

# To Be OS not to Be?

BeOS 4 is impressive, but Cliff Joseph wonders whether it has **missed the Mac market.**

**W**e've been waiting ages for the final version of BeOS to be released, but now that it's here, it seems that the Mac version may effectively have been killed off by Apple. Be Inc. recently launched Release 4 of BeOS, the operating system on which it has been working for most of this decade. As the name suggests, there had been three previous releases, but these were primarily intended for developers in order to encourage them to write software for the operating system. Release 4 is the first version that is actually intended for public consumption.

Be Inc. is a small company, set up in 1990 by Jean-Louis Gassée, a former top executive at Apple. Gassée wanted to develop a next-generation operating system that was designed from the ground up to cope with "high-

▼ **THE MULTI-THREADING BEOS CAN RUN MULTIPLE AUDIO, VIDEO AND GRAPHICS APPLICATIONS SIMULTANEOUSLY**

bandwidth" applications such as video editing, multimedia and 3D graphics. When it was first announced, BeOS did sound truly innovative.

It was intended to offer features such as multitasking, multi-processing, and object-orientated development tools. These were features that were not available on either the Mac or PC platforms at the time; even now, they're still not available on the Mac. Back then, it was clear that multimedia and 3D were developing into important technologies, so there was a definite gap in the market for BeOS. And, since the Mac dominated the graphics and video markets, Mac users were the obvious target audience for this new

operating system. Mac users are famously loyal to their Macs, though, so it's interesting to look at this long-awaited rival and see what it has to offer.

## ➤ **Be yourself**

From a technical point of view, BeOS is undeniably impressive. Its graphical user interface looks like a kind of halfway house between the MacOS and Windows, but Mac users should have little trouble getting to grips with it. In fact, if you've recently upgraded to MacOS 8.5 you'll probably feel quite at home with Be. There are a number of

features in BeOS, such as the Tracker menu, that are directly comparable to features in MacOS 8.5. But it's really the underlying architecture of BeOS that is its main selling point. Its efficient multi-threading allows it to perform several tasks at once. Demos generally show it running several different QuickTime video clips simultaneously. You can move video clips around on-screen without interrupting playback, and you

can drag a video clip onto a 3D model so that the video continues to play while wrapped around

the surface of the model. BeOS has a 64-bit file system, which allows it to support terabyte file sizes. These features mean that BeOS is far more efficient at handling large media files than either the MacOS or Windows.

## ➤ **Testing time**

We tested BeOS Release 4 on a PowerMac 9600 with a 200MHz PowerPC 604e processor. This is quite an old machine and not very powerful compared to the latest G3 Macs, but it managed to run four QuickTime movies on-screen, simultaneously. I doubt the machine would have been able to do this if it were running the standard MacOS.

An interesting new feature in Release 4 is the Media Kit, which allows you to automate workflow processes. You could set up a routine that automatically imports a video clip, applies a filter, recompresses the clip and then saves it onto hard disk.

Be has also incorporated the OpenGL graphics library into the operating system. This will appeal to 3D designers, as well as making it easier to produce Be versions of games like Doom and Quake. In fact, it might even make it easier to produce games for BeOS than for the Mac because Apple just doesn't seem to know what to do about OpenGL. There's no doubt that the sheer performance and versatility of BeOS will be very appealing to graphics, video and audio professionals. There's even an impressive range of audio,



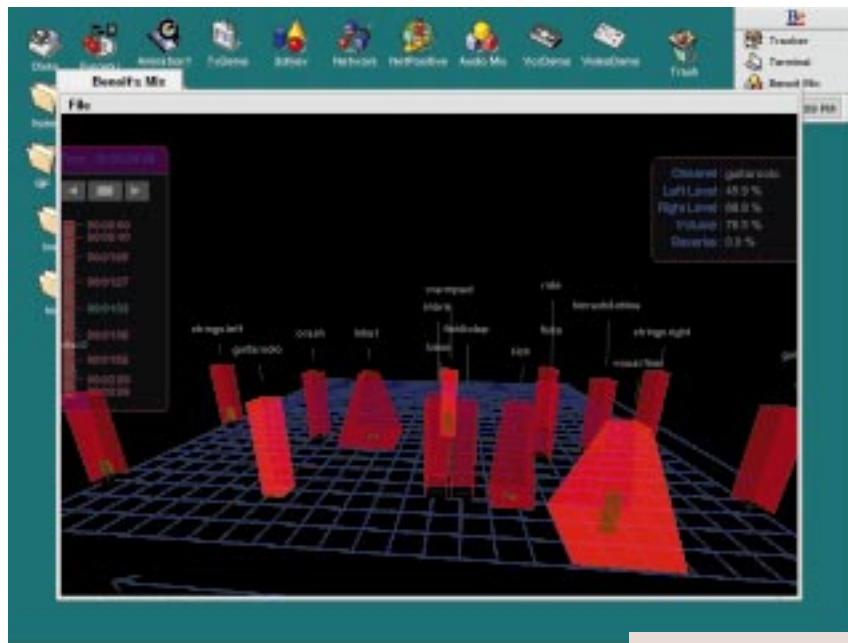


video and graphics programs being developed for it. Unfortunately, it's taken so long for Be to get the operating system ready, that it may have missed its chance to win over converts from the Mac platform.

#### ✦ X marks the spot

Later this year, Apple plans to release OS X, which will be a landmark for the MacOS and should provide the Mac platform with many of the features that currently make BeOS so attractive. In addition, OS X will be compatible with most of the current generation of Mac software, which will mean that it has a far larger software base than BeOS. If the performance of OS X lives up to expectations, Mac users may simply have no need for BeOS.

The biggest problem for BeOS is that it is incompatible with Macs based on the PowerPC G3 processor. The reason for this is simple: Apple will not give Be the technical information it needs to ensure compatibility with G3 PowerMacs. This has not stopped the Linux community producing a version of Linux that runs on G3 systems, but Be claims that there are legal issues preventing it from reverse-engineering a G3 version of BeOS, and that Linux doesn't face these problems



▲ **BEOS MULTIMEDIA APPLICATIONS INCLUDE THIS 3D VISUAL AUDIO MIXER**

because it is not a commercial product. So, without Apple's help, the BeOS simply won't run on currently shipping Mac models, nor on any Macs that are likely to ship in the future.

It's true that there are a lot of designers out there who still use older PowerPC systems, but you can bet your

boots they're going to upgrade to G3 as soon as their budgets allow. This means that BeOS is almost certainly dead in the water as far as the Mac platform is concerned. That's a shame; but the commercial reality is that Apple isn't going to do anything which might encourage a rival operating system.

## MAC COMPATIBILITY

Without support from Apple, BeOS is incompatible with all current PowerMac G3 models. However, it should be compatible with most Macs based on the PowerPC 603 and 604 processors as long as they have PCI motherboards. Macs that use the NuBus architecture are incompatible with BeOS.

System Name	BeOS Compatible?	Processor
Power Mac G3 (all)	No	G3
Power Mac 9600/300 (or faster)	No	604
Power Mac 9600/250 (or slower)	Some models*	604
Power Mac 9600 MP	Yes	Dual 604
Power Mac 9500	Yes	604
Power Mac 9500 MP	Yes	Dual 604
Power Mac 8600/300 (or faster)	No	604
Power Mac 8600/250 (or slower)	Yes	604
Power Mac 8500	Yes	604
Power Mac 7600	Yes	604
Power Mac 7500	No	601
Power Mac 7300	Yes	604
Power Mac 7200	No	601
Power Mac 4400	Yes	603

\*Power Mac 9600 models are based on two possible motherboard designs, only one of which is compatible with BeOS.

#### ✦ It's a PC world

If there is any hope for the long-term survival of BeOS, it therefore lies in the PC world. There is a PC version of BeOS which works quite happily with Pentium II processors. BeOS is certainly more advanced than Windows 98, and the creative users at which Be is aiming have not, as yet, all been won over by Windows NT. Be's vice-president, Jean Calmon, told PCW that it only needs a user-base of 200,000-500,000 to make BeOS financially viable. Linux has more than ten times that number of users, so it's possible that this promising operating system could find a profitable niche for itself. But wherever that niche is, I doubt that it's going to be in the Mac market.

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