It's quicker by **bus**

Panicos Georghiades and Gabriel Jacobs flag down the miroVideo DC20, a card which uses the PCI bus to speed video capture. Plus, the new IconAuthor for Win95 and the Net.

IN A PREVIOUS *HANDS ON*, WE stressed that to get good results with digital video it's important to initially capture and work with (edit) video containing as much information as possible — in other words, with very low compression. The final result then needs to be at the higher compression ratio required for distribution.

The bottleneck for capturing video at low compression is usually the hard disk transfer rate. Hard disks have been getting better at this, but the problem with many of the cards designed for amateur use has been the transfer rate between the card and the computer. This problem has been addressed by the use of the PCI bus and from now on you'll see many video capture cards using it (most of the cards on the market still use the ISA bus).

Above *Here, for your multimedia D-light, is IconAuthor, a graphics-based authoring package*

Right *The miroVideo DC20: the quality of its digitised images is impressive, given its modest price*

The price is right

The miroVideo DC20 is one of the first of these new PCI cards. It's medium-sized and can capture up to 3.5Mb of data to the hard disk (whereas last year's model, the DC10 using the ISA bus, managed just over 2Mb/sec). 3.5Mb/sec is not really state-of-the-art specification — remember, there are cards out there for professional "broadcast use" — but it is state of the art for a price of just over £700. Not bad.

For a full PAL signal (both fields of 25fps at a resolution of 768 x 576 this works out at a ratio of about 7:1, while for a quarter-screen resolution of 384 x 288 (good enough for MPEG-1) it works out at a compression ratio of about 2:1. The compression method is, of course, M-JPEG (Motion JPEG) and the chip it uses is a Zoran (as with other cards from Fast, Reveal and Spea). In this case, it's the ZR36050.

The card digitises at 4:2:2 YUV (YUV is a luminance and chrominance colour-encoding scheme for natural pictures). This gives 24-bit colour (as with other cards) when grabbing moving video, but it's also capable of 32-bit colour still-image capture — as are some of the latest flatbed image scanners. It accepts S-Video as well as composite signals (all three TV signal standards: PAL, NTSC and SECAM are supported).

The miroVideo DC20 also includes a video output (S-Video and Composite), and if your hard disk can handle the 3.5Mb/sec transfer rate and capture 736 x 576 at the lowest compression ratio, you can end up with video which is better than S-VHS (Hi-8) quality. So you can use this card to edit video on a hard disk and output back to tape.

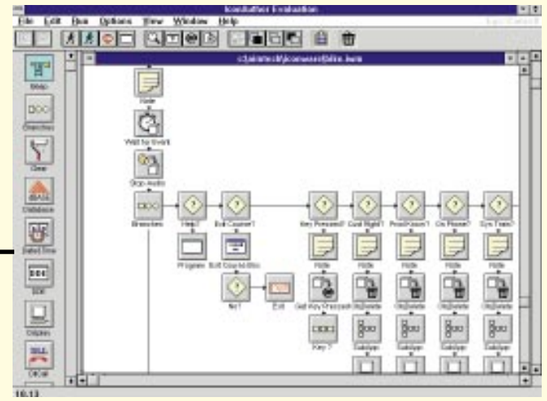
Getting the measure of it

The bundled software includes Adobe Premiere 4.0 LE, Adobe Photoshop LE image processor, Asymetrix 3D F/X, and Vidcap32. There's also a utility program that measures the data transfer rate of your hard drive, as well as the transfer rate of the PCI bus to memory, since you can also capture directly to memory (as long as you have masses of it).

The card can capture at 16:9 (so-called widescreen). Many films are transmitted using this format nowadays, and you can even buy special TV sets equipped for it. Additionally, you have the normal 4:3 screen ratio.

Before capturing, you can alter the brightness, contrast, saturation, hue, video filter, compression rate and hard-disk data rate settings.

The card is plug & play and is compatible with graphics cards up to 1,600 x 1,280. There's no feature connection required, and the installation is software based — no jumpers or dip switches to set. However, you do require a Pentium 90 or better, 8Mb RAM or more and a



With IconAuthor, tools are dragged from a palette onto a flow diagram

Held captive by the video question

Over the last six months, about a third of the letters we've received have been about video capture cards and MPEG video playback. It seems that either the interest in this topic is increasing dramatically, or else there isn't enough information available out there. Probably both.

Anyway, we'll bring you as much new information as we can about these topics, as and when we have it. So among this month's goodies, we've tested a new video capture board and bring you the results. Here's a typical email on the subject:

● "Why is it so hard to find out about video capture boards? I want to buy a PC and edit video with it. It's as though companies like miro and Fast are trying to avoid me. Desktop Video companies are trying to sell me configurations I don't need. To whom do I turn?"
fin3bni@arts-01.novell.leeds.ac.uk
You are most welcome to turn to us with specific questions, after you've done your own research: see our review of the new miro board, on the first page of this feature.

● "I am writing to comment on the advice given to James Purbrick (*Questions & Answers, February*) regarding the question of whether or not to purchase a multimedia docking station. I was wondering if you might be able to put me in touch with Mr Purbrick, because as fellow TI TM4000M owners we may be able to benefit from each other's experiences.

His suggestion of an external enclosure with CD-ROM drive and SCSI disk was the path I took. This was mainly because, for £399, all I got was a two-drive enclosure, stereo speaker pair, double-speed CD-ROM drive and a 3.5in drive bay — not very good value, even at the street price of £300, and after having reclaimed VAT. The TM4000M has a powerful power amp on the output jack and is quite loud with unpowered speakers.

The docking station is really a drive enclosure with speakers built in. However, I solved the problem of requiring active termination by using a CD-ROM drive with internal termination (which can be disabled). The TM4000M has a Fast SCSI-2 port micro-D50 pin. Cables cost a bomb. Termination costs even more."
Jason Tay <100256.3556@compuserve.com>

We sympathise wholeheartedly with the prices of cables using the micro-D50 SCSI connectors; some suppliers charge over £50 for such cables, which is daylight robbery. We're told that only Adaptec makes that type of connector, but we don't believe it. As your letter has appeared here, Mr Purbrick may get in touch with you, but we cannot pass on readers' addresses without their permission.

300Mb hard disk or larger.

Thanks to drivers specially adapted for Adobe Premiere, the producers claim ten times faster display of images in the editing window and computation of motion JPEG files twice as fast. We tested the card on a 133MHz Pentium, which is fast anyway, but were still impressed.

An interesting upgrade option for the card is the miro Mouse, an accessory used to control camcorders and video recorders via control buttons and a jog shuttle. It supports VITC, RCTC and RAPID time codes. This can speed things tremendously when digitising video clips.

Our verdict? The quality of the digitised images is the best we've seen to date for a card costing less than £2,000. For the price, it's probably the best card on the market today.

The really wild cycle show, courtesy of IconAuthor

IconAuthor 7.0

Aimtech's Icon-Author, together with Macromedia Authorware Professional, have been top-of-the-range multimedia authoring packages for a number of different platforms.

They're both expensive, both target the CBT market, and both use similar graphical methods for constructing multimedia applications — tools are dragged from a palette onto a flow diagram. This, it is claimed, eliminates the need for programming, and makes the packages easy to use even by "ordinary" people. Not that experienced multimedia developers aren't ordinary people, of course, but this is how both companies justify the high price of the products. They claim that the pay-off comes in time saved by easy development by non-experienced users. You now have the chance to see for yourselves whether this claim is true by having a go yourselves, using the demo on this month's cover-mounted *PCW* CD-ROM.

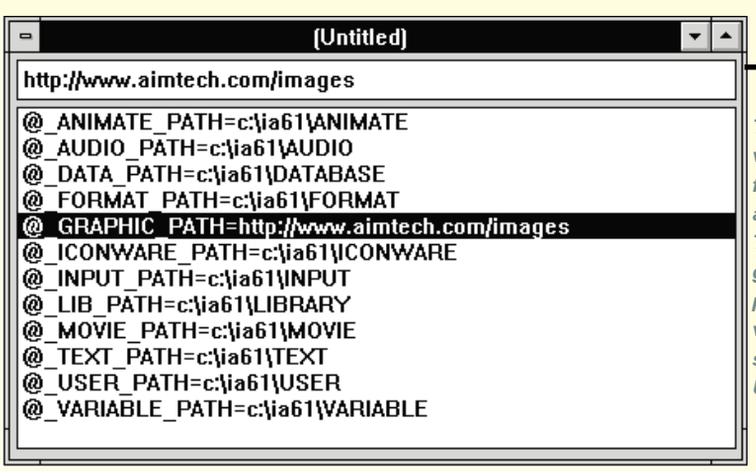
With this new version IconAuthor is now one step ahead of the competition, and takes on board two main contemporary issues: Windows 95 and the Internet. Version 7.0 is 32-bit, so you can experience the better performance offered by Windows 95 (you can also have the long filenames: what a relief to be able to say to Mac users, "Yes, we have that too").

IconAuthor and the Internet

It's also "Internet compatible". But what does this mean? Well, it goes beyond HTML Web pages. New features enable you to create pull-down menus and include drag and drop, timers and combo boxes in your Internet applications.

Perhaps the most important of these Internet-related features is one called Universal Media Access (UMA). It allows you to create applications, parts of which reside on the Internet and parts on CD-ROM or a Local Area Network (LAN). That way, you can put on to the Internet those parts which need to be constantly updated, while keeping back others which need less frequent updating and/or which can't be delivered properly via the Internet due to the low transfer rates of modems. Remember that a 14,400 baud modem (admittedly, without on-the-fly compression) is about 90 times slower than a single-speed CD-ROM drive.

With UMA you can update Internet pages with ease. What's more, you can enter a URL (essentially, an Internet address) as a path in your path file. Thus you can create your files locally (graphic or otherwise) and store them on your Internet site. When IconAuthor has to access these files, you simply change the name of the path variable.



The path variables for an application. The graphic path variable is set to a URL

Present tense

You also get IconAuthor Present, a free run-time player which can be set as a helper application in a Web browser (such as Netscape) to launch an IconAuthor application from within a Web page. Aimtech states that it will be announcing specific support for the Netscape API in the future.

Other new features include an image manipulation utility (ImageLab), a palette object for handling palette shifts, a table object to handle the display of spreadsheet and database-type data, zooming graphics, and a search-and-replace facility.

IconAuthor claims the largest degree of platform portability, including Windows 3.x, 95, NT, OS/2, Unix/Motif and the Mac. One small disappointment at present is that Java isn't supported, but Aimtech tells us it's considering this at a later date.

● The demo on the *PCW* CD-ROM enables you to save but not distribute applications, and you're limited to 100 icons. Because each icon in the flowchart carries out a specific action, the creation of multimedia applications using this demo can be no longer that 100 actions, but you'll find that's quite a lot. ■

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.

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