THE FUTURE OF STORYTELLING STARTS NOW

Advanced Content Creation and Photorealistic Rendering with Award-Winning Graphics Technology

Image courtesy of Lucasfilm

NVIDIA

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TECHNOLOGY ADVANCEMENTS ACCELERATE PRODUCTION AND ENHANCE CREATIVITY

While discerning audiences are expecting higher-quality visual effects and animation, budgets and timelines are not increasing proportionately. Film and television studios are continuously challenged to increase production value under extreme budget constraints—and produce high-quality, original content that stands out from a growing list of competitors.

To create efficiencies, media and entertainment (M&E) professionals are looking for advanced technologies to accelerate time to market, simplify IT management, enhance creativity, and reduce costly errors that appear late in the production process.

REINVENTING GRAPHICS FOR ARTISTS

As a trusted technology partner for M&E professionals worldwide, NVIDIA is creating the future of storytelling with breakthroughs in GPU technology. Powered by the greatest leap in graphics computing since the invention of NVIDIA® CUDA® GPU in 2006, NVIDIA RTX™ and NVIDIA® Quadro RTX™ with Ampere and Turing™ architectures, fuse AI, real-time ray tracing, and programmable shading to power the most advanced, visually rich film and video productions ever created. Whether you're editing in 8K HDR video in real-time, creating complex effects and simulations, or animating 3D elements and textures for Emmy-winning TV shows or Academy Award–winning feature films, NVIDIA RTX and Quadro RTX accelerates your workflow and expands creative potential.

NVIDIA EGX PLATFORM

Delivering the most powerful unified data center platform to the M&E industry.

NVIDIA professional GPUs, along with NVIDIA vGPU software, are at the heart of the next-generation NVIDIA EGX™ platform for professional visualization. The EGX platform delivers the performance and features that can power professional graphics and computing anywhere.

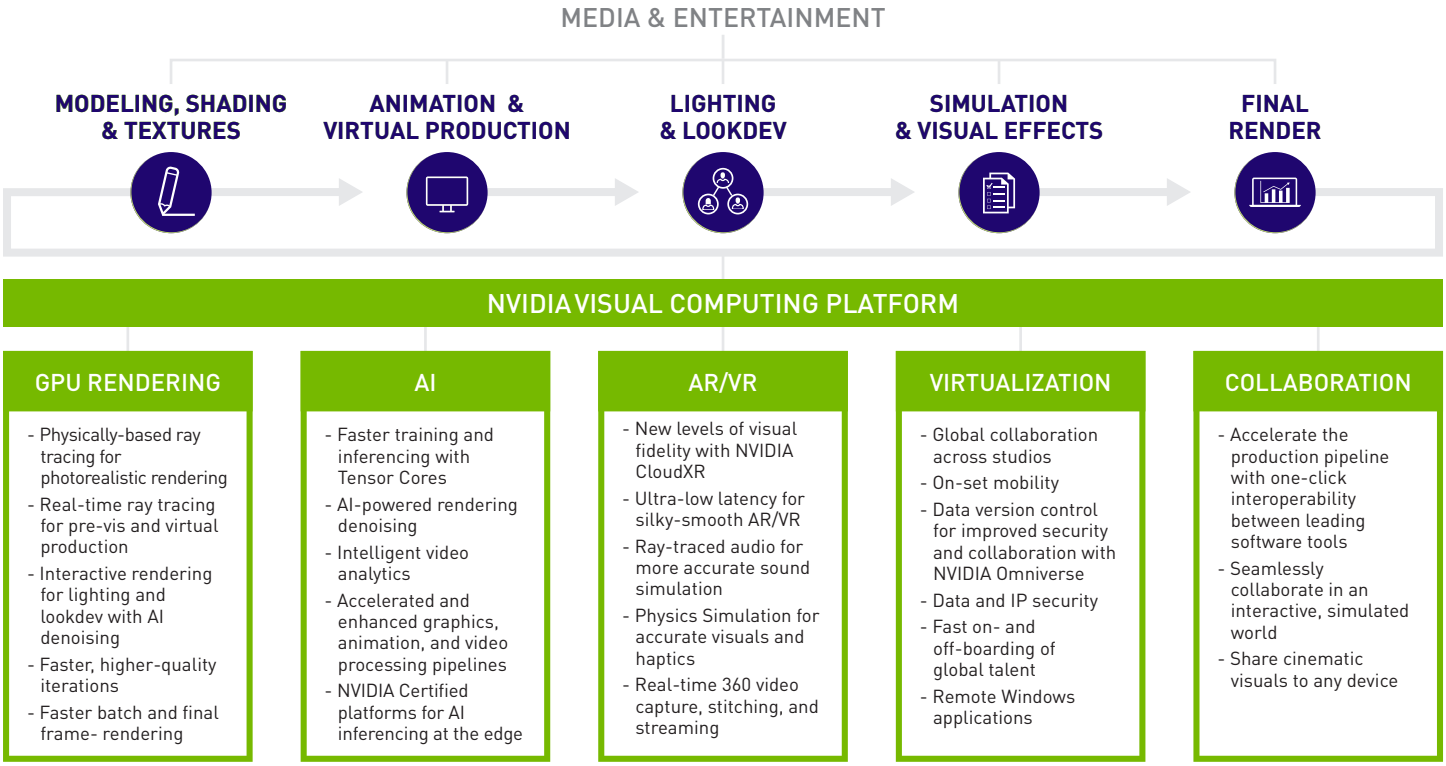
With NVIDIA RTX Virtual Workstation (vWS) software studios can simplify deployment of a high-performance, cost-effective infrastructure, providing a solution that is tested and certified with industry-leading partners and software applications on trusted hardware partner servers. It enables professionals to do their work from anywhere, while increasing productivity, improving data center utilization, and reducing IT and maintenance costs. Deploying powerful virtual workstations with advanced graphics capabilities helps artists tackle a variety of workloads from anywhere - from interactive rendering to graphics-rich virtual workstations.

ACCELERATED COMPUTING WORKFLOWS:

- Artists can work interactively on large 3D datasets and render film-quality scenes. NVIDIA EGX™ Platform can render up to 60X faster than a dual-CPU render node.
- Deep learning can enable new capabilities while reducing repetitive tasks, allowing artists to spend more time on creative work.
- Real-time video production and post-production with ultra-high resolution, high frame rates, and high-dynamic range (HDR) are now possible.
- Encoding and decoding can be accelerated with dedicated silicon on NVIDIA GPUs and NVENC.
- Studios and broadcasters can benefit from real-time engines for production, from animated television shows to live on-set graphics in the broadcast studio.

POWERFUL WORKFLOWS THAT DELIVER RESULTS

Media and entertainment professionals know they must work smarter to meet project budgets and deadlines, which means taking advantage of the latest technology for greater efficiency.



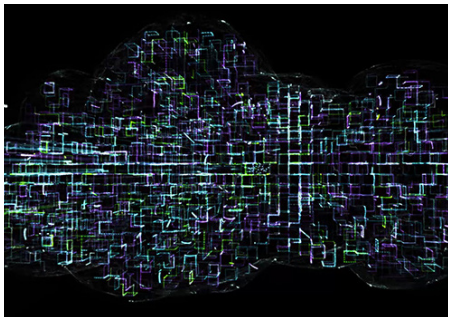
Auto image courtesy of Epic Games and Porsche.

Workstations

NVIDIA Quadro and the latest NVIDIA RTX Ampere based professional GPUs are powering the next-generation of desktop workstations. Tackle the most graphics and memory-intensive tasks by bringing the latest advancements in real-time ray tracing, artificial intelligence, and advanced graphics to your workflow.

EGX Platform

Tackle complex workloads in the data center with certified servers and workstations at a fraction of the cost, space, and power requirements of CPU-based solutions. Servers powered by NVIDIA A40 can deliver the combined benefits of virtualization, simulation, rendering, AI and data science.



Cloud

Experience GPU-accelerated cloud computing with NVIDIA RTX Virtual Workstations accessible from NVIDIA Cloud Service Provider partners. Spin up a GPU-accelerated virtual workstation in minutes, paying for only what you need, when you need it.

NVIDIA RTX and Quadro RTX solutions can assist in four key areas:

GPU RENDERING

Image courtesy of Digital Domain

With distinct advantages over CPU rendering, from previsualization through to final frames, GPU rendering is poised to become a standard in the industry. NVIDIA Certified platforms render nodes can deliver up to 60X the performance of dual-CPU nodes. With GPU rendering, artists can choose to generate more iterations or render much faster than by traditional means. With new RT Cores, photorealistic ray-tracing can now be achieved in real-time, enabling higher fidelity workflows from interactive rendering to virtual production.

AI/DEEP LEARNING FOR CONTENT CREATION

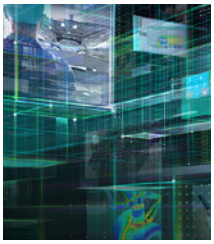
AI is changing the way content is created and managed, and it's being considered for all facets of the production pipeline. Studios are beginning to experiment with AI, not only for content creation but also for back-office decisions on whether or not jobs are worth bidding on.

NVIDIA is at the forefront of the AI revolution in graphics, with the goal of reducing the time spent on repetitive tasks so artists can focus on creative iterations. NVIDIA RTX and Quadro RTX GPUs now feature Tensor Cores to accelerate deep learning tasks. Deep learning AI dramatically simplifies content creation and animation, expands the possibilities of image and video processing, and makes it effortless to auto- tag and manage stored content so it can be repurposed for future use.

NVIDIA OMNIVERSE

Revolutionize your studio's workflow. NVIDIA Omniverse™ is an open platform built to accelerate film and television production pipelines. With one-click interoperability between leading content creation tools and seamless collaboration in an interactive, ray-traced, simulated world, teams are empowered to create at the speed of imagination.

GPU VIRTUALIZATION



Industry consolidation, geographically dispersed productions, and increased security concerns are driving M&E firms away from traditional desktop workstations. With NVIDIA® RTX Virtual Workstation (vWS) or NVIDIA® Virtual PC (vPC) software and NVIDIA data center GPUs, M&E professionals can keep projects moving forward securely, while scaling compute resources to meet specific project needs.

TESTED AND CERTIFIED FOR ENTERPRISE-CLASS RELIABILITY

The NVIDIA RTX platform ensures that users have a smooth, responsive experience while editing, rendering, and working with high resolution video and massive 3D datasets. To ensure the best possible experience for your IT investment, RTX professional graphics solutions are tested and certified by leading workstation and server OEMs. They've also received independent software vendor (ISV) certifications for more than 100 professional applications.

KEY OEM PARTNERS

KEY ISV PARTNERS

USERS	Animation and VFX: Content creation	Broadcast: On-air graphics	Broadcast: Content understanding
WORKFLOW USE CASES	3D modeling and animation, color grading, visual effects, and rendering VR/LBE Creative decision-making and faster iterations	Publishing real-time graphics live, on-air Making changes in real time Create data-driven graphic	Sentiment analysis, natural language processing, compliance, automatic metadata generation, speech to text, and facial recognition

WHAT OUR CUSTOMERS ARE SAYING ABOUT NVIDIA RTX

"Cinesite was proud to partner with Autodesk and NVIDIA to bring Arnold to the GPU, but we never expected to see results this dramatic. This means we can iterate faster, more frequently, and with higher-quality settings. This will completely change how our artists work."

Michele Sciolette
CTO, Cinesite

"Digital Domain leads the industry in pioneering real-time photo-realistic digital humans. Working with Epic Games and NVIDIA, we have continuously pushed the limits of technology. The new NVIDIA RTX A6000 lets us completely redefine what's possible with real-time ray tracing and machine learning."

Darren Hendler
Director, Digital Human Group, Digital Domain

"Most artists don't even notice a difference between NVIDIA vGPU powered VMs and physical workstations."

Graham Jack
Chief Technology Officer

"Real-time ray tracing massive datasets in a remote workstation environment is finally possible with the new NVIDIA RTX A6000, HP ZCentral and NVIDIA's Omniverse."

Chris Eckardt
Creative Director and CG Supervisor, Framestore

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