

## Mad March gets our men in a muddle

**Oops! Panicos Georghiades and Gabriel Jacobs have been the hapless victims of the great banana-skin bug... On a brighter note, Panasonic pitches in to help developers, and a new Director gets ready for action.**

March wasn't too good a month for us in terms of accuracy! A number of people working in higher education emailed us about our section in the March *Multimedia* column entitled "When it comes to the Crunch". Our fault: the email address of the Association for Learning Technology in Oxford should have read: alt@vax.ox.ac.uk

We also apologise if (on page 297 of the March issue) we gave the impression that a single 4Gb hard disk costs £400.

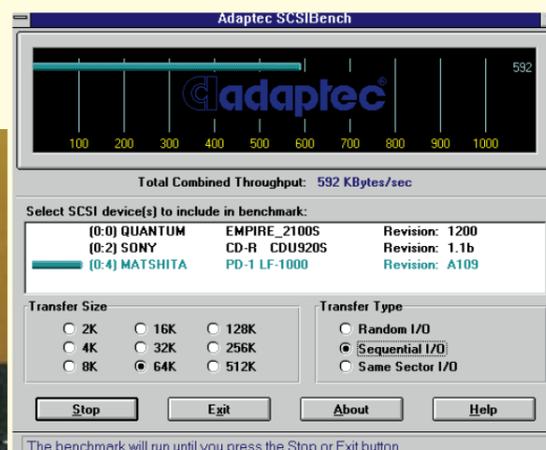
Two readers, A.J Elliott <100112.2612@compuserve.com> and Sumeet Kapur — dbae005 <dbae005@uac.ac.uk> — have been asking where they can get one?

Well, the fact of the matter is that the cheapest price for a single 4Gb drive is around £650. What we really wanted to say was that you can obtain 4Gb of hard-disk space for about £400, and what we had in mind was the new Iomega Jaz 1Gb removable drives. Cartridges have been advertised at less than £100. A similar drive from Syquest claims a transfer rate of 4Mb/sec — good enough for video work.

Note that you can also obtain the Seagate 2.1Gb ST32140A drive for about £240. We can't name specific suppliers — so look in the advertisement section.

### A drive for multimedia developers

The same theme — cheaper storage — brings us to the Panasonic PD optical drive. With the recent cuts in the price of this drive (you can get an internal version for as little as £350 plus VAT), this has now become a pretty big temptation for multimedia developers who generally require more disk storage and higher performance than most other people in the computer field. So we thought that it would be a good idea to test one and see how it



**Above** The Panasonic PD drive is ideal for testing multimedia applications designed to run on a quad speed CD-ROM

**Left** Panasonic's PD System combines a 650Mb rewritable optical disk with a quad-speed CD-ROM drive



### ...and here is the news

- Asymetrix has released a new version of its Toolbook CBT edition (version 4.0), and Aimtech has released CBT Express version 2.0. Aimtech is also said to be about to release a sub-£1,000 version of its IconAuthor package, called IconAuthor Lite. And the new version of Macromedia Director is now shipping (see page 312).

- Data Translation's Multimedia Group has launched version 2.6 of its Media 100 (£8,795, excl VAT) professional non-linear video editing system. This offers broadcast-quality pictures using 2:1 compression, eight tracks of CD-quality sound, and many more features.

- The ubiquitous Microsoft has unveiled two more technologies. One is SIPC — Simply Interactive PC framework — to give some brains (that is, parts of the Windows operating system) to dumb hardware such as VCRs, TVs and consumer hi-fi systems, so that PCs and consumer entertainment machines can communicate with each other via a universal serial bus.

The other Microsoft technology is ActiveMovie, a cross-platform digital video technology for the desktop and the Internet. With this you'll be able to create and deliver titles on multiple platforms with synchronised audio/video and special effects.

Benefits will be fast playback of all popular media types over the Internet and MPEG-1 playback in software-only on a Pentium 90 with a low-cost graphics card at 24 frames per second with 11KHz audio. MPEG II (which will be used on the new Digital Video Discs) is also supported.

This has meant the creation of a new file format: .ASF (ActiveMovie Streaming Format) which is data independent. Streaming means that playback can start without having to download the entire file.

performs in areas related to multimedia development.

The PD drive is, in fact, two drives in one. It is a rewritable optical drive: each cartridge holds 650Mb (about the same as a CD-ROM) and costs £39. It is also a four-speed CD-ROM drive. It can only act as one of these two things at any one time, but it automatically detects what kind of disk is in, and then re-identifies itself.

If you have a SCSI adaptor, installation is simple. If you don't, you have to go through the rigmarole of installing a SCSI adaptor: something which will either give you a nervous breakdown or be as easy as pie, depending on your PC configuration. Panasonic supplies an Adaptec SCSI-2 adaptor, as an option. The PD drive installs itself as two extra drive letters: one for the optical disk and another for the CD-ROM.

The CD-ROM behaves well. The transfer rates and access speeds we got from our tests matched approximately those of the specifications (600Kb/sec and 195ms). The CD-ROM drive also played our Video CD disks — using a Showtime Plus board — with no problems. And we managed to grab CD-audio data via the SCSI port digitally and save it as a WAV file, using Corel's CD player utility.

Of greater interest to us, however, was the optical drive. Because its capacity is near that of a CD-ROM, in theory it ought to be a good means of testing multimedia applications, instead of writing one-off CDs and sending data to CD-ROM

pressing plants. Also, because of the inexpensive disks and relatively fast performance, it should be a good option for backing up. And then there's simultaneous work: it ought to allow you to work on many projects at the same time instead of being restricted to the normal hard disk.

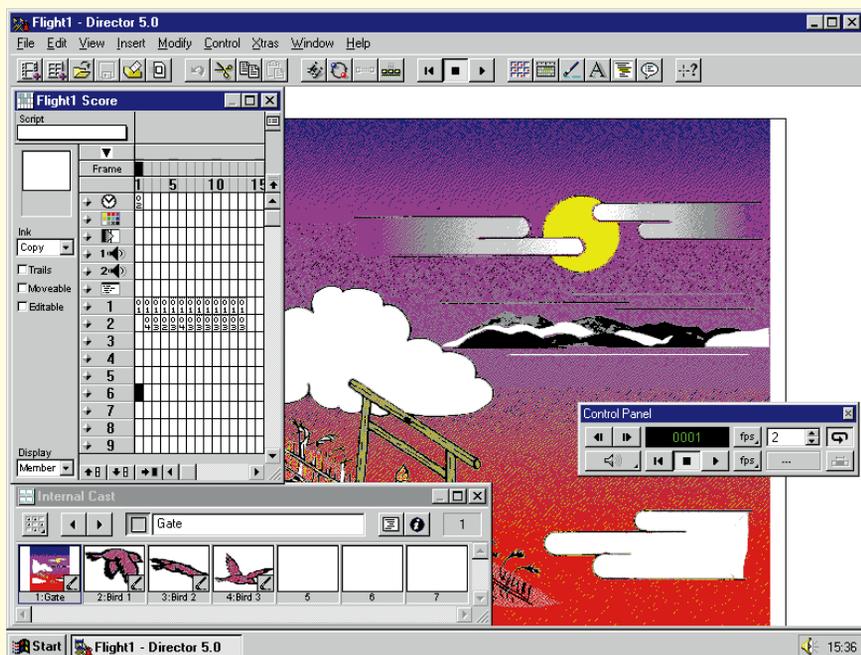
We first tested the drive using standard testing software from Adaptec. The results varied from about 250 to 1,280Kb/sec, depending on the size of the file used (2Kb to 512Kb), and whether access was sequential or random. However, standard software of this kind uses small files for the tests which are not representative of multimedia applications using audio and video files.

In our own, similar, tests of reading and writing large files to the drive we found the average transfer rate to be about 350Kb/sec.

The drive managed to play three tracks of 44KHz 16-bit mono audio files at the same time with no problems, and four tracks with very little crackling noise (four mono tracks amount to  $4 \times 44.1 \times 2 = 352.8$ Kb/sec).

We also managed to grab video directly on the drive using a resolution of 384 x 288 at 25fps and with a transfer rate of 350Kb/sec without losing a single frame. At a setting of 400Kb/sec it lost about 15 percent of the captured frames. Though you wouldn't actually use such a drive to capture video, you would definitely want to use it for testing playback.

Given, then, that the optical disk's speed and transfer rate are similar to those of a four-speed CD-ROM, the drive will



*Macromedia Director 5 now offers support for the Internet, using Shockwave*

indeed be perfect for testing material to run from a four-speed CD-ROM, though its performance for material to run from a two-speed CD-ROM will, of course, be on the optimistic side.

As for the drive's usefulness and cost-effectiveness for working on multiple projects, yes, certainly, since the alternatives are still a bit more expensive — and some not even there! The Iomega Jaz and Syquest 1Gb drives we mentioned earlier are still not available at the time of writing and the blanks are advertised at about £100. The cheapest hard disks (which can be made removable) are about £250 for 2Gb. In addition, the PD disks have a longer lifetime than hard disks: they are guaranteed for at least 15 years.

When it comes to sending data to pressing plants on a PD disk, six out of ten places we contacted would accept these disks; so little or no problem on that score.

Our verdict is, therefore, that this drive generally comes up to our expectations. It's really very good for storing data and for testing CD-ROM material and we can recommend it as a good buy for multimedia developers. It's also a very good backup system, and you get a CD-ROM drive to boot (to ruin a phrase!).

### A new Director hits town

Macromedia's Director is probably the most widely known and used multimedia authoring package around as far as commercial CD-ROM titles are concerned.

Its great success can be attributed to its dual-platform compatibility (with Mac and PC) in addition to its animation facilities, which suit both presentation-type and

storybook-type titles. Director 5 is the second Windows release, but the fifth for the Macintosh, and as with version 4 you only need to author once, to distribute on both machines.

Version 5 extends itself now to the Internet. As we have seen with IconAuthor 7 (last month), the Internet is clearly the area where development-tools software companies are seeing the largest growth at the moment. We're not saying that the Internet is where most users will get their multimedia information but this is the area where most development will happen. Why? Simply because everyone wants to put pages of their business onto the Net — it's the in thing.

Director's support for the Internet is through Shockwave. This is essentially a software tool which makes the Internet provide support for Director, instead of the other way around.

A utility called Afterburner post-processes Director source files to protect and compress the content by 40 to 60 percent, in order to increase performance. You can control the type and amount of compression for each media type including LZ77 lossless compression, IMA audio compression and lossy image compression.

For longer Director movies, Streamed Media Xtras allows users to receive a constant stream of data from a server to their computers, so that they notice no delay as they view video or listen to audio as it downloads.

You can also connect to the Net from a hot-link in a Director movie played from a CD-ROM or your hard disk. New Network Lingo commands support URLs (Internet

addresses), and can take you to HTML (hypertext) pages on the Net. You can link to other Director movies on the Net, too.

At the moment there's support for Netscape Navigator 2.0, with support for Microsoft Explorer 3.0, CompuServe, AOL/Navisoft, and SGI WebForce to come. If you wish to see an example, visit the Deep Forest Web site (developed by M/B Interactive in the US (phone 001 212 539 6992), which uses no HTML. It's all done using Director movies.

Some of the other new features include built-in formatted text (you can now import RTF files) and there are controls for text manipulation such as kerning, tracking, line spacing and indents. Text is automatically anti-aliased against any background to smooth out jagged edges.

There's now support for Photoshop/Premiere image filters, and you can alter filter parameters over time to create animated effects.

Director 5 introduces a new cross-platform standard for third-party extensions, replacing the use of XObjects and DLLs. It's claimed that Lingo now executes 50 percent faster. Movies can be pre-loaded in the background, giving you more control over managing performance. There's now a Lingo debugger, too; over 100 new Lingo commands, and a new user interface consistent with other Macromedia products.

And there's so-called onion skinning — the ability to see other cast members in the Paint window, making cel animation easier (yes, that's *cel*, which is animation created by moving an object over a background).

Additionally, it's worth mentioning that OLE objects can now be used as cast members in Director movies.

Director 5 supports Windows NT, 3DO, OS/2, OS/9, SGI and Enhanced CD. ■

### PCW Contacts

If you have any multimedia-related problems or queries, email us at [g.c.jacobs@swansea.ac.uk](mailto:g.c.jacobs@swansea.ac.uk). We're sorry, but we can't answer queries by personal reply — we'd be at it all day! But we're glad to publish queries, with our answers, which we think will interest PCW readers generally.

**Data Translation** 01734 796100  
**Panasonic** 01344 853913  
**Macromedia** 01344 55644