

NVIDIA MAXIMUS SPURS DRAMATIC CHANGES IN DIGITAL SPATULA FOUNDER'S WORK AND LIFE

At the start of a TV sports program, an elaborate metallic 3D ESPN logo moves at an angle across the screen, then pivots and recedes from the viewer. At an electronics trade show, Toshiba launches a new line of laptops with a looping video highlighting the products' advanced features and capabilities. Tourist bureaus for California and Italy show videos with gorgeous beauty shots of locales to lure visitors to their regions.

“The Maximus system has changed my life. Its effect on my work and my life is nothing short of revolutionary.”

What is the common thread? All were projects of Steve Taylor and Digital Spatula, a boutique video production company founded in 1997 and based in southern California. Since then, Digital Spatula has been providing full-service pre-production, production, and post-production services for clients that include CNN, BMW, Toshiba, Jaguar/Land Rover, Johnson & Johnson, and the California Angels baseball team.

Most of Digital Spatula's work is for corporate and industrial clients – including new product releases, corporate overviews, and video loops playing in trade show booths – as well as corporate-style videos for nonprofit organizations, effects for TV and movie productions, and the occasional music video.

“We specialize in projects that have a strong visual element and that would be considered very graphics-heavy,” said Taylor. “My skill, experience, and passion lie in blending video editing and motion graphics – sometimes putting video inside motion graphics, sometimes using motion graphics to support the video. It entails lots of green screen work, lots of layers, and lots of rendering.”



Digital Spatula - Logo animation



ESPN - Design comp for ESPN interstitial



Italy - Motion Graphic branding for Italy travel

The complexity and volume of Digital Spatula's projects was pushing the studio's technology beyond its limits – until Taylor was introduced to the NVIDIA® Maximus™ platform, and suddenly the quality of both his work and his life improved exponentially.

Challenge

Taylor relies heavily on Adobe Premiere Pro and After Effects software, for timeline-based video editing and for digital motion graphics and compositing, respectively, as well as Maxon Cinema 4D software to create ray-traced 3D moving text for credits and logo animations. He wanted to move to the Creative Suite (CS) 6 versions of the Adobe applications, but his Mac Tower, equipped with only the base-level graphics card, meant he could not use the new CS6-enabled features, especially with After Effects.

Even with the CS5 versions running on his Mac, Taylor was spending an inordinate amount of time waiting for Maxon Cinema 4D renders to complete. And because After Effects and Premiere Pro had to be run as two separate applications,

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it took a great deal of work to merge things together, such as combining frames from Cinema 4D with video in Premier Pro. As a result, he was limited in the amount of work he could take on and the number of iterations he could perform to perfect graphics. His creative process was fragmented by long render times.

"I want to be productive in my work and deliver the highest quality possible, and I also want a great quality of life," he said. "I can't achieve any of these goals if I'm stuck watching a render bar go across the screen."

Solution

As an Adobe beta tester, Taylor found out that a switch to the NVIDIA® Maximus™ platform – combining NVIDIA Quadro® GPUs with the NVIDIA Tesla™ C2075 companion processor – would not only let him take advantage of the latest and greatest After Effects features, it would also make all the CS6 applications and their effects more useful.

"The faster rendering time made possible by the Maximus system has dramatically improved my creative process."

Taylor upgraded his After Effects and Premier Pro software to the CS6 versions and installed in his studio an HP Z800 workstation running the Maximus platform with a Quadro 4000 GPU and the Tesla C2075 processor.

He immediately began testing the performance of the new Maximus system for tasks such as creating complex 3D motion graphic effects, or moving logos around to make them look photorealistic – tasks that involved ray tracing, warp stabilizing, multi-layer color correction, rendering, and other complex functions. He also began experimenting with the consolidated software environment of CS6.



Army - 3D motion graphics for recruiting video



Anthony Wright - Greenscreen music video for MTV UK artist

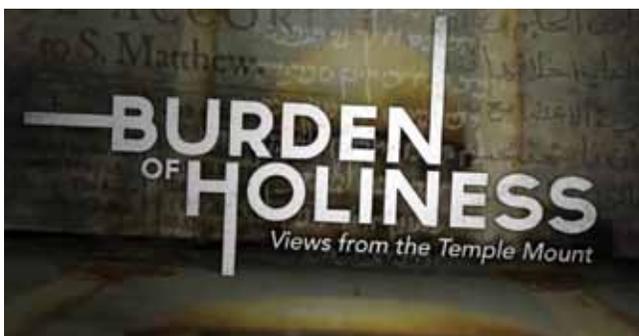
He soon found that the performance improvements compared to his old system were no less than astounding.

Impact

“The Maximus system has changed my life,” said Taylor. “From the first second we had it up and running, we saw the startling increase in power and speed afforded by the software and hardware marriage. Its effect on my work and my life is nothing short of revolutionary.”

He set up a test project using After Effects to create a few extruded shapes and text – a feature Taylor knew he wanted to use frequently in his work. He rendered the same 31 frames (about a one-second video clip) at the same time, with the same settings, on the Mac system without CUDA processing and the new Maximus system.

“The test completely choked the Mac system,” he said. “At first, I saw a 48X increase in rendering speed, but then I realized only the Quadro card was dedicated to CUDA processing. With both the Quadro and Tesla cards engaged, rendering speeds jumped by a whopping 68X compared to the Mac.”



Title animation from feature-length documentary currently in production

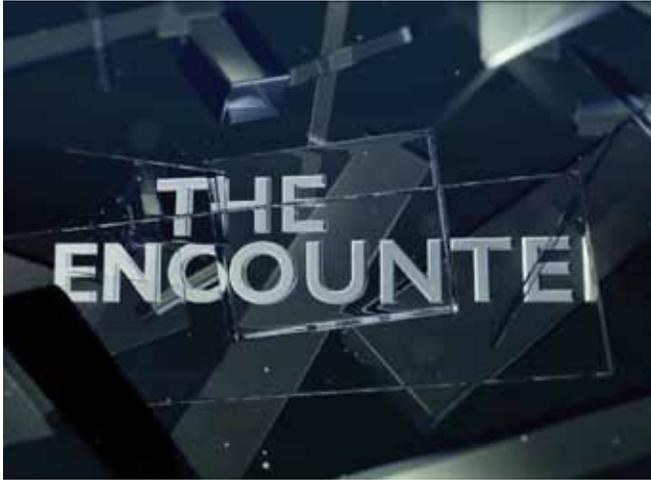
Here’s a comparison of rendering times with the old workflow compared to Digital Spatula’s Maximus workflow, based on Taylor’s tests:

	Old Workflow	Maximus Workflow
1-second video clip	4 hours	3.5 minutes
15-second video clip	60 hours	52.5 minutes
one minute of video	240 hours*	3.5 hours
* equivalent to 30 eight-hour days		

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In addition, the Maximus system enabled real-time playback of even clips with complex effects applied, which was impossible for Digital Spatula previously. The NVIDIA platform also meant that Taylor could do all of his work within a single suite of applications – Adobe Creative Suite 6 – that are connected.

“The faster rendering time made possible by the Maximus system has dramatically improved my creative process,” Taylor said. “If I can design, see, render quickly in full resolution, make changes, and re-render – all without having to take periodic half-day breaks – I can increase the number of iterations on a project, and I don’t lose my train of



The Encounter - Title card for Feature Film Trailer

Perhaps the most profound change, however, has been in the quality – and quantity – of Taylor’s life away from work.

“I can now do other things with my time besides waiting for images to render,” he said. “I can spend more time with my family, and I can give back in ways that are important to me. I’m finally able to take time off to do some pro bono work for nonprofit organizations I believe in, which I always wanted to do but couldn’t consider before. I can’t express how satisfying it is to be able to use my resources, skills, and talent to help these nonprofit organizations. In a very real way, I credit the Maximus system for allowing me to be true to my calling to give back to the world.”

creative thought along the way. Ultimately, this leads to higher-quality work. Now that my hardware limitations have been lifted, I am able to go where my mind takes me creatively.”

It also means he can accomplish more work in the same amount of time. “I can take on more work and generate more income in a given week or month,” Taylor said. “I can also charge more for the work I do because of the higher quality.”

Taylor calculated that the Maximus system paid for itself quickly. “I figure the ability to take on just two extra jobs covers the price of the system,” he said. “The return investment for dollars spent on this system is some crazy multiple.”



NVIDIA® MAXIMUS™ TECHNOLOGY

For the fastest media workflow, Maximus technology combines NVIDIA® Quadro® and Tesla® GPUs to deliver both high-performance graphics and parallel processing. This is a truly unique technology that helps transform video editing, effects, animation, rendering, and media-creation workflows by allowing multi-GPU processing in a single workstation on one or more applications.

To learn more about NVIDIA Maximus, go to www.nvidia.com/maximus