

The DV Dia One man's adventures in

by Kirby Ferguson

Before I get into the details of my own experiences in digital video, let's take a moment to clear the air about what DV is and isn't.

The story so far

Even in these times of high-tech bloodletting, digital video is somehow riding high. In creative circles one will often hear references to the "DV Revolution" we are apparently in the midst of.



DV Camcorders are wonderful for those special moments—like when your nephew suddenly decides to throw gravel at his head. This shot was taken with a Panasonic PVDV951.

tapes are capable of capturing broadcast quality (or "near-broadcast" some would argue) video and CD-quality sound. This MiniDV footage can then be fed into a computer via FireWire, IEEE 1394 as it's less-catchily known on the PC side, or Sony's i.LINK. From there, you can edit your footage with a range of applications, including the free(-ish) *iMovie* or the inexpensive *StudioDV*, up to the pricier but more powerful *Adobe Premiere* or Apple's *Final Cut Pro*.

The third technological factor that brings DV into the limelight is that recent processors like the G3, G4 and Pentium 3 and 4 are all capable of handling the considerable heavy lifting required to edit video footage. Apple has played a particularly large role in DV's development, shipping consumer-level systems that are DV-ready right out of the box. On the high end, *Final Cut*

Meanwhile, many retailers are having trouble keeping DV equipment on the shelves. A number of factors have combined to lead to DV's ascent—let's take a look.

While there are other digital video formats, the term DV has become virtually synonymous with just one: MiniDV. These tiny

Pro has established itself as the DV editor of choice. Ultimately, the DV process is so appealing because it's streamlined, relatively inexpensive, and delivers power previously available only in enormously costly professional systems.

On the creative side, filmmakers and artists love DV because in addition to delivering editing suite power to their desktop computers, it allows them to shoot heaps of footage without the worry of blowing the entire budget on expensive film stock. Digital video's advantages have grown so compelling that feature films such as *Time Code*, *Chuck and Buck*, *Julien Donkey Boy* and the recent *The Anniversary Party* have even been shot on MiniDV.

And I'm not even going to begin getting into things like the now-substantial (and growing) broadband Internet audience capable of watching decent quality video, or the rapidly expanding television choices offered through digital cable and satellite and



The JVC JY-VS200U shoots crystal-clear outdoor footage. This frame is the quality of a digital still.

Homework Web readings on digital video

www.z-pop.com
www.dv.com
www.dvcreator.net
www.dvshop.ca
www.nvlab.com
www.res.com
www.unhollywood.com
www.videomaker.com



ries the world of digital video

the coinciding demand for niche programming, or the widespread adoption of DVD.

I could go on.

Add all this up and it's easy to see why DV is in demand.

A cold splash of water

The DV backlash hasn't arrived quite yet...but let's just pretend.

Anything termed a "revolution" is going to be accompanied by plenty of hyperbole and outright falsehoods. First, MiniDV's image quality is often exaggerated. In fact, when I was rhyming off the films shot on MiniDV, I'm sure many of you realized the common thread between those otherwise disparate pictures: they all look kinda crappy. Hollywood professionals have established that DV's image quality just isn't up to snuff cinematically, and I strongly doubt MiniDV will be anything more than a niche format for no-budget, independent filmmaking. MiniDV footage is actually more akin to something you'd see on the less glamourous television set.

Fanciful parallels are sometimes drawn between DV and the desktop publishing upheaval of the early 90s, but the only real similarity is that they're both creative pursuits. With DTP, the processes that came before were suddenly passé. More expensive, older methods were actually inferior. DV tools are not su-



Final Cut Pro has deservedly risen to the top of the non-linear video editing heap.

perior—just cheaper and more accessible. You can't just pick up an iMac and a DV camcorder and start butting heads with DreamWorks. MiniDV lets you edit good quality video—and that's all. Video professionals—except perhaps on the low-end—have little to worry about.

*Short Films
on the Web
Need inspiration?
Check out these
sites*

(Unless otherwise noted, all Web addresses are simply the name of the site followed by ".com".)

SPUTNIK 7: Awe-inspiring. It could use more updates, but this is currently the spot on the Web for superior shorts and music videos. Refreshingly free of the "viral" videos that clutter many other sites, and I've found the streams to be very solid.

ATOM FILMS and **IFILM**: The two big dogs of video streaming are more alike than different. Both feature loads of garbage and the "hits" are more triumphs of shoestring ingenuity than anything else. Still,

both sites are deep and worth browsing. iFilm has just been redesigned (for the better), but is now less focused on shorts. I've found the streaming for both to be iffy.

HOTWIRED ANIMATION EXPRESS: (hotwired.lycos.com/animation) Some superb animated shorts can be found at this division of HotWired. Nice, simple design too.

HEAVY: One of the most fully-realized high-bandwidth sites out

there. Not a shorts site, per se, but includes plenty of animation and video and transcends the gimmickiness of many bandwidth-heavy sites. Absolutely elite design. Now has a (doomed) pay section.

And if that's not enough...
Always Independent Films
Britshorts
Burly Bear
Eveo
Hypnotic
Icebox
Underground Films

The DV Diaries: One man's adventures

Despite the high profile of some Canon and Sony models, camcorders like the JVC JY-VS200U (top) and PANASONIC PVDV951 (bottom) shoot beautiful DV. The JVC is a single CCD camcorder that uses a "Rapid-Image-Shift" AIS lens system to triple its pixel resolution. The Panasonic is a low cost three-CCD (1.6 million pixels) camcorder.



Platform wars revisited

Okay, I'm done editorializing about the digital video revolution. Here's how I've been faring thusfar.

I use both Mac and Win2K systems at home. When I started getting into DV, I figured the Mac's simpler hardware management and the superior Mac-only tools (*iMovie* and *Final Cut Pro*) would make it my platform of choice. On current Macs, DV just works, straight out of the box. On a PC, you have to shell out for some upgrades, then roll up your sleeves and install some stuff—or have a system custom-built.

But since my old-ish iMac doesn't include FireWire ports (essential for feeding DV into your computer), and I couldn't buy a G4 right away, I figured I'd start off in DV by upgrading my Windows 2000 system, then perhaps switch over to the Mac later. I picked up Pinnacle's *StudioDV* at a local retailer for just over a hundred bucks. This package not only includes a FireWire card, but also the *StudioDV* application, a fine low-end editor not quite as sweet as Apple's *iMovie*.

I went on to buy 512 megs of Micron RAM (just over \$100 from NCIX.com) to ensure everything runs smoothly and a 40 gig

Western Digital hard drive (just over \$200 from Future Shop online) to add alongside my 20 gigs. It's essential to put your DV footage and your system and apps on separate hard disks; otherwise, your footage will end up being fragmented around your disk, making playback jumpy. You'll also need a reasonably fast hard drive. RPM is the deciding factor: 5400 is just head-above-water; 7200 should really be considered the minimum. I made certain most of what I bought was Mac-compatible, so if my Win2K exploits didn't pan out, I could pull out my new hardware and put it in a Mac. I'm fearless-but-not-exactly-skilled with the insides of a computer.

But installing the RAM and FireWire card was dead simple. The hard drive didn't come with Win2K software, so I e-mailed Western Digital's tech support. They got back to me the next day and I was done. Ready for DV without much difficulty.

My run-of-the-mill PC clone cost me about CDN\$1500, and I spent about \$500 upgrading. I now have a solid DV workstation and no plans to switch to the Mac. I think an equivalent Mac system would cost around \$3000 (I'm not including the iMac since it has little expandability and no drive bays). I'm by no means a hardware wiz, so if I can upgrade my PC for DV capability, most of you can, too. But I gotta admit, if you're buying a new system, I'd opt for a G4 and save yourself the nuisance.

DV software

For video editing, the major players are Apple's *Final Cut Pro* and *Adobe Premiere*, the formerly dominant app that FCP deservedly trounced on the Mac side. *Final Cut* is much more expensive than *Premiere*, but still very sexy.

More tempting than *Premiere* alone is Adobe's *Digital Video Collection*, which gives you *After Effects*, *Premiere*, *Illustrator* and *Photoshop* in one package. Four superb programs for less than two grand—an absolute steal. On the low end, Pinnacle's *StudioDV*, the software which initially got me delving into digital video, is the closest thing I've found to *iMovie* for Windows. The program is very easy to use and even includes an enviable low-res capture feature: you can obtain all your footage low-res, then after you've edited everything, it will recapture the needed hi-res footage. However, *StudioDV* is quickly out-grown—I felt I had mastered the program after only a few sessions—but if you just want to edit video, *StudioDV* will do the job with minimal fuss.

in the world of digital video

If you simply want to cut video, the likes of *iMovie* or *StudioDV* are all you need. You'll be editing quickly and getting excellent results.

Me, I moved on to *Adobe Premiere*. It doesn't feel quite as refined or usable as *Final Cut Pro*, but it's still enormously powerful and easy to use. I learned *Premiere* from the book *Premiere 6 Visual Quick Start Guide*. It's a so-so volume really, arranged more to the structure of the software than to the way we use it. It also has a generic, generally uninsightful tone, but is still thorough and well-illustrated. Hey, it did the job.

I've recently discovered the pricey-but-impeccable Total Training tutorials and will be purchasing their *Premiere* series; samples can be found in Adobe's *Premiere* Tutorials section. *Premiere* is also well-covered in mainstream publications like *VideoMaker*.

But which camera do I buy?

Many of you will be eager for the answer to the big, expensive question: which camera do I buy? Unfortunately, the rule of thumb seems to be you get what you pay for. There are no miracle deals—comparable camcorders have comparable price tags. The good news is that I've had my hands on a half-dozen different DV cameras and been impressed by the video quality of all of them. It seems almost any new MiniDV camera shoots pretty good-looking footage. I can't cover all the details in selecting a DV camcorder, but here's some major factors to consider.

The first thing you'll need to decide is whether you want to go with a three-CCD camera or a single CCD. Three-CCD cameras are dramatically more expensive, but give you the professional quality that DV enthusiasts rave about. They tend to cost about twice as much as a single CCD model—we're talking at least CDN\$3000 versus around \$1500. Most non-professionals just won't be able to rationalize that kind of investment, but if you have the money, you certainly won't regret it.

If you also want to take still pictures, a growing number of

camcorders double as digital cameras. This can make a DV camcorder a more appealing investment. I'll warn you, however, that downloading still images is often more cumbersome than you'd expect, and image quality usually doesn't match stand-alone digital cameras.

Look out for boasts about zoom ratios like 700x. These are always digital zooms—a process that essentially enlarges pixels. The results are typically pixel soup. The optical zoom ratio is actually your useable zoom, although some digital zooms are decent up to

about 40-50x. I don't recommend buying online unless you've previously handled the model you're buying. Subjective issues like the feel of a camera and the layout of controls are often the only deciding factor between otherwise identical camcorders.

Perhaps most important, remember that image quality is only half the story. While most DV cameras deliver good point-and-shoot results, audio is more complicated. Onboard microphones typically don't give good results for a host of reasons. Foremost is that they're often as cheap as can possibly be gotten away with. They also tend to pick up a lot of ambient (surrounding) sound that has nothing to do with what you're shooting, as well as the sound of your hands moving around on the camera. Without good audio, your results will always feel like a home movie. If you want good footage, you'll need to shell out for a good microphone. At the minimum, you'll need to invest in a better on-board camera, and the more ambitious among you will want a fleet of different mikes for different situations. And forget about picking up a mike at Radio Shack for \$20—it's probably worse than what you've already got. I'd guesstimate that \$300 is the minimum for a good performer.

Perhaps because Canon and Sony camcorders have been used exclusively for high-profile projects like feature films, they have attained a premium reputation in the field. But don't forget about other manufacturers who are producing equally good cameras.

I recently previewed camcorders from JVC and Panasonic, two companies known as makers of solid electronics but lesser-known in the DV arena. The Panasonic PVDV951 and JVC JY-VS200U are well worth consideration. The Panasonic model is one of the less expensive three-CCD cameras you'll find, while the JVC shoots nearly as well despite being a single CCD camera. Both feature a compelling blend of high end features and shoot beautiful DV footage equivalent to their Canon and Sony counterparts.

Like I said, I have yet to see a DV camera that delivers a disappointing image. Don't torment yourself too long about which camcorder to buy. Get one, and get out there, and get shooting.

And now I gotta go shoot...

(My second short will be posted by the time you read this article. Please drop by www.Kirblooey.com to see what I'm up to.)



The JVC JY-VS200U's 16:9 mode gives you a wide, cinematic-style image. The underside of the coals turned green here (probably because of my relentless twiddling) but I like 'em.



The Panasonic PVDV951 handles odd lighting situations pretty well. Here, the camera's automatic controls had to contend with dim lighting overall and shafts of bright light. Like all MiniDV images, the highlights are prone to blowing-out.

Kirby Ferguson is a Toronto-based graphic designer and technology writer. On the Web you can find him at www.KirbyFerguson.com.