



Mixed marriage

Apple's Copland and IBM's PowerPC-based OS are both floating free so how about a relationship, proposes Chris Bidmead. Plus, NTRigue and NeXT.

Apple doesn't get much space in this column, for the reason that its venerable co-operative multitasking OS (at heart, on a par with Windows 3.1) doesn't in my view qualify as a modern 32-bit operating system.

The heart of the matter

I've certainly been looking forward to Copland — in fact there's an Apple PowerMac here waiting to run it. Last year we heard that the launch of this microkernel-based truly pre-emptive multitasking operating system had been deferred until the middle of this year.

In January, amid the financial crisis at Apple that finally shed Michael Spindler, a leaked internal memo from Apple's Senior VP, David Nagel, revealed that the company was freezing all new spending on research and development. Okay, this was qualified by the word "temporarily", and in

any case, we reassured ourselves, Copland as a long-running development project probably didn't qualify as "new spending". And Apple's PR people were keen to point out that the new CEO, Gilbert Amelio, was no mere bean counter and wouldn't be operating a slash-and-burn policy to get Apple back into shape.

I very much hoped that this would be true. Apple, as a company and as a computing environment, is different. And if this column is about anything, it is about exploring the merit and the merriment of just these kinds of differences. Different 32-bit multitasking operating systems can mix and match in a way that the rigid old 8- and 16-bit operating systems never could. I want healthy plurality.

But is Apple's heart still in the game? Earlier this year I had a long chat with Nick Graves, Apple's European Marketing Manager, and asked him about the slippage of Copland, hoping to hear that it was now steaming ahead on all cylinders. Instead, I got some intricate foot-work. "We never announced a date, so when people say

Copland has 'slipped', that is really a comment about perception," he told me. Ah, I see. "Copland is probably the largest system software project ever undertaken in the personal computer industry," he continued, "a massive, massive project, so clearly the timescales are long."

This really wasn't what I wanted to hear. When it comes to "massive, massive projects" Apple has already been there, done that, got the T-shirt. In the mid-eighties Apple got caught up in the development of "Pink", the object-orientated buzzword operating system to end all operating systems, which was so slow coming and such a drain on resources that it nearly put paid to the entire company. And so it would if the then CEO, John Sculley, hadn't managed to palm Pink off onto IBM as part of the joint venture they set up together.

Pink became Taligent, fizzled down from a be-all, end-all operating system to just another application development environment, changed its name (unmemorably) to CommonPoint, got absorbed into IBM, and, er, is now just a tiny footnote in the history of computing. And here was Nick Graves telling me that Copland was bigger than Taligent.

"The man-hours associated with Copland are far greater than something like Taligent," insisted Graves. "I would stake my life on that." Interesting choice of words, Nick, but it's clear that Copland is more than mere vapourware.

"Currently, we have what we call the 'Developer Tools' release of Copland out with people who, er, write developer tools," he told me. "There will be a wide developer release this spring. Then through the middle of the year there will be a release into customers' hands. We're calling it 'the customer evaluation release' — with such a big project it's very difficult to talk about alphas and betas."

What I wanted to know was, would Copland be out, released, finished, this year. And what he was telling me, translated into English, was "No".

Gilbert Amelio says it more straight-

Good news for Linux

Last month I mentioned a reader, Boris Stojnic, who thanked me for getting him interested in Linux. Since then I have discovered that Boris, who it turns out used to publish *Amiga World* in the former Yugoslavia, is pursuing his vision for Linux by establishing a new magazine, *Linux World*. The first issue should be out by the time you read this.

● *Linux World* (subscriptions), 66 Maxted Road, London SE15 4LF (tel 0171 771 6170); email boriss@cix. The magazine's email address is: info@edream.vossnet.co.uk



Codenamed Merlin, IBM's newest OS/2 will be out sometime soon, voice enabled, and with a different look and feel

forwardly. He told Wall Street analysts that Copland will be "a 1997 event" — so now we know.

Or do we? It seems possible to me that Copland may not turn out to be an event at all. A day or two before Amelio "clarified" the Copland schedule, the news came through that David Nagel had left the company. Nagel was in charge of R&D and I'm very concerned that this might mean the "temporary freeze" in that department is destined to become permanent. Frankly, I think without Copland, or something very much like it, Apple is going to end up as a toymaker.

Meeting Merlin

As I write I am due to go to Nashville, Tennessee, to spend a week with IBM when the new version of OS/2, codenamed

Merlin, is due to be unveiled.

At the moment, the only thing I know about Merlin is that it's not the cross-platform, microkernel-based OS/2 we were promised by IBM last year. Merlin is Intel-only and like Warp, it's predecessor, stays tight and efficient by avoiding the message-passing interfaces required by microkernel architecture.

There is a microkernel OS/2 in existence: it's the PowerPC version which was quietly released last December. IBM has said it will leave it alone for a year and then, if there's a market for it, the company will consider further development. This is a bit like leaving a weakling child on a mountain-top in winter and saying you'll drop round at the same time next year with some food and blankets — if they're still needed.

Running NeXTStep on a 486

I'm conscious that NeXTStep is a luxury not everyone can afford, so I've been writing about it with some caution. I love it, but then, I don't have to pay for the hardware and software. If I did, Linux would probably be my OS of choice. But hardware prices are coming down and today's so-called "entry-level" machine, at least as far as the processor is concerned, actually has a higher spec than the 100MHz 486 Canon object.station I have here on my network, running NeXTStep. Perhaps that's why I'm getting so many queries from readers now about NeXT. One such comes from Dominic Hopton (dombo@darkhos.demon.co.uk). He has a 486DX2 66MHz with 16Mb of RAM and wants to know if he can run NeXTStep on it. Here's the full spec:

- 16Mb RAM
- Adaptec 1542cf SCSI card
- 2 x 500Mb SCSI Seagate hard drives
- SoundBlaster 16
- NEC Atapi 1.2 Compatible CD-ROM
- USR V.34 modem
- Cirrus Logic 5426 VLB Gfx card with 1Mb, upgradable to 2M.
- AMI BIOS
- 14in, 1152 x 864 refresh rate monitor

NeXTStep is broadening its hardware base all the time as new drivers come on line. To get the latest news on this, I checked with Paul Lynch of P&L Systems who's been helping me set up my own NeXTStep installation. Here's what Paul calls his generic-type answer, because obviously it's hard to be too specific when you don't have all the details:

Memory: 16Mb is okay. "You'll get noticeable swapping, but it'll run," says Paul. "Not as bad as Windows with 4Mb. About the same as NT with 16Mb. Commercial customers usually have 32Mb as a minimum."

Paul considers that the processor, the Adaptec card, the SoundBlaster and the hard drives are all great. Personally, I'd have thought the processor a touch on the slow side.

The NEC Atapi 1.2 Compatible CD-ROM? Paul tells me that NEC isn't on the supported list, which means that it may or may not work. "Atapi CD-ROMs can be made to work, although you will need to ftp some driver disks from NeXT before you can even attempt an install."

The USR V.34 modem is fine, but only for data, as it's not supported by any of the fax software. The Cirrus Logic 5426 VLB Gfx card is okay-ish, says Paul. "There is a GD542x driver: this supports 2-bit greyscale, possibly up to 800 x 600. SoftPC (the DOS emulator) and NEXTime (the movie module) don't work on it properly. You really want 1,024 x 768 16-bit colour to feel happy."

The AMI BIOS should be no problem. The monitor is probably a little small, thinks Paul. "Most people use 17in as a minimum."

So, some hardware swaps might be necessary but on the whole NeXTStep will run.

Personally, I'd go for 32Mb. On top of that there's the price of the NeXTStep operating system, which, as I say, isn't cheap. NeXTStep is £530 plus delivery and VAT. Academic pricing is £220 plus delivery and VAT.

● If anyone wants to follow this up, they can talk to Paul Lynch directly on 01494 432422.



Mate, and we can take it from there.

NeXT: the guts under the GUI

The great thing about NeXT as far as this column is concerned is that underneath it's a reference-quality Unix, while on top it's a beautiful object-orientated interface that's more than just a pretty face.

Here's a great example of how the interface and the underlying operating system marry up. The screenshot alongside shows a shareware application written by NeXTStep veteran, Scott Hess. It's called "Stuart".

Essentially, it's just a terminal window along the lines of xterm or the Terminal app that comes as standard with every NeXT machine. A terminal window like this emulates the old DEC VT100 dumb boxes that used to be the most common way of communicating with computers. It's what you use on an operating system like NeXTStep or Linux when you want to punch your way through the GUI to get to the guts and do some raw character-based computing.

Stuart is no dumb terminal, though. Optionally you can give it a "shelf": a subclass of the shelf in the NeXT WorkPlace Manager, also used in the Librarian and the Finder. Icons of files or folders can be dragged from the WorkPlace Manager and dropped onto Scott Hess's shelf at any time while you work inside the terminal.

Why would you want to do this? Well, one of the boring things I find when working in char-based Unix is switching around between various directories. Okay, I know there are some nifty shortcuts to do this in shells like csh and bash — one day I really will learn them. Meanwhile, on the NeXT machine I just pick up a directory icon, drop it onto the terminal window and it automatically produces the `cd <new directory>` on the command line.

This odd meeting of old-style computing and modern drag-and-drop happens elsewhere in NeXTStep, too. Any time an application pops up, the standard file selection panel allows you to choose a filename for loading or saving: you can pick up a directory or file icon and just drop it on the panel, whereupon the appropriate entry appears in the text entry window. ■

See what I'm thinking? Here's IBM with this microkernel, PowerPC-based OS for which it has no market and doesn't know what to do with anyway. And there's Apple, with an installed base of something like a couple of million PowerPC machines, struggling to bring down to earth a "massive, massive" operating system project that seems to be stalling in mid-air.

As it stands, OS/2 is not what Apple users want. The OS/2 interface, already Mac-like, could probably easily be fixed and would bring much useful object-orientated, drag'n'drop magic to the party.

The big problem with OS/2 is that it won't run Mac users' old apps. But microkernel operating systems are designed to make backward compatibility like this easier to implement. If Apple and IBM aren't sick of trying to work together after the Taligent fiasco, it's just possible there might be some spark to be struck here.

NEC to the rescue

In my previous column I just managed to squeeze in a screenshot of NTrigue, which I finally got working. I blamed Windows NT for the hold up because its "rsh doesn't work in a way consistent with Unix".

I apologise to Windows NT. The problem was at my end. The version of NTrigue that Insignia Solutions had sent me included printed instructions that got you as far as installing the software, but stopped short of actually telling you how to set up Windows sessions so they can magically pop up on every workstation on your network capable of running the X Window System. Eventually, I stumbled on a .PDF file on the CD-ROM which took me through the rest of it.

Stuart is a shareware application written for NeXTStep, and a great example of how old-style command-line computing can work with modern drag-and-drop

I did promise more on NTrigue this month but in the event I deferred work on it for a week while I waited for the delivery of a new Pentium from NEC. It's a PowerMate V100 with a 1Gb hard disk — a modest enough spec these days but a giant of a machine compared with my network of ageing 486s.

I'd first installed NTrigue on a 25MHz Mitac with 16Mb RAM, and was pleased to see it working at all. In fact it's quite usable, bearing in mind that I'm the only user on this network. But with the PowerMate, I hope to see some real speed. I say this, because just as I was setting up the PowerMate on the network the news came through from Insignia Solutions that version 1.1 of NTrigue was on its way. It seemed sensible to wait for that, particularly as the installation of NTrigue involves a fairly convoluted ritual with licence numbers.

You install it, run a validation program which provides you with a magic number derived from the machine and the date and then fax that number to Insignia, which then faxes you back another number to unlock the software. The catch is that you have to enter the number the same day you get it or it becomes invalid.

So hopefully, next month, I'll have NTrigue 1.1 safely installed on the Power-

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