

DV3 PRODUCTIONS

HP Workstations deliver stable, speedy postproduction



Dv3 Productions

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—Obin Olson, co-owner, Dv3 Productions, Wilmington, N.C.

HP customer case study: Independent Dv3 Productions finds low-cost HP Workstations transform workflow, deliver high-end results

Industry:
Entertainment

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Objective:

Digital imaging/motion picture postproduction

Approach:

Dv3 Productions is using HP Z-series Workstations to perform the full range of digital editing and postproduction roles

IT improvements:

- Improved stability
- Ability to process 12-bit, compressed color motion images

Business benefits:

- Improved rendering
- Fewer interruptions due to equipment limitations
- Improved color control, fidelity



Obin and Amariah Olson represent a new generation of “film” makers. They don’t use film, though, and never have. Instead, they turn to the very latest high-end, high-resolution digital cameras to capture motion footage, and HP Workstations to edit and finish their work.

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The Olsons launched their company, Dv3 Productions, in 2000. It started with modest corporate videos and quickly moved on to produce commercials, dramatic television pilots and reality programming, and most recently, a feature film. The award-winning production and postproduction company is based in Wilmington, N.C., but on any given day the Olson brothers can be working anywhere.

They might spend a full day in the field shooting, then retire to a hotel suite and spend the night editing, mixing audio, and sending rough cuts out for client approval on an HP EliteBook 8730w Mobile Workstation with DreamColor Technology.

In the company's home office, they work on HP Z800 Workstations with eight processor cores rated at 2.4 GHz. "All I know is it has eight cores, renders really fast, and I'm happy," Obin says with a wink. It runs on the 64-bit edition of Genuine Windows Vista® Business in order to take advantage of 64-bit processing, and is equipped with an NVIDIA Quadro FX 4800 video card to optimize image processing and make best use of the graphics processing unit (GPU).

"In editing, horsepower equals render speed, and render speed equals time saved," he says. "The HP Mobile Workstation is the fastest I've seen. With four cores (in an Intel® Core™2 Extreme processor), I can finish work on the road. I'm constantly revising high-resolution work even on my laptop—something you just couldn't imagine doing until now."

"Our future is entertainment production from start to finish, and the technology advantages we can leverage—including HP Workstations—will play an important role in shaping our success."

Obin Olson, co-owner, Dv3 Productions

In an industry long dominated by Apple hardware for postproduction, the Olson brothers chose a different path. In 2007, they bought consumer-grade, quad-core HP computers and found they were highly stable and worked well with Adobe® Creative Suite® 4

Production Premium software, their core software suite. With the move up to HP Z-series Workstations, Obin Olson says the brothers have the most stable hardware/software combination he's ever seen, along with lightning speed.

"I've been cutting one project for three days straight, with no crashes, no slowdowns, no problems of any kind," he says. "That's unheard of when you're working with 2K and 4K files. These workstations just eat it up."

To fully appreciate what the Olson brothers are doing with HP Z-series Workstations, you have to consider the recent history of digital postproduction. Not long ago, no one would consider editing production-quality motion images on a desktop workstation—let alone a laptop. Instead, high-quality images (either from film or digital video) would be down-sized in resolution to standard video for "offline" editing. That reduced the amount of data to a manageable level for a desktop computer. An editor would cut and assemble a piece in standard video, then get it approved by the customer. Next, the edit decisions would be captured and used in an expensive, high-end editing suite (rented by the hour and typically equipped with powerful servers) to work with the high-resolution images.

With their HP Z-series Workstations, the Olson brothers eliminate the "offline" stage entirely. "It's not about online versus offline anymore. It's about what your machine can render," says Obin Olson. His brother, Amariah, reduced the rendering time for one project from 35 minutes on his previous-generation hardware to just five minutes on the HP Z800 Workstation.

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Customer solution at a glance

Primary applications

Digital motion imaging postproduction

Primary hardware

- HP EliteBook 8730w Mobile Workstation
- HP Z800 Workstation
- HP DreamColor LP2480zx Professional Display

Primary software

- Genuine Windows Vista® Business 64-bit edition
- Adobe® Creative Suite® 4 Production Premium
- LightWave 3D
- Digital Fusion

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Notes Obin, "You get three Z-series Workstations and you have a render farm equivalent to 40 or 50 machines from just a couple years ago."

Demanding requirements

The Olsons not only edit in high resolution, but edit extremely large, demanding files. They capture their motion images on a RED camera, a high-performance digital cinema camera that delivers 4K (4096 horizontal pixel) resolution along with a wide dynamic range and 12-bit color in its native RAW format. At 4K resolution, that's more than five times the amount of information of formats recorded by competitive cameras with embedded image compression.

The sheer amount of data would choke most computers. But not the HP Z-series Workstation. "Working with a RED RAW file and expecting it to playback at 24 frames per second requires four times the processing power to compress and decompress the images," notes Obin. "It's one of the hardest things you can ask a CPU to do."

But the Olson brothers insist on working with RAW format RED files because it allows them to capture image data and manipulate it like no other digital workflow. "We can push the image all over the map in terms of tonality and color gamut, just like you would a film scan," says Obin. "All of which pays off for the client. It looks great, with crisp, more saturated and detailed images."

They use SCRATCH Digital Intermediate Process Solution from ASSIMILATE for color finishing. Obin says it's the ideal tool for color finishing RED files and that with the HP Z800 Workstation and NVIDIA video card, it all takes place in real time.

To maintain control over the color gamut throughout postproduction, the brothers use HP DreamColor LP2480zx Professional Display. "The DreamColor monitors are very, very accurate with calibrated color and contrast, and that translates directly from desktop to cinema, to computer screen, to every output option our clients might have. So I know I can see the color once and it's done," says Obin.

Delivering value, stability

Dv3 Productions works in an industry where creative talent is prized above all. But in order to get their foot in the door, Obin and Amariah Olson have had to deliver high-end production value at the most reasonable possible cost. Their workflow—from image capture with the RED camera, through editing and other postproduction on HP Z-series Workstations using primarily the Adobe CS4 suite—has been key to their success.

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Today, the Olsons handle every aspect of postproduction—from editing to sound mixing, animation and compositing—on their Z-series Workstations. Adobe CS4 (including Adobe Premiere Pro, After Effects, Soundbooth and OnLocation) is their primary toolbox, but they also utilize such software as LightWave 3D and Digital Fusion.

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It was a contact at Adobe who originally recommended the Olsons consider HP Workstations. When they thought about it, that recommendation made perfect sense. "We've always had a lot of HP products—DVD burners, printers, etc.—and it seemed like all our HP products just worked better. The underlying stability is noticeable with HP products. And that's important to us," notes Obin. "When you're trying to get things done on deadline to satisfy demanding clients, the last thing you can afford is to get interrupted by an equipment failure."

After three months of using the Z-series Workstations, often with 12-hour editing days, Obin Olson says Dv3 has yet to experience any problems. "That's huge. That's where Macs once seemed to have a leg up on their competition. But I think Adobe and HP products working together give us the same kind of synergy."

Where closed, proprietary systems were once the norm, open systems are now a key advantage for the Olsons. Using hardware and software from HP and Adobe is enabling them to deliver extraordinary images with great value, Obin notes. Equally important, it's allowing them to direct resources elsewhere.

"Having standard software and hardware lets us go out and buy a lot more camera gear and other equipment for shooting," says Obin. "Overall, our

costs are still lower than what you typically find in the industry. But truthfully, the monetary savings are secondary to the power and flexibility we have. Our technology choices have taken away many of the limits and constraints, allowing us to go wherever we want creatively. We're not limited in format or resolution."

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Looking ahead, the company is already working on its first feature film, with plans to become involved in the New York and Los Angeles media markets. In fact, Obin goes so far as to say his company's future is directly enabled by HP, Adobe and RED camera technology.

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