NVIDIA at NAB 2013

New NVIDIA GRID Visual Computing Appliance Accelerates Creative Workflows

NVIDIA showcased how professionals creating and distributing content can accelerate their workflows using the latest GPU technologies and partner software at NAB 2013.

NVIDIA GPUs provide the power behind the most important applications used for animation, color correction, editing, visual effects, on-air graphics and the processing of content for distribution to multiple screens.

Demonstrations featured in NVIDIA's booth included:

On-Demand GPU Acceleration

Unveiled in March 2013 at the GPU Technology Conference, the NVIDIA GRID™ Visual Computing Appliance (VCA) enables workgroups of up to 16 users to get the full benefits of NVIDIA Quadro reliability and performance on their Windows, Mac and Linux systems. At NAB, NVIDIA featured technology demonstrations of the GRID VCA running:

- Adobe® Photoshop CS6 and the next version of Adobe After Effects® running virtually on a Linux system – two applications that do not have native Linux versions.
- Autodesk 3ds Max 2014 with full GPU acceleration on a MacBook Pro – an application that does not natively run on Mac OS.

Simultaneous Animation, Simulation and Rendering

Animators and visual-effects artists can create, simulate and render simultaneously without interruption with NVIDIA® Maximus™ technology. Using the latest generation of NVIDIA

Quadro® GPUs based on the powerful NVIDIA Kepler™ architecture, Maximus technology was demonstrated with:

- MAXON CINEMA 4D and Jawset TurbulenceFD on a Dell T7600 workstation showcasing interactive particle simulation for 3D animation, only possible with Maximus technology.
- Otoy Octane Render on an HP Z820 workstation showcasing interactive, globally illuminated rendering.

Accelerated Color Grading

Employing multiple NVIDIA Kepler-architecture GPUs on a Mac Pro system with a Cubix expansion chassis and Blackmagic Design DaVinci Resolve, NVIDIA demonstrated the current state of the art for color grading for colorists, video producers and digital filmmakers.

High-Speed Video Production

Video editors, digital filmmakers and broadcasters who need real-time performance for fast video production saw the next version of Adobe Premiere® Pro, which adds supports for multiple GPUs in the Adobe Mercury Playback Engine, running on a Dell Covet mobile workstation with NVIDIA Quadro processors.

"Adobe is revealing some incredible enhancements to our professional video editing tools at NAB this year," said Bill Roberts, director of video product management at Adobe. "We're very pleased that NVIDIA continues to support Adobe and our next-generation tools with their powerful Kepler GPUs that enable the professional video community to bring their creative visions to life faster than before."

NVIDIA technologies were also be found in dozens of booths throughout NAB. A number of leading vendors demonstrated significant new capabilities that take advantage of the features and performance of NVIDIA GPUs, including:

- Adobe previewed the next generation of its professional video and audio products and launched its new NVIDIA Tesla-accelerated collaboration platform, Adobe Anywhere.

- Autodesk showed the latest versions of Maya 2014, with new GPU-accelerated DX11 shader and Ubershader, which provides artists with lifelike realism and takes the guesswork out of design animation. 3ds Max 2014 also uses the GPU to provide the most realistic ambient occlusion in the viewport and active shade interactive ray tracing to dramatically reduce the time to create rich 3D images. Autodesk will also be demonstrating Autodesk 3ds Max on NVIDIA GRID VCA.

- Quantel announced that its Pablo Rio software high-end color and finishing system now supports the latest NVIDIA® Kepler™ architecture-based Quadro® and Tesla® K20 GPU accelerators.

- Cinnafilm Tachyon now available as a plug-in, adding NVIDIA CUDA-accelerated standards conversion to Harmonic ProMedia Carbon.

- Digimetrics' support for NVIDIA Tesla K20 to its Aurora video QC suite, which provides up to 50 percent faster than real-time artifact detection of HD resolution content.

- Elemental Technologies' first public showing of NVIDIA Tesla-accelerated HEVC/H.265 encoding on an Elemental Live 2.1 system.

- GenArts announced Sapphire 7, which adds a number of new CUDA-accelerated effects including an innovative "skin beautifier," and added NVIDIA GPU acceleration for a dozen previously existing effects.

- Matrox DSX LE3 4K enabled 4K workflows leveraging NVIDIA GPUDirect™ for Video, which provides low-latency I/O to and from the GPU.

- Telestream showcased the new Vantage Transcode IPTV VOD, which utilizes Lightspeed technology with NVIDIA GPU acceleration for video processing and H.264 encoding.

- Realtime Immersion unveiled a new 220-degree streaming video solution that gives consumers total control with real-time pan, tilt and zoom. NVIDIA CUDA processes RAW color processing and dewarping to enable smooth playback.

- Red Giant added new GPU acceleration to Denoiser II 1.4, which, when combined with NVIDIA Quadro K5000 cards, runs 3 to 4 times faster than version 1.3.

More information on NVIDIA and its partners is available at www.nvidia.com/quadro.