, though I hope Preview windows in future versions remember their size and position.

The *Font Reserve Browser* interface is wonderful. It consists of a single window (listing the fonts) and sometimes a second (the Preview window); but both windows, and especially the former, are splendidly designed – the sort of

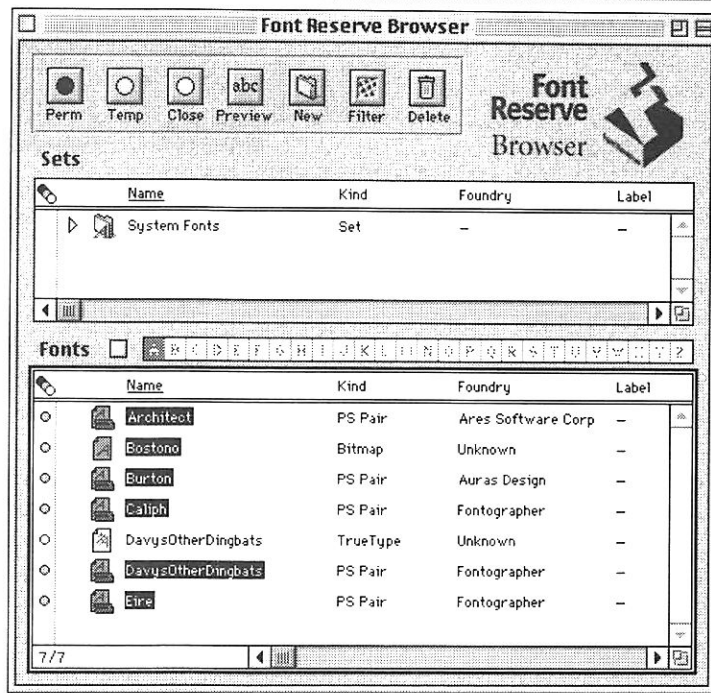


Figure 5. The Font Reserve Browser window.

thing that gives one heart about the Mac interface, proving it remains vital and capable of new constructive and intuitive uses.

Suitcase horror

A major part of my personal font hell is the inconvenience of font suitcases. *Font Reserve* not only fails to save me, it increases that inconvenience. I regard this as a major flaw.

For instance, the *Browser* represents all members of a FOND family as a single font, providing no way to learn what fonts the family really contains. Thus, if the vault contains *TrueType* fonts for Palatino, Palatino Italic and Palatino Bold, plus some correspond-

ing bitmaps (which I will never have reason to do), find the suitcase(s) in question, and look inside.

You cannot drop a *TrueType* font onto the *Browser* – it must be in a suitcase first, and *Font Reserve* does nothing to help you make one. (I was told this would be fixed in *version 1.0.2*, though.)

Font Reserve does not accept non-fonts, such as **FKEYs** and sounds, even when disguised in font suitcases. But, since *Font Reserve* is incompatible with utilities I was using to handle such entities (*Suitcase* or *Carpetbag*), I am forced to disguise them as font

Continued foot of page 31

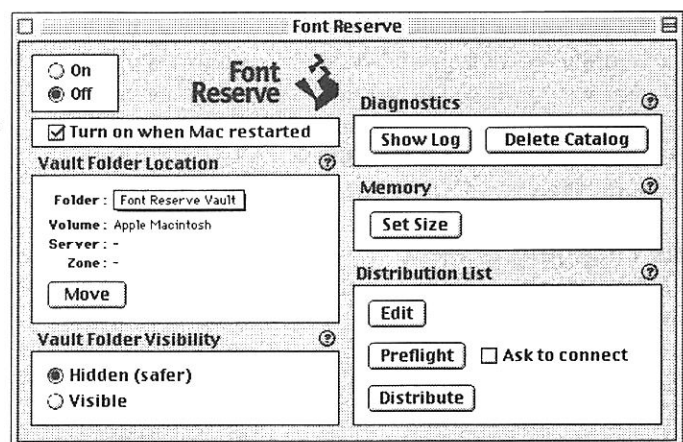


Figure 6. Customising Font Reserve for your system.

<<http://www.tidbits.com/>>

Since *TidBITS* predates the Web by several years, we had a mature publication and distribution scheme when the Web became real. Our early Web efforts weren't impressive but most early sites would look amateurish today.

About a year ago, we completely redesigned our Web site, which set the stage for this year's update. We were happy with the basic organisation, but the site felt dull and slow to navigate. We took a good number of hits every Tuesday as people read the latest issue, but hits dropped off on other days. We wanted to improve the look, navigation, and content relevance to increase traffic and make *TidBITS* more useful.

The graphic

Our first move was to devise a new logo, and the new graphic served as an impetus to create a more functional page design with a left-side navigation bar.

Graphics have always been tricky for us, since *TidBITS* is pure text, but working with our friend, Jon Hersh, a graphic designer in Seattle, we arrived at the current logo, which relies heavily on the word **TidBITS** for visual interest. Colour is provided by the purple "torn paper" out of which the "BITS" is cut, and the strong vertical line between the "Tid" and "BITS", helps separate navigational elements on the left from content on the right.

The navigation bar also enabled us to emphasise aspects of *TidBITS*. For instance, we linked to our translations there and provided direct links to some exclusive **DealBITS** discounts for *TidBITS* readers.

The changing graphic

On most pages the logo is static but, if you visit our home page frequently, you'll notice there's a "slug" (a short slogan) below the "BITS" and some callout text to the right (see Figure 1). Clicking the callout text takes you to a specially chosen article or collection of arti-



Figure 2. The **NetBITS** masthead continues the new design format.

cles in our *FileMaker* article database, accessed through **Blue World Communications' Lasso**.

<<http://www.blueworld.com/lasso/>>

Once per hour, a program Geoff wrote called *BlurbMaster* chooses a random slug, picks a callout from a select set of articles in *FileMaker*, then uses *clip2gif* to create a new graphic with the text of the slug and callout. Next, it generates a new copy of the home page with an appropriate image map tag and uploads the new files.

Every time you visit our home page, you see a random callout that provides access to some of our most interesting articles. Try it – it's neat, and many of the more than 3,000 articles that have appeared in *TidBITS* are still relevant.

TidBITS Updates

BlurbMaster does even more to jazz up our home page. To make our Web site interesting throughout the week, we came up with *TidBITS* Updates: high-quality, concise updates to topics that have been discussed in previous issues, or breaking news items that can't wait for the next issue. All the updates, like our back articles, live in a *FileMaker* database. When we add an update via a Web form, *BlurbMaster* regenerates both the home page and the *TidBITS* Updates page.

Got BITS?

But that's not all. We needed to solve a problem that *TidBITS* Updates created. We wanted people to be able to link permanently to an individual update, but we also

wanted to list updates on our home page. It was easy to link from the home page to named anchors on the *TidBITS* Updates page, but since updates expire off the bottom of that page, named links would break after a week or so.

Geoff's solution was a **CGI** called *GetBITS* that does one of two things when someone asks for an update. If the update is active, *GetBITS* goes to an appropriate anchor on the *TidBITS* Updates page. If the update has expired, *GetBITS* instead pulls it out of the database. Thus, to link to a recent update, just copy the URL from our home page and *GetBITS* will ensure people always end up in the right place.

GetBITS proved helpful in another way too. In the past, no one has been able to link directly to a specific article in *TidBITS*. You could point at a named anchor within a *TidBITS* issue, but that meant loading the full issue.

Geoff's article database provided the article granularity we needed, but the **Lasso** URLs are far too long to use in *TidBITS*. So *GetBITS* acts as a traffic cop, accepting a request for a specific article then redirecting that request into a longer Lasso URL.

From now on you'll see URLs pointing to **db.tidbits.com**, which is where *GetBITS* lives. Click them to read specific *TidBITS* articles. If you want to link to a specific article or update, click the **Search Author/Title** link on our home page, find the article you want, and look at the bottom of the page for a *GetBITS* URL to copy into your *HTML* file.

Dynamic doings

It feels great to reach our 400th issue and to add new features to the Web site. Now it's time to turn some attention back to finding sponsors for *TidBITS*; if you have suggestions or leads, we welcome them at:

<sponsors@tidbits.com>. ☐

MACinations Deadlines

For every issue, the deadline for material submitted is the first day of the previous month. Material for the February issue must reach us no later than 1st January. We love your contributions, but we love them on time!

Get Info

The monthly column of the Club Mac Committee



As an Ordinary Member of the Committee my duties entailed attending Committee meetings and being involved in the decision making; but I put most of my time into my non-Committee duties, mainly in running the **HelpDesk**.

I'm something of a pocket-battleship HelpDesk operator – I have more experience than people who may have more time to run the HelpDesk and I have more time than those with superior technical knowledge to me.

I appreciate it when people let me know how things I wasn't able to help with were sorted out. Thereafter, those with a similar problem will get a quicker solution. If you do call the HelpDesk, remember to leave your contact details and, if you haven't heard from me within a week, give me another call.

You may have forgotten important details or perhaps have left a wrong number. In such cases I do a search on the BBS but I'm often left guessing at the spelling of names. I do try to get back to peo-

ple quickly, but a week allows for those times when I'm extra busy.

My other duty on Club Mac is **Software Librarian** – I move the files from the **Latest Additions** area into their respective **Library** categories. Recently, there was a backlog when we changed over to a new filing system – more in line with **Infomac** – and there were some difficulties in getting it all sorted out (we didn't think you'd want categories with names like "gst"). By the time you read this, those difficulties should have been overcome.

On a completely different topic, the Committee takes several measures to keep in touch with Club Mac members' concerns. Apart from reading the BBS threads, Letters to the Editors in *MACinations* and all correspondence directed to us, we have been looking closely at the **Survey** (conducted some months back) and have been reviewing why some members have chosen not to renew their memberships.

Occasionally correspondence to the Committee has not been

answered because "everybody thought somebody else would do it...". However, that has now been rectified. This does not mean letters were not read, considered and brought up at meetings. Sometimes the Committee has been silent on an issue because, by the time a decision had been reached, the matter had died down and it was not considered wise to stir it up again.

Sometimes people wonder why their suggestions haven't been implemented. In many cases, for each person who wanted more of something there was someone else who wanted less of it. For example, some people find *MACinations* "goes over their heads" while others want to see more articles on topics such as programming.

While the content of *MACinations* is the decision of our esteemed and highly valued editors, they do seem to have found a good balance and the Committee of Club Mac has to do likewise on a number of issues.

Joe Mithiran

Font Reserve Review – cont from p.29

suitcases and put them in the *System* Folder's Font folder. In other words, *Font Reserve* replaces my utilities without taking over all their duties, which is impolite.

Other quibbles

Members of different FOND families which are in fact related are sometimes treated as separate families: Mishawaka and Mishawaka Bold for instance, aren't paired correctly. (Possibly that's because they're bitmaps, in general, *Font Reserve* seems antipathetic to bitmaps that aren't paired with *PostScript* fonts.)

Font Reserve has no facility (such as *Suitcase* has) for opening fonts in response to the launch of a certain application. That's a pity, because some applications require particular fonts. The exception is *QuarkXPress*, for which an *XTen-*

sion is provided that scans a document as it opens and tells *Font Reserve* to load the requisite fonts.

Font Reserve makes extensive use of invisible files at the root level of your hard disk. That's poor Mac citizenship. There's a proper place for temporary invisible files (the Temporary Items folder) and non-temporary files should be visible.

Font Reserve isn't scriptable, which seems silly since communications with the database are entirely via **Apple Events**. I'd also like to see *Font Reserve* add printing, perhaps for printing a list of font names or, better, a sample of each font. As a final quibble, I'd like DiamondSoft to mention *Relauncher* (an application that comes with *Font Reserve*) in the manual.

Conclusion

Although I think *Font Reserve* has

room for improvement, it's a delightful concept, beautifully implemented. I'm happy it's here to replace the font utilities I used before. The first time I ran it, it identified font corruption problems which had plagued me, and it has run trouble-free ever since. For home use, I recommend it from personal experience; for a corporate setting, I would recommend it as well.

Font Reserve requires *System* 7.5.x or later. It conflicts with other font managers such as *Suitcase* and *ATM Deluxe*, but works with utilities such as *TypeTamer* and standard *ATM*. From DiamondSoft directly, *Font Reserve* costs \$US119.95 for the electronic version, add another \$US20 to purchase it on CD with a printed manual. Note that there are discounts when purchasing multiple copies.



MACcess Report

compiled by Colin Lee

Congratulations to the old and new faces on the Committee, your work is much appreciated. The hype about Mac OS 8 has settled and, although I like it, it's not as crash-proof as originally I thought it was. I put much of that down to some of the old software I'm using. The update, which should be out at the end of the year, promises some speed improvements to opening windows and includes some other tweaks. This month's column focuses on RAM issues, MacComCentre and some interesting but resource hogging (both in computer power and finances) dictation software. Have a good Mac month. Cheers, Col.

To: Neil Phillips
From: Andrew Shipton
Subject: **PowerSecretary**

We bought our 7300/200 because we had purchased PowerSecretary at a reduced price – from \$3,500 to \$1,300. Just before we bought the computer (thinking of either a 5500 or 7300) we spoke to our friend at Apple Frenchs Forest and he spoke to the tech heads up there who said that you will need at least a 604e chip, 64MB of RAM and plenty of hard disk space. So trust me, get a 7300/200.

To: Andrew Shipton, Neil Phillips
From: Joe Mithiran
Subject: **PowerSecretary**

Could you please comment on how effective you find PowerSecretary? I've been thinking about getting this software for a long time but \$4,000 (the last time I checked) for something that, if it's as accurate as Plaintalk's speech recognition would be almost useless, was too expensive for me. At \$1,300 it's more within my reach but I'd really like to know how effective it actually is. Thanks.

To: Joe Mithiran
From: Andrew Shipton
Subject: **PowerSecretary**

PowerSecretary is great. It takes up a lot of memory and you also need a fast CPU with a good chunk of hard disk space available. You get all the stuff you need in the package – microphone, good easy-to-understand manuals and software. It works with WordPerfect and most word processing programs, even TeleFinder. (I am dictating this to the computer now and it is typing this up for me!)

The program itself is very sensitive to noise so it really only works in a quiet environment. Training takes quite a lot of time – it took me half a day to train and they say it takes eight hours of use after that to get worthwhile performance. But it is worth it!

To: All
From: Peter Thorburn
Subject: **MacComCentre Faxing**

I've just set this machine up with a separate Telstra fax number and a line sharer gizmo that connects both the phone and the modem to my one phone line socket. I have MacComCentre and a SimpleModem 336f. When I set it up, it auto detected the modem and displayed its init string in a terminal window (wouldn't this be a good solution to all the "What's my modem init string?" problems!)

However, this string was different from the one I'm currently using for BBS and ISP connection. (I kept using one from a previous 144 SimpleModem since the 336 one the manual offered didn't work and I also got a "factory settings" init from the manufacturer's tech support). This setup has worked in a trial at receiving a fax but I've noticed that one of the Extensions the program installs, "Quick IPC" doesn't load at Startup. Does anyone know what this is supposed to do?

My main confusion as a computer faxing newbie is

how this setup operates on an ongoing basis: Does my PowerPC need to be awake all the time or can it be asleep and still receive faxes? (I actually like to turn it off overnight.) If I'm connected to this BBS or the Internet or just on the phone, is this "engaging" my one phone line and so stopping faxes, even though there's a separate fax number?

In setting up a home office, I don't want to advertise my fax number if it would be unavailable a lot of the time. I also wonder if these probable limitations make a computer-based facility a lot less dependable than a separate fax machine with its own line?

To: Peter Thorburn
From: Carl Vine
Subject: **MacComCentre faxing**

It depends on which utility is putting the machine "to sleep", and which communications package you are using. Apple's "Energy Saver" should be able to detect a request to answer an incoming phone call and wake the computer up, but MacComCentre may not send the right signal in sleep mode. (Any other members with experience of this?)

You don't tell us which of the two lines you've connected the modem to. Whichever one the modem is connected to, whenever you are on-line, connected to Club Mac or sending a fax, then of course you can't receive any incoming call of any type at the same time. You should also make sure that "Call Waiting" is not enabled on that line or your on-line connection will break if an incoming call attempts to break through. (Lift up phone, dial #43# to disconnect call waiting. Dial *43# to re-enable call waiting).

Whichever line the modem is **not** connected to will not be affected in any way by your modem connection status, unless those dear Telstra technicians have botched the phone connections. And of course, if you turn your Mac off, you will not receive a fax. (They're good computers – they're just not mind-readers).

To: All
From: Peter Thorburn
Subject: **More MacComCenter**

Thanks Carl (and others) for your replies on this. From what you've said it looks like it is OK for the PowerPC to be in Sleep mode (from the "Special" Menu or after a set time) and still be woken up by the Fax Manager if it detects modem activity. You'd expect this but, I wasn't sure. I know it can work in the background.

Further info on my setup: the "black box gizmo" I mentioned is called an Easy Connect Jnr Line Sharer and my phone and modem plug into this. It plugs into the phone line socket and has its own power supply. It's configured to work well with Telstra's Faxstream Duet service, which I've subscribed to. You get a separate fax number, although you have one physical phone line. A separate fax machine could also be used in this setup, but I'm trying to swing it using a modem and fax software.

As I said, I've tested it both sending (to the UK) and receiving (from a local newsagent) and it worked OK, but I had trouble with it on Sunday when the UK recipient tried to

send back a fax a number of times. For some reason, the Fax Manager kept interpreting the message as a voice call – giving an onscreen alert to this effect – and telling me to lift the handset. When I lifted the phone handset it was just buzzing then reverting to a dial tone. Each time no fax was actually received. I can't call the UK people to check what they're doing and Telstra was mystified when I talked to them today. It seems more complicated than someone trying to send a fax to your phone number – I can recognise that.

I've started sleuthing through the MacComCentre Web page, www.smithmicro.com. The version I'm using is a bit old hat (1.1), there's also a "plus" version which is in beta 2.0, so I guess an upgrade is advisable soon. I wonder what will happen with this sort of fax receiving system when modems like the new Banksia Wave 56k are in common use? They seem to include voice capability and can replace the phone – that will really confuse the fax software!

To: Peter Thorburn
From: Carey Beebe
Subject: **MacComCentre faxing**

Do not worry about different initialisation strings for faxing or BBS – when you run each program it will initialise the modem accordingly. As both Carl and others mentioned, your computer must be on and perhaps you must experiment to see if an incoming fax call will be received – either waking it up from energy saving mode or not.

Most of your problems are going to come from trying to do all this juggling on one phone line. While the phone/fax detectors have improved, they are awfully frustrating for someone trying to place fax calls to you when they don't work. Or those dreadful ones which answer the line and decide whether it is a fax or voice, then direct it to the right machine, or ring the phone again so the person knows to pick it up. Telstra is laughing, especially with call waiting – they get revenue from at least twice as many calls being made!

While you have two numbers to provide a distinctive ring when a fax call comes in, I guess they will both be engaged if you are online. Maybe you would want to connect to FaxStream, and pay for their "never busy" service, so that their system stores incoming faxes and will keep trying to forward them to you if you happen to be holding up the sole line with your Internet activities.

I use a normal fax machine for receiving – there is something to bits of curly paper on a desk – however, I do send virtually all of my faxes direct from my Mac with Fax STF. This will always result in clearer reception at the other end, with artwork precisely straight for example. (When I experimented with receiving faxes using the Energy Saver, faxes were received without the screen powering up, so I guess the computer doesn't technically wake up.)

To: All
From: Peter Thorburn
Subject: **Modem Script for OS 8 Internet**

Yes it's me again – Mr Trouble. I don't know if anyone else experienced this but, in setting up OS 8, the Internet Setup Assistant asks you to choose your particular modem script from the available ones or from the additional ones on the CD. The SimpleModem 336f never seems to be on these lists so I've been trying to obtain a script. The advice given was to get it from the modem manufacturer. They referred me to the Banksia Web page, www.banksia.com.au. Guess what? There's actually a "modem setups" list (with that little modem icon) you can download to use in TeleFinder, instead of the one that comes with the program. I guess this simplifies setting up a Banksia modem to connect to a TeleFinder BBS.

However, I couldn't open this to try and extract a script

for a particular Banksia modem as advised. Nothing seemed to be in the form of a script for the SimpleModem that could be added to the Modem Scripts folder needed for setting things up in OS 8. I can still use the Apple Internet Connection Kit (which allowed me to set up all this stuff in a more understandable way) but I would like to set things up via OS 8 as well so I can try out the Desktop icons for Internet connection. Any suggestions for finding a script?

To: Peter Thorburn
From: Joe Mithiran
Subject: **Modem Script for OS 8 Internet**

Try AT&F. If you get good download speeds with that, why worry about something more specific? Please let us know what happens if you try it either way.

To: All
From: Albert Willis
Subject: **Upgrading RAM**

I want to increase memory above the 16MB in my Performa 5400. Another 16MB seems the shot. Should I get a DIMM or buy RAM Doubler? If the former, can I as an amateur (a bit cack-handed at that) fit it or must I lug the whole machine to the shop – and pay?

To: Albert Willis
From: Rosalie Marshall
Subject: **Upgrading RAM**

I've fitted quite a lot of RAM SIMMS/DIMMS to the school machines and it hasn't been a problem. I imagine your Performa will be pretty easy to open and then it's just a matter of slotting the card in. Be sure to keep the card clean. As to whether you should get RAM or RAM Doubler, I'd always go for real RAM rather than more disk access – which is essentially what RAM Doubler does. In the long run, performance will be much better and you should have fewer conflicts and crashes.

To: Albert Willis
From: Joe Mithiran
Subject: **Upgrading RAM**

RAM Doubler has the advantage that it can keep making use of memory that is in small blocks. If you open several programs then quit one residing in the middle of RAM – although the total amount of memory you have available may be quite sizeable – the computer can only actually use the largest contiguous block which, in this case, is much smaller. This is called memory fragmentation.

RAM Doubler uses techniques that start to make use of your hard disk and slow things down considerably. It works well if you have a lot of RAM and many small programs, but if you don't have enough real RAM to cope with the actual processing that is occurring at any given moment, it will start accessing your hard disk.

For example, a Photoshop operation requiring a larger amount of RAM than you have – when using RAM Doubler – will take significantly longer than it would if you had enough real RAM. Get as much real RAM as you need, then get RAM Doubler so you can make use of it without having to restart your Mac because of memory fragmentation.

To: Albert Willis
From: Kim Kohen
Subject: **Upgrading RAM**

Real RAM, no question. Fit it yourself but, if you don't feel confident, get someone who has done it before to assist. It really is easy and it's something you should learn as you'll probably need to do it many many times in the coming years. There's probably a Club Mac member who lives nearby who would be willing to help. ☐

gave him, spending only \$1 on a clock crystal chip.

Although he seldom bought new computers (he worked on a used IIfx for a long time and only recently upgraded to a used Power Mac 8100), Cary delighted in finding great deals.

He once bought an Ethernet card at a scratch-and-dent sale for \$7, after the salesperson asked him what he would pay. That was his favourite deal until the time he bought a pallet of stuff at an auction to get a broken stereo microscope for his kids. He knew he could fix the microscope, and it was well worth the \$35 he paid for the whole pallet.

As he dug through the rest of the detritus, though, he discovered about 50 power cords and a pair of sealed boxes with DEC written on them – those boxes contained a pair of 2GB SCSI drives. A friend at DEC helped him get the necessary hardware upgrade so they worked with Macs.

Diagnosis

Cary's cancer, which was diagnosed just after *Macworld* San

Francisco in January of 1997, had first evidenced itself as back pain when he sat down, and Tonya and I ate a standing lunch with him toward the end of that *Macworld*.

A week later, an MRI scan revealed the tumour in a vertebrae that was causing the pain. From then, the news continued to worsen, though for a while Cary showed few symptoms other than the results of the radiation and chemotherapy. We spent more time than usual with him after that, and became far closer friends than would have happened had he remained healthy.

Others have experienced the same deepening of friendships with Cary. Together with a number of other friends, we have created a Web site to hold thoughts and remembrances from anyone whose life Cary touched. We hope that we can all use the site to express better who Cary was and what he meant to us.

More importantly, we are archiving everything to give to Cary's wife, Ellen, and his children for when they're older. Nathaniel and Meredith will not have Cary in their

lives as they continue to grow up, but they'll be able to read how he was a part of so many other lives.

The site has already had tens of thousands of visitors, and submissions continue to come in from people who've known Cary. I encourage you to visit the site, read what others have written and, if you have anything to share, send it to:

<caryl原因-remembered@tidbits.com>

<http://www.tidbits.com/caryl原因/>

We are all the poorer with the loss of Cary. I will miss his knowledge, skill, precision, and fanatical pickiness (he was enthusiastic about very few products, and only recently admitted to the overall utility of the Internet).

I will also miss his subtle wit, represented so dryly in his writing that those who didn't know him often failed to see the humour. Finally, I will honour his memory as a friend and role model, for there was great good in Cary to emulate. I wish the same could be said of more of us.

Membership Application Form

Complete this form and send it, together with the appropriate fee, to **The Administrator, Club Mac Inc., GPO Box 4523, Sydney, 2001**. Please allow time for the Application to be processed.

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Phone (Home) (.....) (Work) (.....)

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Name on card Expiry Date

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(90 minutes per day BBS access, incl. own Internet address)

☐

Premium Mship \$95
(120 minutes per day BBS access, plus own WWW page – up to 2MB)

☐

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How did you hear about Club Mac?

MACinations

Cary Lu remembered

Dunk's Doodles returns the next issue.



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There is little more difficult than to write about a close friend who has died. The words come slowly, and in clumps, with little sense of the whole. And yet, memories and stories surge beneath the surface, along with all sorts of often conflicting feelings. Cary Lu, who died of cancer on 23rd September, 1997, meant much to me and to so many others both in and out of the Mac community.

Those in the Mac community remember Cary as a contributing editor to *Macworld* and as author of *The Apple Macintosh Book*, one of the first Macintosh books. But many people author popular books and write regularly for Macintosh magazines. Those descriptions don't do justice to Cary's depth and breadth.

Tonya and I met Cary at a meeting of **dBUG**, the Seattle Macintosh Users Group. The Quadras had just been released and Cary relayed the complete technical details to a rapt audience. He was often interrupted by his then two-year-old son, Nathaniel, and even Cary couldn't answer detailed questions about new Macs and deal with a toddler; luckily a friend of Tonya's from Microsoft volunteered to watch Nathaniel and the meeting proceeded uninterrupted.

We bumped into Cary occasionally after that, but since he didn't do much online, we moved in different circles. After seeing Cary several times at *Macworld* Expos in Boston and San Francisco, we began meeting in our hometown of Seattle.

Looking back

That was the start of our friendship, at first restricted to computer industry topics. Cary had a Bachelor's degree in Physics from Berkeley, and a PhD in vision research from Cal Tech.

He was at Bell Labs around the time **Unix** was invented, developed short films for *Sesame Street*, worked for the **Children's Television Workshop** and was on the team that came up with the *Nova* television series. He also worked on technology education issues for the governments of Australia, Algeria and Kenya.

He'd done so much and, in conversation after he was diagnosed with terminal cancer at age 51, he said he felt he'd lived a full life.

What he did regret was that he wouldn't see his children, Meredith and Nathaniel, now ten and seven, grow up. Cary was perhaps the most doggedly practical person I've ever met, and he loved children.

A clear vision

Cary deserves credit for two extremely cogent pieces of thinking in regard to hotly debated issues in the computer world.

"...in regard to the age-old question of what computer platform should you buy, Cary commented ... that it should be the platform used by your closest technical friend, the kind of person you could call on a Saturday night if you had a problem."

First, in the process of deciding the computer policies of his daughter's elementary school, he noted that it made little difference what platform a child used in third grade because the industry moved so quickly that all computers would be completely different by the time that third grader reached college.

Second, in regard to the age-old question of what computer platform should you buy, Cary commented accurately that it should be the platform used by your closest technical friend, the kind of per-

son you could call on a Saturday night if you had a problem.

An electronics whiz

Cary did more to help other individuals with computers than any ten people I could name.

Growing up in the '50s and '60s, he had become proficient with electronics and excelled at fixing electronics of all sorts for friends and acquaintances. Once, while soldering a bad connection in my PowerBook 100, he asked if I had done electronics as a kid, sounding slightly confused about how someone could get into computers to my level without a knowledge of electronics. I replied that I'd grown up on a farm and had spent my summers instead fixing farm machinery, for which hammers were more useful than soldering irons.

Cary's skill with malfunctioning electronics also aided him in one of his favourite pastimes – buying and selling old and used computer equipment. His goal was to acquire all the hardware he wanted without paying a cent in the end and, during our last trip to **Boeing Surplus** (where you can buy Boeing's old and extra stuff), Cary commented that he'd come out even in 1996, spending just a little less than he made from selling old equipment.

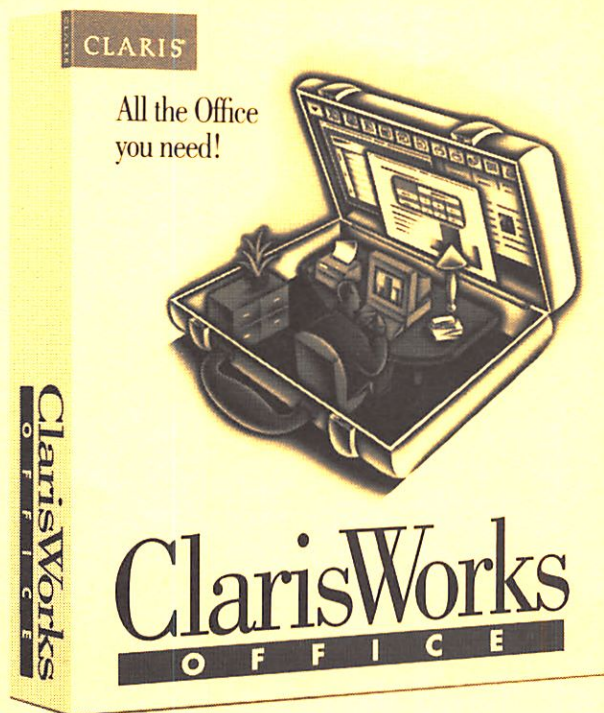
The stories abounded – such as the time he bought a bunch of old monochrome two-page displays, fixed most of them and used others as parts, and resold them – but not before his wife, Ellen, complained about their taking up the entire garage floor. He once put together a 486-based PC clone using spare parts and stuff friends

Continued top of p 34 opposite

More Power and Compatibility Plus Internet Enabling and Linking

New Version

Features one click button bar access,
Improved text ruler and new Web
and linking capabilities



ClarisWorks 5.0 Office features a customisable button bar, Internet enabling and linking, and enhanced HTML (Hypertext Mark-Up Language) translation for immediate productivity on the desktop or on the World Wide Web; an easy on-ramp to the Internet with a choice of Internet Service Providers (ISPs); Claris Home Page 2.0 for establishing a presence on the Web; and more than 200+ ready-to-use documents including JIAN BusinessBasics (Claris Edition), a comprehensive set of small business solutions from the makers of the popular business planning software BizPlanBuilder.

#80061	Claris Works Office 5.0 Upgrade	\$89
#80062	Claris Works Office 5.0	\$169
#94822	Claris Works Office 5.0 Education	\$99

Mac requirements are Mac OS System 7.0.1 or later and a 68020 or newer processor.
On all platforms, ClarisWorks Office requires a CD-ROM drive and 8 Mb of RAM
and 18 Mb of hard disk space for a minimal install.

Right tools at the right time

- The foundation of the ClarisWorks Office product, ClarisWorks Office 5.0 offers significant new features that deliver more power at users' fingertips. In addition to the button bar which brings one click access to 150 of the most commonly used features, ClarisWorks 5.0 includes an improved text ruler featuring new tab and margin guidelines for aligning text easily and instant access to text attributes such as font, size and style. Users can also now specify a default font for all their documents and password-protect confidential documents.
- The spreadsheet now supports named ranges so users can create easy-to-understand formulas that make data sharing easier. In addition, more than 100 functions included in the spreadsheet have been categorised for easier access. And, as important data comes in many forms, the database now supports multimedia fields including pictures and QuickTime movies. More than 400 new clip art images (900 total) are available to illustrate any ClarisWorks Office 5.0 document.
- Users can now also create Internet-enriched documents that include references and links to Web sites, easily link related documents, and facilitate navigation within larger documents through new Web and document linking capabilities in ClarisWorks Office 5.0.
- When sharing data with associates or friends who use other productivity software, ClarisWorks Office 5.0 makes it simple with translators for popular Microsoft, Lotus, and Corel products and others. It is also the only productivity suite that delivers complete cross-platform compatibility with no translation required.

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