



Multimedia Presentation

The visual glitter of multimedia makes it an obvious choice for the festive season. Panicos Georgiades and Gabriel Jacobs look at some of the best Christmas gift material, from 3D packages to a multimedia tutorial.

There's at least one thing that Christmas and multimedia have in common and that's razzmatazz — lights, sounds and pictures. There are other similarities too; they're both concerned with delivering messages. Christmas (supposedly) delivers the word of God, multimedia (and this is certain) delivers the word of anyone with enough money to develop and market a title. Furthermore, Christianity changed the world — many people say that multimedia will do the same.

But before we take the religion/technology analogy too far, let us not forget the biggest similarity: both multimedia and Christmas are big business, and we the public are stuck in the middle. At Christmas time, we're under pressure to buy presents, and multimedia products make very good Christmas presents. So we've decided this time to devote most of our column to ideas for multimedia presents for the festive season.

Get me an Expert

Expert Multimedia Help is a new CD-ROM title that will make an excellent present for anyone interested in buying a Multimedia PC, or for anyone who has already bought one and wants to know more about it and find out if it's up to scratch.

The CD works on both Windows 3.x and Windows 95, and provides an online tutorial, some performance tests and a troubleshooting section. The online tutorial describes aspects of multimedia and explains (with animation and video) how multimedia hardware works.

The performance tests cover the multimedia components of your machine: transfer rates of CD-ROM drives, video and sound playback, and so on. You're

told how these rates compare with MPC Levels 1 and 2 (but not Level 3).

The testing program doesn't test MPEG playback, but it does test Indeo, MS Video 1 and Cinepak at up to 320 x 240 resolution at both 15fps and 25fps. We used this test to find out whether Microsoft's claims of enhanced video playback on Windows 95 are true. They are indeed. Some of the results were amazing, with Windows 95 displaying as much as six times as many frames as Windows 3.1 using exactly the same PC, as the table below proves. It shows the frames displayed of a video clip running at 320 x 240 with the monitor resolution set at 800 x 600 at 65,000 colours.

This of course means that our second idea for a Christmas present (which has no doubt been recommended elsewhere), has to be Windows 95. There can be little doubt that this is the best operating system (performance-wise) for multimedia, especially for titles which take advantage of its 32-bit capability and all the other goodies which are bound to appear.

| Enhanced video playback tests | | |
|-------------------------------|-------------|------------|
| 15 fps | | |
| | Windows 3.1 | Windows 95 |
| Video 1 (15 fps) | 111 | 305 |
| Cinepak (15 fps) | 97 | 305 |
| Indeo (15 fps) | 62 | 292 |
| (Total 305 frames) | | |
| 25 fps | | |
| | Windows 3.1 | Windows 95 |
| Video 1 (25 fps) | 96 | 492 |
| Cinepak (25 fps) | 81 | 472 |
| Indeo (25 fps) | 54 | 336 |
| (Total 507 frames) | | |

Another very interesting discovery made while using the Multimedia Help CD is that if a multimedia PC is made to play back video at a frame rate it can't handle — and is therefore forced to drop frames — it will play back at a lower frame rate than the one it's supposed to be capable of.

Our tests showed that a PC which can happily play a 15fps video clip without losing frames drops to an abysmal 6fps or so playback when forced to play a 25fps version of the same video clip, instead of dropping to 15.

This finding is very important if you're developing video for multimedia. Bear in mind that your video will play back OK on the faster machines it's optimised for, but on weaker machines it will struggle, with the result that they will do far worse than their theoretical optimum.

However, the best part of the Multimedia Help CD is its troubleshooting section. During every test you're given a checklist of faults. You select whatever is happening when it shouldn't, or not happening when it should, as the case may be. The program then offers a list of possible solutions, such as driver versions or settings in the system files that you should check.

This troubleshooting section can also be run interactively — using cue cards — as you try things out. Very handy if you do have problems (and who doesn't?). Indeed, what better Christmas present could there be than the answer to all your problems? Wish someone would do the same for us this Christmas.

Add the third dimension

DoubleVision will make someone's Christmas. Your delighted recipient will be able to create 3D images similar to those used



*3D image created in DoubleVision.
You need 3D glasses to view this (red
on the left eye and blue on the right)
— see the PCW Contacts panel.*

in many fifties B movies, which you can view with coloured 3D glasses.

These images are called anaglyphs. They are actually 2D images which, when viewed through a pair of 3D glasses, appear to have physical depth, as opposed to images created in a 3D design program which have perspective but are only two-dimensional.

The product is easy to use, fast and inexpensive. For a 3D effect you need two images. These can be taken using a 35mm camera, a camcorder and frame grabber, a digital camera or a Kodak PhotoCD. The program accepts most of the commonly used image formats (such as BMP, PCX, GIF, TIF and JPEG).

When photographing an object you take one picture, then move a short distance to the side and take another. There's a simple rule: the distance you move to the side, in inches, is approximately half the distance between you and the object, in feet. So if the object is ten feet from the camera, you have to move five inches before taking the second photo. To exaggerate the 3D effect you can increase this distance a little.

Once you have imported the left and right images,

you have to set an alignment marker. This is a common point marked on each photo which defines a virtual central plane. When viewed with the 3D glasses, objects in the image behind this plane will appear to recede while those in front of it will appear to project forward.

And that's all. The program calculates the 3D image which you can save as a bitmapped image to view on the screen or print. See CAR.GIF and also the AVI files on this month's cover CD.

As a little extra, DoubleVision has a utility that can create a pseudo-3D effect out of a single picture.

2D or not 2D

Of course, 3D glasses are just another bit of equipment and 2D can be fine if the

*SoundTrack enables
you to watch video clips
while you record a
voiceover*



effect is impressive enough. The Digital Video Kick Start CD-ROM would make a good present for anyone who wants to do 2D interactive animation and learn about producing digital video. It contains tools, clips, tutorials and everything else you need to get you started in the world of PC-based video.

First of all you get SoundTrack. This enables you to add sound to video files without too much fuss. You load a video (AVI) file and then click the Record button. You then see the video play as you record a voiceover. You can cut, copy, paste, delete, overdub and mix sound files, and there are three audio tracks available.

But the real *tour de force* in this CD is Starlet Movie. This is a full-featured 2D animation program that can be used not only for entertainment but also for serious business. You can create animations either to use as screensavers, or to incorporate into your sales and training business presentations.

Starlet Movie uses vector-oriented drawing, has relatively good image processing and unique interactive animation capabilities. You can create non-sequential animations which can be activated by hot-spots found on specific frames.

The program uses film strips as a storyboard to specify the animation's path, and you can navigate objects using other frame images as references. You can also include interactive buttons, branches, cycles and sound effects.

Bundled with Starlet Movie is a drawing, paint and image-processing program. Finished animations can be distributed with the included runtime module, or saved as a Windows AVI movie.

Another nice little utility that comes bundled with this CD is Matinée. It displays your videos as screensavers. You choose a backdrop, then drag and drop video clips

Christmas wishes

1 Our first, most ardently wished-for wish is an improvement in the three factors affecting multimedia performance: speed, speed and speed.



For instance, what about a fourth-generation authoring tool, such as Toolbook or Director, which produces compiled code and therefore doesn't run frustratingly slowly on a weak machine? What about faster, and cheaper, graphics cards providing software-only MPEG playback?

Multimedia is certainly the future in computing, but it's the present that concerns us. And (compatibility and standardisation problems apart), speed is the thing holding back the real advent of multimedia, because user-expectations (such as full-screen broadcast quality video) are ahead of what the technology can actually deliver at present.

We're bound to see increases in speed, in both software and hardware, before the end of next year, but it's the extent of those increases which will determine how far multimedia is able to fulfil its obvious potential.

2 Our second wish touches on compatibility. We'd like to see more mainstream multimedia authoring packages offering cross-platform functionality — with the Mac, but also Unix, and the Internet. We suspect this is one wish which will at least partly come true because the Mac is so much stronger in the USA than over here, and whatever

the efforts of the European Union to encourage innovation in computing, Uncle Sam is definitely in the driving seat, and will be for as long as anyone can imagine.

3 Wish number three is for a multimedia authoring package that's as easy to use as the mainstream presentation packages like Freelance Graphics, PowerPoint or Astound — and which uses Visual Basic as its scripting language. In our view, Visual Basic, because it's so easy to use yet so powerful, and because it comes from Microsoft, is now a kind of a standard. So the sooner it's incorporated into easy-to-use authoring packages, the better.

4 Fourthly, back to the question of speed. But this time speed of a different kind, though again linked to compatibility. We need to see faster agreement between companies on important issues such as high-density CD formats. Developers and manufacturers need to be able to get on with the job of development instead of worrying about what will be compatible with what. This is essential for users to get the full benefits of multimedia.

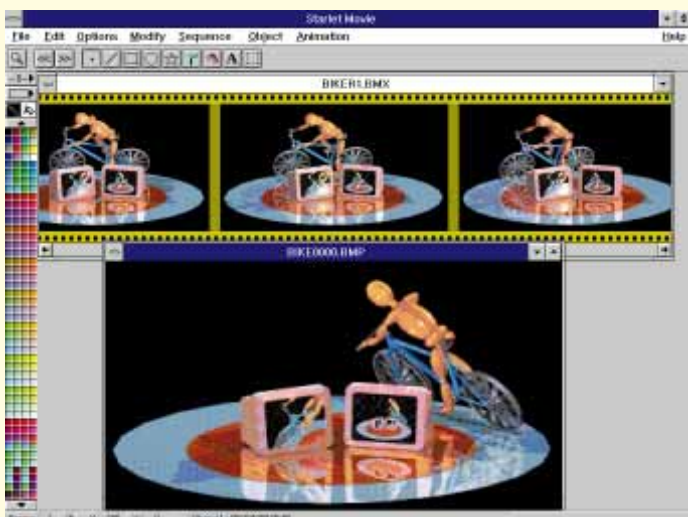
5 Our final Christmas wish is for a living-room multimedia console that will plug into a TV, play MPC-compatible CD-ROMs, and cost £300 or less. Any hope of this coming true? Well, it would require the price of RAM to drop to a fifth of its present value, but who knows what next year holds for chip prices.

into the video sequencer. There's also an option for password protection.

Although the CD doesn't include digital video editing facilities (Adobe Premiere style), there is a tutorial which attempts to get to grips with the mechanics of creating digital video. Topics include a com-

plete glossary of common video terms, a discussion on compression techniques and how to make them work for you, and a section which takes you through the process of creating digital video from scratch.

The CD contains about 150 video clips and about 170 audio files (music and sound effects) — hours of fun for you.



Starlet Movie's vector-orientated drawing provides scope for producing high-quality animation

PCW Contacts

Panicos Georgiades and Gabriel Jacobs will be glad to answer your questions. Either write to PCW, or email g.c.jacobs@swan.ac.uk

Free 3D glasses available from Visual Software **0151 933 8772**.

Fax **0151 933 4108**

Expert Multimedia Help £19 from Software Partners **01954 206 626**

Double Vision £39 from Visual Software **0151 933 8772**

Digital Video Kick Start £29 from LTS **01386 792 617**

