

Way to go

There is **an alternative** to the Mac OS. Cliff Joseph considers the MkLinux version of UNIX.

Last month I was lamenting the fact that Apple had more or less pulled the plug on the promising Be operating system by withholding information that Be needs to get BeOS running on G3 PowerMac systems. However, there is another operating system that will run quite happily on most types of Mac and which already has several million users worldwide.

Linux is a free version of Unix that has attracted enormous interest in the past couple of years and is even being touted as a genuine rival to Windows NT. There is a Mac version of Linux available — three versions, to be more accurate, but we'll get to that in a minute — and it will run on even the latest G3 machines.

The main strength of Linux is its sheer reliability. Even though it is essentially freeware, Linux has proved to be more robust and reliable than rivals such as Windows NT and is now used to run thousands of web sites. The Mac OS, however, is still waiting for features such as protected memory to give it anything like the same degree of reliability.

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Having scuppered Be, you might think that Apple would do its best to play down the Mac version of Linux, too. It turns out, though, that Apple seems to quite like Linux. In fact, as we went to



▲ **LINUX IS BASED ON UNIX, BUT IT CAN ALSO PROVIDE A MAC-LIKE GRAPHICAL INTERFACE**

press there was a rumour going around that Apple was about to launch a new PowerMac model that is specifically designed to run Linux. It's even possible that this new machine will be on sale by the time you read this article. There are a couple of reasons for Apple's more favourable attitude towards Linux. First of all, Linux isn't really a mainstream operating system likely to steal large numbers of users away from the Mac OS. Its main use is on web servers or local network servers, which is one area where Macs are rather weak. BeOS is aimed at content developers, which makes it very much a rival to the

Mac OS as a desktop operating system. By contrast, Linux complements the Mac OS by catering to web managers who might otherwise have been tempted to switch to Windows NT. Linux has gathered a strong following in the educational and scientific communities, too. Education is a key market for Apple, so it makes sense for the company to cater for students and teachers who want to use Linux on their Macs. Consider MkLinux For the past two years Apple has been supporting the development of a Mac version of Linux called MkLinux. Apple

IS LINUX COMPATIBLE WITH YOUR MAC?			
Linux hardware compatibility		MkLinux	LinuxPPC
G3 PowerMacs		✓	✓
Other PCI PowerMacs		✓	✓
NuBus PowerMacs		✓	N/A
Performa models		4400, 5400, 5500, 6400, 6500	None
PowerBook models		5300, 2400, 3400, PowerBook G3	2400, 3400, PowerBook G3
Mac clones		N/A	Motorola StarMax, all Power Computing models
68000 series Macs		N/A	N/A

has licensed the Mach microkernel from the Open Software Group and is working with engineers at the Open Group Research Institute to produce MkLinux for use on a wide range of Mac systems. At the moment, MkLinux is known to



work with most PowerMac models including current versions that use PCI slots and first-generation NuBus PowerMacs. However, some Performas and PowerBook models can't run it. Old Macs based on the 68000 processors won't run MkLinux either, although there is a version called m68k Linux which is designed for these machines.

There is also a version called LinuxPPC, which is specifically designed to run on PowerMac models using the PCI architecture. LinuxPPC claims to be about 20 percent faster than MkLinux, and to offer greater compatibility with peripherals such as Jaz and Zip drives, although its emphasis on PCI machines means that there are a lot of older Macs which can't run LinuxPPC.

LinuxPPC is developed by a separate organisation called LinuxPPC Inc. Even though Linux is free, companies such as LinuxPPC Inc function as businesses by developing, distributing and providing technical support for Linux. The PC equivalent is a company called Red Hat, which is well-known for its work in developing Red Hat Linux for Intel PCs.

You don't have to pay for either version of Linux, though and you can download MkLinux from Apple's web site free of charge. If your Mac will run LinuxPPC you can download the Lite version from the LinuxPPC site, or order the full CD-ROM version for \$32.

Like BeOS, Linux allows you to set up a dual-boot system that enables you to select either the Mac OS or Linux when you first turn on your machine. This allows you to continue to work with your existing Mac software and then switch over to Linux when you want to use programs like web servers.

MkLinux and LinuxPPC are 'binary compatible' which simply means that software designed for one version of Linux will work with the other.

Netatalk is one of the most popular pieces of Linux software on the Mac. It is the Linux equivalent of Apple's own AppleTalk file server software. There is also a program called Samba which allows you to use Windows PCs as

MAC-TO-PC CONVERSION

In the January column, I had a look at some of the options for Mac users who wanted to run PC software on their Macs. Since then I've had some enquiries from readers who wanted to do things the other way around. That is, running the Mac OS or reading Mac-formatted disks on a PC.

Well, as far as running the Mac OS is concerned, forget it. The Mac OS is written specifically for the Motorola PowerPC chips which Apple uses in its PowerMac machines. It may be technically possible to produce a version that

would run on Intel processors but it would take an awful lot of work. And, Apple wants people to run the Mac OS on Mac hardware because that's how it makes most of its money.

However, PCs can read Mac-formatted disks without too much trouble. All you need is a file-translation utility such as **Conversions Plus**. This is produced by DataViz, the same company which produces the PC file-translation software that Apple bundles with the Mac OS, and it works just as well on the PC as it does on the Mac.

Conversions Plus works with Windows 95, 98 and Windows NT 4.0 and costs around £50. A new program called **MacDrive 98** has just been released as well. This not only reads Mac disks but it can also decompress files which use Mac compression formats such as MacBinary and BinHex.

UK distribution details were not available at the time of writing but you should be able to gather more information on **MacDrive 98** from the developers, Media4, through the internet.

• For more information, see our PCW Contacts box, below.

clients. In addition to these networking programs there are traditional business applications from companies such as WordPerfect and Corel, eager no doubt to grab one section of the market which is not dominated by Microsoft.

A Mac emulation program called **SheepShaver** is also in development

which will allow you to run existing Mac software under Linux. **SheepShaver** is still in the early stages of

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development, though, so don't hold your breath waiting for it. In some ways, Linux has greater potential for success than BeOS. It already has around eight million users and a steady stream of software becoming available for it.

The only problem for Mac users is that Linux still shows its Unix roots. It's really only suitable for heavy-duty techies at the moment. Installation is a bit of a nightmare and involves partitioning your hard disk, so be very careful to backup any important files before you start.

If you're new to Linux, then **LinuxPPC Lite** is a good place to start as it has a graphical interface which attempts to hide some of the complexities of Unix from the user. LinuxPPC Inc is also preparing an upgraded version called **LinuxPPC Release 5** which claims to be easier to install. It even says that there will be an option for installing LinuxPPC onto the iMac. If the company can pull that off then Linux really could take off on the Mac in a big way.

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FAQ-O-Matic www.dartmouth.edu/~john/lppc-cache/1.html for more information on Linux.

LinuxPPC can be download or ordered from www.linuxppc.org

Media4 www.media4.com

MkLinux free download from www.mklinux.apple.com