

## NVIDIA and Partners Transform Entire Content Creation Workflow at 2012 NAB Show

### Creative Professionals Increase Their Speed, Quality and Productivity Through GPU Computing

LAS VEGAS, NV -- NAB 2012 -- Content creators ranging from 2012 Oscar winners Industrial Light & Magic, a division of Lucasfilm Ltd. (Rango) and Pixomondo (Hugo) to up-and-coming independents such as Bandito Brothers (Act of Valor, Waiting for Lightning) and smaller creative services shops such as Dawnrunner Productions and Digital Spatula are increasing the speed, quality and productivity of their workflows through the adoption of GPU computing featuring [NVIDIA® Quadro® and Tesla® GPUs](#).

Visual effects studios, post-production houses, advertising agencies and film studios are under constant pressure to more rapidly deliver better content under tight production budgets. They use NVIDIA GPU technology to transform their content creation workflows, using parallel computing on tasks once reserved for supercomputers or racks of costly CPUs.

"GPU computing is a key component of our innovation roadmap," said Dave Story, chief technology officer of Lucasfilm. "To achieve the breakthroughs we're known for, we constantly evaluate the tools and technology that our artists rely on for uncompromising quality and maximum efficiency. To that end, we're developing our own tools and using commercial software to leverage the immense power available to us through NVIDIA CUDA architecture and both NVIDIA Quadro and Tesla GPUs."

To improve the creation process -- from importing and processing high-resolution camera data through the entire post-production process -- leading software providers are expanding the breadth and depth of their GPU-accelerated product offerings. One example is Adobe® Systems Incorporated, which is demonstrating at NAB [a landmark upcoming new release of Adobe® Creative Suite® 6 that uses NVIDIA GPUs](#) to accelerate Adobe Premiere® Pro CS6, Adobe SpeedGrade® CS6, Adobe Photoshop® CS6, and, most notably, Adobe After Effects® CS6, which benefits from a new 3D ray tracing feature that is up to 27 times faster<sup>1</sup> on NVIDIA GPUs.

"I use After Effects every day, and 90 percent of my work is post-production with a heavy dose of motion graphics mixed with tons of video editing," said Steve Taylor, senior creative director of Digital Spatula. "By using the new 3D ray tracing capability in After Effects, running on an NVIDIA Maximus-equipped workstation, I'm getting so much more done in less time, freeing me up to be more creative and thoughtful about the project. I'm no longer interrupted by having to switch to a second 3D application to create compelling, animated 3D text and logos. Not only is it powerfully fast, efficient and easy to use, but After Effects CS6 also gives me more time to focus on delivering higher quality productions."

#### NVIDIA Maximus Technology

One reason content creators choose NVIDIA GPU technology is the immediate business value that comes from achieving both high-performance parallel processing and graphics on the same system, often in the same workflow.

[NVIDIA Maximus™](#) technology combines the power of NVIDIA Quadro professional graphics and NVIDIA Tesla parallel processing in a single workstation, enabling customers to, for instance, create motion graphics while rendering effects in the background -- with no impact to the artist's interactivity.

"Maximus literally saved the day for us," said James Fox, chief executive officer of Dawnrunner Productions. "We had a client ask us for overnight changes on a job that had taken us 32 hours to render. There was no way we could pull that off. We had just gotten our Maximus system and decided the only way to meet the deadline was to put it into production right then and there. We used it to run Adobe CS5.5 and Autodesk 3ds Max and completed the job with time to spare. No way could we have done that without Maximus technology."

At the 2012 NAB show, a number of companies are introducing support for NVIDIA Maximus technology, including Adobe, Blackmagic Design (DaVinci Resolve), Chaos Software (V-Ray RT), Cinnafilm (Dark Energy), eyeon Software (Fusion), GenArts (Sapphire) and Quantel (Pablo).

"Blackmagic Design is excited to support NVIDIA's new Maximus configurations for Windows with DaVinci Resolve," said Grant Petty, chief executive officer of Blackmagic Design. "By combining a single NVIDIA Quadro and Tesla GPU with Resolve, customers will be able to enjoy incredibly high performance color correction features, such as the ability to process an uncompressed RGB HD resolution video with five layers of real time color correction and image blur at 24fps. With a single Quadro and four Tesla GPUs, colorists using Resolve are able to color correct more than 20 layers of HD video in real time."

"We've seen the adoption of GPU computing more than double by software vendors in just one short year from NAB 2011 until today," said Greg Estes, industry executive, media and entertainment for NVIDIA. "It's pretty clear that customers across the content creation spectrum are embracing NVIDIA CUDA as the architecture of choice for GPU computing, and our software partners are seeing that they can grow their business by being on the forefront of this trend."

NVIDIA Quadro and Tesla GPUs both feature innovative [NVIDIA CUDA®](#) architecture, and NVIDIA Quadro GPUs feature unique stereo 3D capabilities, support for low-latency SDI video I/O, and support for multiple displays of up to 4K resolution from a single system.

A partial listing and descriptions of the various innovations leveraging NVIDIA GPU technology that are on display at NAB 2012 include:

[Adobe](#) (Booth SL2624) is demonstrating its upcoming Adobe Creative Suite 6 Production Premium software accelerated with NVIDIA Quadro pro graphics, including NVIDIA Maximus technology, to accelerate Adobe After Effects CS6, [Adobe Premiere Pro CS6](#), [Adobe SpeedGrade CS6](#) and Adobe Photoshop CS6. Adobe will highlight its [new NVIDIA GPU accelerated 3D ray tracing feature in After Effects CS6](#). It simplifies and accelerates the motion graphics workflow like never before with a powerful new 3D compositing pipeline that employs ray tracing for uncompromised image quality. Creative pros can now incorporate extruded and beveled text and shapes directly within After Effects CS6, integrate their rendering with its native layers and eliminate the traditional time-consuming back and forth with external 3D tools. Adobe's new "Ray trace 3D" renderer leverages the [NVIDIA OptiX™](#) ray tracing engine for rendering realistic materials, accurate reflections, soft shadows, depth of field and motion blur. The new ray tracing becomes truly interactive, delivering final frames up to 27x faster when using NVIDIA GPUs, as compared to dual hex-core CPUs alone.<sup>1</sup> Adobe Creative Suite 6 software continues to feature the NVIDIA CUDA-accelerated Mercury Playback Engine in Adobe Premiere Pro, providing up to an 8x performance boost<sup>2</sup> for fast video editing. Adobe After Effects CS6 and Adobe Premiere Pro CS6 is also

being demonstrated in the NVIDIA booth (SL9215).

[Chaos Group](#) is constantly working to ensure it creates the best tools for customer workflows. Its industry-leading V-Ray rendering engine now offers support for NVIDIA CUDA architecture. With CUDA, V-Ray RT is now capable of better harnessing the speed and performance of NVIDIA GPUs. This provides higher reliability and performance, and more rapid GPU support than before while providing the responsive experience users have come to rely upon in V-Ray RT.

[Cinnafilm](#) Inc., the world leader in GPU-based Standards Transcoding, noise reduction and film simulation, is demonstrating its Dark Energy Professional image texture management and optimization software platform in the NVIDIA booth (SL9215), showing how professionals can accelerate its full potential using NVIDIA Maximus technology.

[Elemental Technologies](#) (booth SU10012), a leading supplier of video solutions for multiscreen content delivery to any IP connected viewing device, is demonstrating a high-performance solution for live event production in the NVIDIA booth (SL9215), featuring the new Elemental Live 150 Series powered by dual NVIDIA Tesla GPUs. The Elemental Live 150 Series packs high performance video processing and throughput in either a rack mount or desktop form factor, allowing live event producers to output streams for multi-camera angle viewing.

[eyeon Software](#) Inc. offers a complete line of image processing and management applications that utilize NVIDIA GPU technology to provide massive processing power for VFX finishing of feature films, stereoscopic and broadcast production. The eyeon Software Fusion 3D renderer is now running on CUDA architecture, offering incredibly fast performance and cementing Fusion's reputation as one of the fastest, most comprehensive postproduction applications available.

[GenArts](#), Inc. (booth SL2205) provides robust visual effects tools to the industry's leading artists across every major host application. Its popular Sapphire line of plug-ins, which are GPU-accelerated to leverage NVIDIA CUDA architecture, now support NVIDIA Maximus technology. Industry pros who rely on Sapphire to streamline their workflows can now look forward to the highest levels of productivity while creating visual effects within their video editing or compositing software.

[Harris](#) (Booth N2502/Diamond 2/N3400), which serves government and commercial markets in more than 150 countries, is demonstrating new features in both its Inscribe G8 and TitleOne AE live graphics systems. Inscribe G8 is built for high-end graphics creation, and utilizes the NVIDIA Quadro 4000 professional GPU with NVIDIA CUDA technology to significantly reduce channel hardware density for a greatly reduced footprint (2RU), lower power consumption and improved performance and clip playback scalability for the execution of high-caliber, complex 3D graphics and animations. The TitleOne AE improves on previous-generation TitleOne graphics systems by adding a high-performance NVIDIA Quadro 600 professional GPU and enhanced processing for maximum flexibility, offering sophisticated graphics creation features for real-time single-channel HD/SD or SD-only 2D-in-3D graphics.

[Marquise Technologies](#) (booth SL9109) creates high-end solutions for the post-production industry. At NAB, the company is demonstrating a new real-time debayering engine, Mosaic, for use with ARRIRAW, Phantom and Adobe DNG Converter, accelerated and processed exclusively with NVIDIA Quadro professional GPUs. By harnessing the tremendous processing power of NVIDIA GPUs and CUDA architecture, Marquise Technologies is able to use increased computational complexities in its proprietary debayering algorithms without the fear of bandwidth or processing bottlenecks. This adds additional accuracy when bringing an image from the RAW realm into the RGB world, all in real-time.

[Perceptive Pixel](#) (booth SL1629MR), a recognized leader in interaction design, is demonstrating its 27-inch professional-grade, ultra-high-resolution, multi-touch desktop LCD in the NVIDIA booth (SL9215). NVIDIA Quadro GPUs and SDI capture cards help Perceptive Pixel deliver state-of-the-art multi-touch interaction, providing the best possible graphical touch experience.

[Quantel](#) (booth SL2415) is an international leader in content creation systems for broadcast, post, and digital imaging, with systems installed at broadcast facilities and post houses worldwide. Its new Pablo color correction software takes advantage of multi-GPU processing, ushering in the next generation of non-linear color correction. Quantel will be demonstrating new Pablo accelerated with NVIDIA Maximus technology, which enables the highest frame rates and most productive finishing workflows -- it's a perfect color correction and finishing solution for colorists working with HD, 2K, 4K and stereoscopic 3D video and film.

Additionally, [NVIDIA GPUDirect™ for Video](#) technology is being demonstrated during the 2012 NAB show by [AJA Video Systems](#), [Bluefish444](#) (in booth SL9309), [Deltacast](#) (in booth SL8006), and [Matrox](#) (in booth SL5115).

To learn more, visit: [www.nvidia.com/workstation](http://www.nvidia.com/workstation).

Follow NVIDIA Workstation/Quadro on [YouTube](#), and Twitter: [@NVIDIAQuadro](#).

<sup>1</sup>Based on test configuration of dual Intel Xeon 5690 3.47GHz CPUs (12 cores).

<sup>2</sup>Compared with dual Intel Xeon W5580 3.20GHz CPUs (8 cores).

#### About NVIDIA

[NVIDIA](#) (NASDAQ: NVDA) awakened the world to computer graphics when it invented the [GPU](#) in 1999. Today, its [processors](#) power a broad range of products from [smartphones](#) to [supercomputers](#). NVIDIA's [mobile processors](#) are used in [cell phones](#), [tablets](#) and [auto infotainment systems](#). [PC gamers](#) rely on GPUs to enjoy spectacularly immersive worlds. Professionals use them to create [3D graphics](#) and visual effects in movies and to design everything from golf clubs to jumbo jets. And researchers utilize GPUs to advance the frontiers of science with [high performance computing](#). The company has more than 4,500 patents issued, allowed or filed, including ones covering ideas essential to modern computing. For more information, see [www.nvidia.com](http://www.nvidia.com).

Certain statements in this press release including, but not limited to statements as to: the impact and benefits of NVIDIA Quadro and Tesla GPUs, NVIDIA Maximus technology and NVIDIA CUDA architecture; and the effects of the company's patents on modern computing are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time

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#### About NVIDIA

Since 1993, [NVIDIA](#) ( NASDAQ : NVDA ) has pioneered the art and science of [visual computing](#). The company's technologies are transforming a world of displays into a world of interactive discovery — for everyone from gamers to scientists, and consumers to enterprise customers. More information at <http://nvidianews.nvidia.com/> and <http://blogs.nvidia.com/>.

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