

## Case study

# Jonathan Bird Productions

## HP Z820 Workstation powers through editing, rendering process



### Industry

Television Production

### Objective

Deliver stable, high-speed editing platform capable of editing multiple digital formats on the fly

### Approach

Jonathan Bird Productions moved to an HP Z820 Workstation

### IT matters

- Multi-core Intel processors and internal RAID storage power through transcoding, editing and graphics rendering
- Internal 12 terabyte RAID storage ensures preservation of raw footage and in-process edits
- Move to Windows® 7 Professional enable adoption of more flexible Adobe® CS6 editing suite

### Business matters

- Faster rendering: 12-hour rendering time with legacy system completed in 2 hours with new HP Z Workstation<sup>1</sup>
- Elimination of transcoding step prior to editing cuts days from the production schedule

HP recommends Windows.



**“We do our own graphics, color correction, our own online edit and closed captioning, so we need a platform that’s both powerful and versatile. Since we got our HP Z Series Workstation, we spend less time waiting, less time troubleshooting, and more time editing.”**

— Jonathan Bird, naturalist and underwater photographer



*Jonathan Bird's Blue World* is an educational family-oriented underwater adventure series hosted by naturalist and underwater photographer Jonathan Bird. It is co-produced by Jonathan Bird Productions and the non-profit organization Oceanic Research Group. The 30-minute episodes cover a variety of subjects about animals, marine research, underwater exploration and discoveries and always feature stunning underwater photography. The series is broadcast by United States Public Television and available online. As technology demands for in-house production created ongoing challenges, Bird transitioned to the high-performance HP Z Series Workstation to streamline workflow and meet its high production standards.

## HP recommends Windows.

*Jonathan Bird's Blue World* takes viewers underwater to learn and marvel at the wonders of marine life and the aquatic ecosystem. As the complexity of working with sophisticated graphics and multiple digital formats has grown in recent years, the program's technical demands outstripped Bird's editing capability. Desperate to speed production, Bird turned to an HP Z820 Workstation—dramatically reducing rendering time for a typical show.

"On the HP Workstation, we literally save days of rendering time," says Bird, a naturalist and underwater photographer. "Editing is very processor-intensive, and in the past, our hardware just got in the way of the software. Those problems are behind us now. We spend less time waiting, less time troubleshooting, and more time editing."

### From the web to TV

*Blue World* grew out of Bird's experiences as an underwater cinematographer. The science/adventure program is shot and edited entirely by Jonathan Bird Productions, and is co-produced by the Oceanic Research Group. It started as a web broadcast in 2007, but soon found a home in the United States on Public Television, which raised the bar for its output. From low-res, 640 x 360 pixel resolution for the web, the company needed to produce professional quality high-definition output.

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— Jonathan Bird, naturalist and underwater photographer

Each half-hour episode consists of three separate segments, like a typical news magazine show. For online viewing, each segment is a self-contained webisode. A segment may focus on a marine animal, research, underwater exploration or recent discoveries.

Footage is captured in the field by cinematographer Bird and his team, in multiple

digital formats. Then the crew returns to the editing suite to begin the process of assembling a show. That's where problems with the old editing workflow appeared.

### More horsepower for editing

Bird's company had, like many small production companies, chosen Apple Macintosh Pro computers for editing tasks. "But it was time for us to upgrade. We needed more horsepower, and even the newer models just weren't going to meet our needs," says Tim Howe, the company's primary editor.

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Rendering in sophisticated graphics software is extremely processor-intensive," Howe explains. "Sometimes a rendering would take all night just to do one graphic."

Dealing with multiple digital formats posed additional challenges. "In a typical show, we're mixing five or more different formats," explains Bird. It was virtually impossible to simply translate different formats in real time with Final Cut Pro on the Mac. "Instead, we would have to spend several days transcoding all the footage into a common format before we could actually begin editing."

### HP Workstation speeds process

The new HP Z820 Workstation eliminates that bottleneck. With Intel® Xeon® ES 3.1 GHz liquid cooled processors featuring 12 processing cores, along with 48 GB of RAM and an NVIDIA QUADRO K5000 video card, the workstation can deal with the various digital formats on the fly. "Now all the footage goes right into the HP system and, coupled with Adobe Premiere Pro, without any transcoding," Bird explains. "It saves an enormous amount of time—literally days—from the editing process for each program." The system's internal 12 terabyte RAID storage protects any raw footage and in-process edits.

## HP recommends Windows.



As for rendering sophisticated graphics in After Effects, the HP Workstation speeds the process exponentially.<sup>1</sup> “It’s worlds beyond what we had before,” Bird says. “We’ve got graphics that were taking 12 hours to render on the Mac, and now those same graphics might be done in two.”

### Software compatibility

Another reason for switching from Macs to the PC-compatible HP Workstation was the evolution of editing software. Many editors who began working on Macs automatically gravitated to Final Cut Pro software. But over time, that presented technical barriers to Bird’s production.

“When we got our HP Workstation, we were impressed by its speed and very happy to find its reputation for stability is well deserved. We’ve been trying to crash our workstation and still haven’t figured out a way to do it.”

—Tim Howe, editor

The most recent software release from Apple for the Mac dropped all support for mastering on tape, which meant Bird could not upgrade to it. “We have a contractual requirement to

deliver our programs on HDCam tape. If I can’t provide a time-code accurate master on tape, I can’t deliver to all my clients,” he explains. “So we were stuck with using an older software version that doesn’t even support all of the new formats we use.”

Given a lack of adequate hardware, Bird says he was more than ready to switch to the world of Wintel computing and move to Adobe Premiere Pro when upgrading his editing suite.

### From Macs to HP Workstation

“We heard from several associates that the high performance HP Z Workstations are rock solid and we felt HP was offering a more compelling solution to meet our needs,” Bird says. “With the changes in software, it became clear that our production company would be better served with Adobe Premiere, and we would no longer be locked into the Mac,” he explains.

“I took the leap to HP ordering a high-end Z820 Workstation. When it first arrived, we ran some bench tests and couldn’t believe how fast it was,” says Bird. “In initial testing, it was rendering complex graphics in After Effects six times faster than our Mac.”

After implementing the Z Workstation, Bird sees ongoing reliability in performance. “I think it’s fair to say that the Z Workstation platform is totally stable for video editing. The Z Series performance is definitely not your average PC,” he explains. “It handles 4K files like they are standard def!”

## Customer at a glance

### Application

Video editing and postproduction

### Hardware

- HP Z820 Workstation
- HP DreamColor LP2480zx Professional LCD Monitor

### Software

- Adobe Premiere
- Adobe After Effects
- Adobe Encore
- iZotope RX2

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“The DreamColor monitor is our reference standard. We can’t control all the televisions that people will be using to view our program, but with good color control, we have confidence that what we’re sending out looks good and is color accurate.”

— Jonathan Bird, naturalist and underwater photographer

With the move to Windows® 7 Professional, Bird’s company also has a broader range of editing and postproduction software to choose from. It has chosen to standardize on the Adobe Creative Cloud video applications including Adobe Premiere, After Effects and Photoshop. For sound sweetening, it uses iZotope RX2.

“One of the things that distinguishes us is we do everything in-house,” Bird notes. “We do our own graphics, color correction, our own online edit and closed captioning. So we need a platform that’s both powerful and versatile.”

## HP DreamColor delivers accurate, beautiful color

For color correction, Bird also invested in a 24-inch diagonal HP DreamColor LP2480zx Professional LCD Monitor. The monitor supports over one billion active colors—64

times the colors supported by traditional LCDs—using 30-bit LCD panel technology. It enables Bird’s company to customize seven color space presets to achieve accurate rendition of sRGB, Adobe RGB, Rec. 601, Rec.709, and DCI-P3.

“The DreamColor monitor is our reference standard,” Bird says. “We can’t control all the televisions that people will be using to view our program, but with good color control, we have confidence that what we’re sending out looks good and is color accurate.”

And looking good is a big part of what *Jonathan Bird’s Blue World* is all about. The mysteries of the aquatic world are still eye-opening to most viewers. As a cinematographer first, Bird is always out to get the most stunning underwater photography possible.

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— Jonathan Bird, naturalist and underwater photographer

“We like to bring the wonder of the underwater world to people who may never otherwise get to see it,” he says. “The mysteries of the aquatic world are still eye-opening to many of our viewers.”

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<sup>1</sup>Comparisons based on rendering time with a legacy 2009 Mac Pro core compared with the current HP Z820 x core Workstation.

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