

## It's out on video

**Video hogs the limelight this month, with Panicos Georghiadis and Gabriel Jacobs attending to such matters as playing video disks, grabbing video sequences, and the elusive Crunch-It card.**

Most of the letters we receive these days are about video, whether capture or playback. So if you're considering buying a video board, stick around with us.

But we begin with some announcements that will interest multimedia developers. A new version of Aimtech's IconAuthor (version 7.0 for Windows 95) is now available. This concentrates on providing enhanced multimedia authoring for the Internet, with interactive features that go beyond what current standard HTML can provide. IconAuthor includes features such as easily attainable drag-and-drop capabilities, timers and combo boxes.

In addition, a new facility called Universal Media Access allows IconAuthor applications to access data located on a hard disk, CD-ROM, remote database, or any server on the Internet. We'll have more on this in the near future.

Two other new versions of authoring tools are also now available: Illuminatus 3.0 and Visual Basic 4.0. Illuminatus does not require programming and is one of the easiest and cheapest multimedia authoring programs around. The new version comes on CD-ROM and includes more templates and clip media.

Visual Basic isn't officially classified as a multimedia authoring tool but it's still the preferred choice of many multimedia programmers due to its universal use and, frankly, much better language syntax. Although nothing has been advertised about version 4.0's multimedia enhancements, they're there, especially in the 32-bit Professional version. Also, enhancements related to database access now make VB4 an even more

attractive tool for multimedia applications that involve database-stored data.

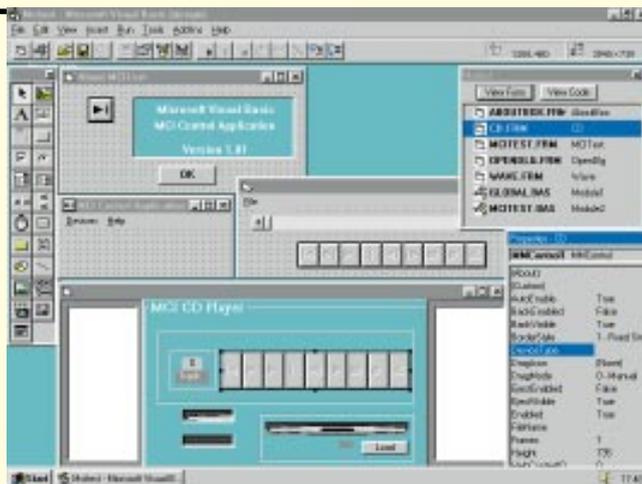
Finally, if you're into writing one-off CDs, you'll be interested to know that Corel CD Creator (version 2) is now out. Apart from benefits related to Windows 95 GUI features and speed, the new

version can write Video CD and Enhanced CD formats.

### All present and correct?

*"I own a 486 33MHz system. I recently purchased a sound card and a Sony CDU31A 2X CD-ROM drive. I am also*

*Right Visual Basic is established as a multimedia authoring tool. Version 4.0 has several enhancements designed for multimedia, not least improved database access*



*Left The Reveal VE500 is probably the cheapest board on the market offering M-JPEG compression. It comes with Ulead's Media Studio 2 and costs as little as £322*

about to purchase a video card. I was wondering if it was possible to play video disks using my present hardware (excluding the video card) and software in Windows For Workgroups (i.e. Media Player). If not, could you recommend a low-cost method of playing video disks with my present CD-ROM drive?"

**Timothy Thairu**

(Henry\_Thairu@AfricaOnline.co.ke)

By "video disks" we assume you mean Video CDs, not the old analogue laserdiscs which were also known as "videodiscs".

There are two ways to play MPEG-1 video, the format contained in video CDs. The cheapest way is to use a public domain or shareware software-only playback program, such as MPEGPLAY, which is often incorporated into Internet browsers. These will provide you with a small window playback on your 486/33, but you'll really only be able to get an idea of what the movie is about. With a Pentium 90 or above, you can get a decent-size playback window and frame rate. Programs are provided free with some graphics cards, but note that some of these software-only MPEG players are for vision only: sound does not come included in the package.

To get proper MPEG-1 playback at full screen and frame rate (and especially on your 486/33MHz), you'll need to buy a dedicated MPEG playback board. There are several on the market, such as the Creative Labs RT400, ReelMagic, Visionetics and Ace MovieMaster; these work in conjunction with graphics cards. There are add-on boards for cards such as the VideoLogic 928 movie (which accelerates .AVI files). There are also single cards that combine MPEG playback and S-VGA graphics on the same board (for example, the Spea Showtime Plus), saving you both money and space.

Your twin-speed CD-ROM isn't a problem, since Video CD has a single-speed transfer rate. Problems do arise with some systems where the CD-ROM drive can't keep a constant sustained transfer rate required by MPEG-1, even if this is single speed. Fortunately, Sony CD-ROM drives have a good reputation when it comes to playing Video CDs. Sometimes the cause of bad MPEG-1 playback is the CD-ROM driver.

### How does that grab you!

"I wish to grab short video sequences (10 to 15 seconds) and import them into

Multimedia ToolBook to create interactive teaching material for medical students.

One idea would be to make our own CD-ROMs with a runtime program, so that the students can run them on their own machines or ones around the college. I have a Dell P90 running Win 3.11 for Workgroups, with a 500Mb hard drive, 8Mb RAM, a Number Nine GXE64 graphics card, and a quad-speed CD-ROM drive.

Could you suggest a frame-grabbing board and/or direct me where to find information?"

**Peter Rowles (rehkpmr@ucl.ac.uk)**

We don't want to recommend a single board as there are several that will do the job. You don't specify what sort of quality you have in mind, or what budget you have available, both of which are, of course, important considerations. But we can give you a general answer which will cover the same kind of questions asked by a number of readers this month.

Judging from the information you give about students being able to play them on their own machines and on machines around your college, you're looking at producing video clips that are playable using software-only decompression on machines ranging from, say, a 486/33MHz to a Pentium 90MHz, with average graphic cards with no special video acceleration facilities.

In that case you're looking at video window sizes ranging between 192 x 144 to 320 x 240 pixels, and (realistically) at frame rates of between five and 25 fps. You have to decide the actual figures depending on the amount of movement and the detail in each video segment. Less movement requires fewer frames per second, allowing larger window sizes thus giving more detail.

Your 500Mb hard disk will be sufficient to handle capturing and editing 10 to 15 second clips, but not (of course) to store them. What's important with grabbing video is the minimum sustained transfer rate of the hard disk, *not* its actual size, but larger disk sizes usually have better transfer rates. We recommend a minimum of 1.5Mb per second, and the higher the better.

There are companies that manufacture hard disks specifically for audiovisual applications. They're often called AV drives. These drives (which usually have larger buffers) ensure constant and high transfer rates so that you can record and playback a continuous stream of data. Micropolis,



## When it comes to the Crunch

*"I read your review in PCW about the Crunch-It card, and contacted the manufacturer for details. Nothing came, and I've since lost the contact details.*

*I'm interested in buying a new video capture board to replace our Screen Machine II. I thought MPEG was out of the question, till I read your review. I think we're looking at under £1,000 for a general purpose board, mostly Video for Windows, but possibly MPEG.*

*We are an institutional computer-aided learning unit. Can you send me the name of Crunch-It's manufacturers, and any advice on other boards we might consider?"*

**Steve Brydges (CCZSWB@ccn2.ccc.nottingham.ac.uk)**

Spea has now been acquired by Diamond Multimedia. The telephone number is still 01844 261886. For other boards, see our answer to Peter Rowles's query [page 295]. Any of the boards capturing M-JPEG can be used to produce .AVI files. Using software compression, you can then recompress the M-JPEG files to MPEG files. However, there are now some relatively inexpensive boards that can capture MPEG files directly in realtime, such as Vitec's Video NT (£350).

Incidentally, since you're a university-based CAL unit, you may already be a member of ALT (the Association for Learning Technology). If not, consider joining (01865 273281 or alt@ox.vax.ac.uk for full details). ALT has hundreds of members involved in producing multimedia software specifically for higher education. It's a way of being in constant contact with people encountering the same problems and finding common solutions.

*"Could you tell me the minimum system requirements for the Spea Crunch-It?"*

**Mathew Southall (lpyimjs@psyc.nott.ac.uk)**

The basic requirements for the Spea Crunch-It card are more or less the same as those for most other video capture cards, since they all aim to perform to roughly the same level. These requirements are: 486 PC or higher, 16-bit ISA expansion slot, MSDOS 5.0 or higher, 8Mb or more of RAM, hard disk transfer rate of 500Kb/sec minimum (the higher the better), 100Mb E-IDE or SCSI hard disk (recommended more than 1Gb audio-visual drive). You also require a video source that outputs composite or S-video signals.

As for the Crunch-It card specifically, it requires an external TV monitor with composite or S-video input for monitoring playback. And if you wish to view the signal on your computer monitor, you require the Spea Showtime Plus card (at £325). As with most other video capture cards, you normally also require a sound card for recording sound.

Quantum, Seagate, Conner and others produce such drives, and prices have recently dropped dramatically — how does £400 for a 4Gb drive sound to you?

As for video capture cards, these range from £200 upwards. If you go for cards that capture and compress using Indeo 3.2 (such as the Inter Smart Video Recorder, the Creative Labs RT300, or the FAST Aviator) you'll be able to capture in realtime and use the movies straight away on other machines in their original captured format (Indeo 3.2 is available as a software-only decompression driver).

Better quality than Indeo 3.2 is M-JPEG compression. Cards that compress using this format include the Miro DC1 and the new DC20, the Spea Crunch-It, the Fast FP/S 60, the Reveal VE500 and the Orchid Vidiola Premium among others.

However, if you capture using this format you'll need to recompress the video clips using drivers supplied free with Video for Windows for playback

using software-only decompression on other machines.

Suitable drivers giving reasonable quality are Cinepack, MS Video 1, and Indeo drivers, including the latest Indeo Video Interactive that gives superior quality (near MPEG) video.

### Which video capture card?

*"Which is the most suitable video capture card for a PC? I have a Pentium 75MHz with 24Mb RAM running Windows 95/Windows NT. I wish to capture from VHS video and laserdisc (video has Scart and phono connection, laserdisc has Scart and S-Video connections) at the fastest rate/size. Replay of the captured video would probably only be on my machine, but possibly on other machines too. I'd prefer to keep my existing video card (a Diamond Stealth). I have a SoundBlaster for capturing audio.*

*I've been looking at the Miro DC1 and the VideoBlaster 300. Are there any problems having one over the other?"*

*The few suppliers I've spoken to seem useless with advice, so I hope you can give me some help."*

**David Doyle (dd215@gre.ac.uk)**

The other letters in this column, and our answers, will interest you. The two products you mention are not in the same category for either price or quality. The VideoBlaster RT300 is half the price of the Miro DC1. It uses an Indeo 3.2 codec, while the DC1 uses an M-JPEG codec. Files captured with the RT300 can be played without the card (using software-only decompression), while files recorded on the DC1 need the DC1 for playback, unless you recompress them using a software-only driver (including Indeo 3.2; this is not difficult to do, it just takes time).

Both cards accept S-Video or composite signals. The RT300 has no video output, so you can't record .AVI files back onto a VCR, if you need to. The DC1 has a Video Out facility — both S-Video and composite (phono) — but doesn't have a built-in overlay facility. This means you can't view the captured files on your computer screen, unless you buy Miro's overlay option or recompress the files using another (software-only playback) driver. It is, however, possible to view the captured video on a TV via the video output.

In our view, go for the RT300 if you wish to grab video at a high compression ratio into a file that will be the final product. The DC1 is a better choice if you wish to grab video at low compression ratios for editing first, and then either recompress them to a smaller file, for software only playback on other machines, or output them back to a VCR. If you decide to go for a Miro board and you have a PCI bus, consider the new DC20 instead of the DC1.

## PCW Contacts

If you have any multimedia-related problems or queries, email us at **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.

**AimTech** 0171 702 1575  
**Illuminatus** from Digital WorkShop  
 01295 258335  
**Spea** (now Diamond Multimedia)  
 01844 261886  
**Miro** 01494 510250  
**Reveal** VE500 (Video Artist)  
 0181 845 7400  
**Creative Labs** 01734 344322

