BRINGING IMAGES AND ANIMATIONS TO LIFE

Image courtesy of Dabarti Studio

NVIDIA

NVIDIA GPU rendering unleashes creativity, productivity, and quality while boosting profits at Dabarti Studio.

NVIDIA GPUs ACCELERATE RENDERING SPEEDS BY 4-6X WHILE LOWERING PER-FRAME COSTS BY 75% AND GROWING REVENUE BY 30-40%.
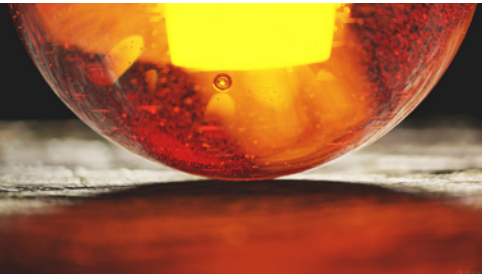

Image courtesy of Dabarti Studio

REASONS FOR NVIDIA GPUs

> 4-6X rendering speed increase compared to CPU rendering

> 3X faster rendering speeds than competing products

> 60-70% faster scene setup

> 75% lower cost per frame

> 30-40% revenue increase

Tomasz Wyszolmirski founded Dabarti Studio in 2009 to create high-quality CGI stills and animations, most of which are available through royalty-free stock agencies, such as Shutterstock and Getty Images. Customers ranging from individuals to ad agencies, and movie studios use Dabarti's creations for ads, trailers, presentations, and other creative products. Dabarti also performs custom CGI image and animation creation, compositing and color grading, and on-site service and VFX supervision. To date, the Dabarti portfolio includes almost 3,000 clips spanning an array of trending media topics.
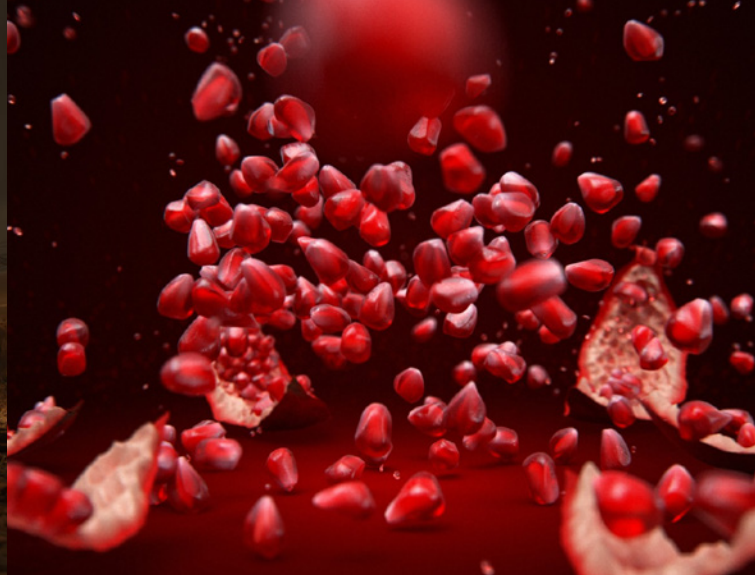
CUSTOMER PROFILE

dabarti.

Organization	Industry	Location	Employees	Founded	Website
Dabarti Studio	CGI still and animation production	Bialystok, Poland	6	2009	www.dabarti.com

Images courtesy of Dabarti Studio

PRODUCTS

NVIDIA
Quadro GP100

Autodesk
3ds Max

Chaos Group
 V-Ray GPU

Capturing Reality
RealityCapture

Allegorithmic
Substance Designer

TECHNICAL LIMITATIONS HAMPERED COMPETITIVENESS

Dabarti creates CGI stills and animations that are mainly aimed at the royalty-free market—a competitive, highly demanding space where thousands of artists and agencies scramble to attract and retain customers. High production values are crucial to success, from detailed, realistic models to rich maps, accurate lighting and environments, and size/resolution. Dabarti primarily uses Autodesk 3ds Max for modeling and V-Ray for rendering.

"Early GPUs with 512 or 1024 MB of memory weren't powerful enough to meet our needs," explained Tomasz Wyszolmirski, Founder and Creative Director of Dabarti. "We therefore relied on CPU-based rendering. This worked, but the back-and-forth process of getting everything right involved a lot of trial and error because we had to do some work, wait for a render, make changes, and then iterate as needed in a very non-interactive manner. Further, expanding our CPU-based render farm was a cost- and space-intensive prospect."
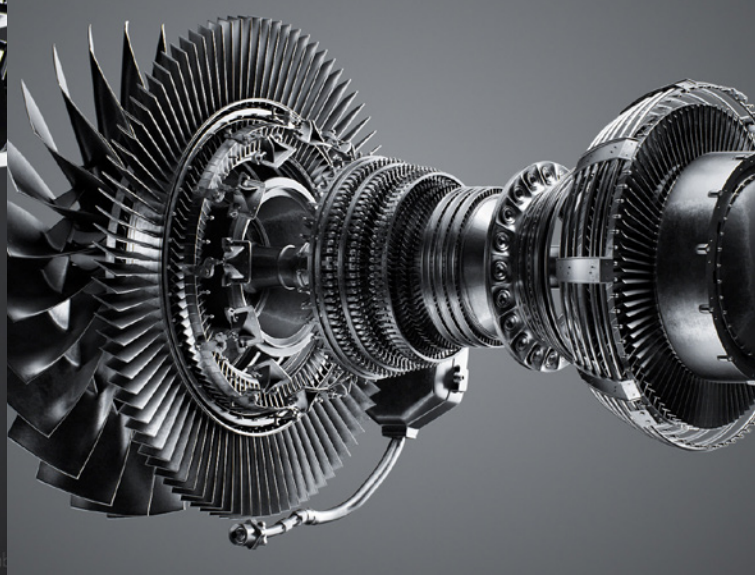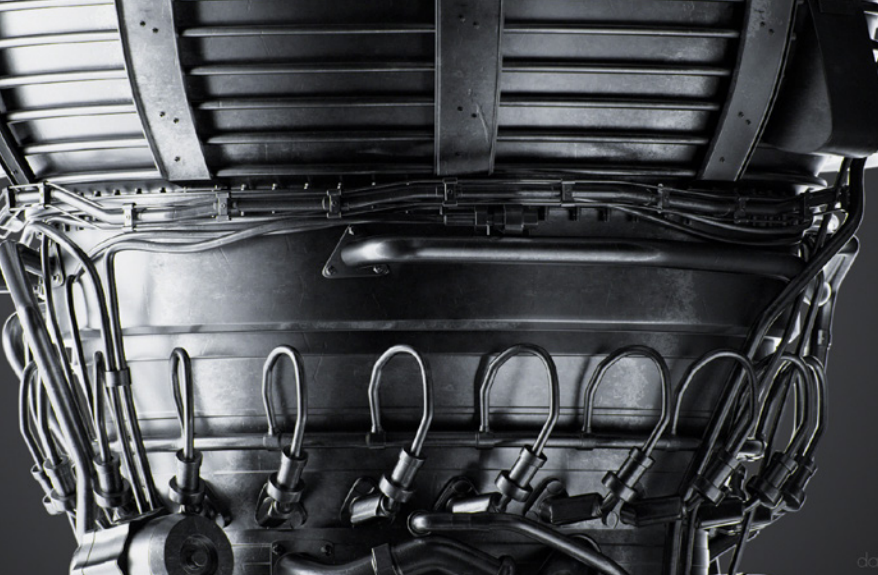
Images courtesy of Dabarti Studio

"We saw immediate jumps in speed, interactivity, and realism. For example, our workflows are four to six times faster… and that's just the beginning."

Tomasz Wyszolmirski
Founder
Dabarti Studio

UNLEASHING THE POWER OF NVIDIA GPUs

The advent of the powerful, cost-effective NVIDIA Maxwell™ GPUs inspired Dabarti to revisit GPU rendering. In January of 2015, they undertook a monthlong process to install and test NVIDIA GPUs in their existing workstations. Dabarti builds custom workstations and servers using off-the-shelf parts. For production rendering, they built a rendering server with four NVIDIA GPU cards. They also migrated to V-Ray GPU in order to see the effect of updates to objects, materials, and lights in real time.

"We ran into a few small hiccups getting the software to work the way we wanted it, and we also had to wrap our minds around the new workflow," Wyszolmirski continued. "Even so, we saw immediate jumps in speed, interactivity, and realism. For example, our workflows are four to six times faster… and that's just the beginning. We also found that NVIDIA GPUs are three times faster than comparable competing products."

Dabarti has kept abreast of emerging NVIDIA cards. Current workstations use NVIDIA Pascal™-based GPU cards for rendering, their current rendering server includes four NVIDIA GPU cards, and a new workstation uses two NVIDIA Quadro GP100 GPUs.

INCREASED SPEED, QUALITY, AND PROFITABILITY

Dabarti's users were cautious about moving to GPU rendering at first but quickly embraced the new workflow, primarily because of the ability to see results interactively with no need to wait for a CPU rendering. This real-time feedback is vital to the creative process because it allows immediate feedback on how materials, lights, and other elements affect a scene. Quality and realism have increased, while time and costs have dropped. For example, an animation rendered by CPU that cost 40 cents per frame may only cost 10 cents using GPU rendering. This is a direct result of being able to set up scenes in 60-70% less time, plus the 4-6X speed advantage of GPU rendering over CPU rendering. The recent upgrade to two NVIDIA Quadro GP100 GPUs with NVIDIA NVLink™ allows Dabarti to easily work with very large scenes, thanks to the 32 GB of combined GPU memory available.

"Adding the NVIDIA GP100 GPUs gave us complete freedom to create without having to wait for our systems to catch up," Wyszolmirski concluded. "This greatly increases the quality of our products, and customers are noticing. We have seen our revenues grow by 30-40%, and we are getting more and more requests to work on client projects in addition to our existing royalty-free work. Increased revenue and lower costs means higher profits. Our customers love our work, and we love our bottom line."

More Information: **www.nvidia.com/gpurendering**

www.nvidia.com