



NVIDIA QUADRO GPU_s ENABLE HIGH IMAGE QUALITY AND HIGH PERFORMANCE FOR VITAL IMAGES

VITAL IMAGES
CASE STUDY

Vital Images (a Toshiba Medical Systems Group Company) is an industry leader in advanced medical imaging and visualization software, bringing success and stability to a rapidly changing healthcare industry. One of its key solutions is Vitrea[®] software, which provides advanced visualization tools to a range of medical specialists (including radiologists, cardiologists, oncologists and other specialists) so that they can visualize patient images and communicate with each other efficiently on a course of action. Vitrea is a crucial tool for clinical decision support and enabling physicians to communicate effectively about a common patient, and specialists rely on its detailed 2D, 3D and 4D images for confident analysis in critical scenarios. Vitrea is powered by NVIDIA's Quadro K2000, which provides the computing performance and reliability required for busy physicians who can't afford technical problems.

CHALLENGE

Healthcare providers today are experiencing myriad challenges from all sides. The increasing focus on affordable care brings intense pressure to manage costs across the medical imaging lifecycle, but at the same time, technology improvements create a relentless expectation for advanced visualization capabilities. Providers are caught in a constant struggle to provide higher value at lower costs. And furthermore, specialists and other providers are not often in one central location, making communication regarding patient care a challenge – not to mention the challenges with finding secure ways to efficiently share information across different locations with different IT protocols.

Vitrea addresses these challenges, offering seamless image sharing in one easily accessible, collaborative solution. The hardware behind Vitrea needs to be agile and reliable in order for it to be a worthy investment for providers.

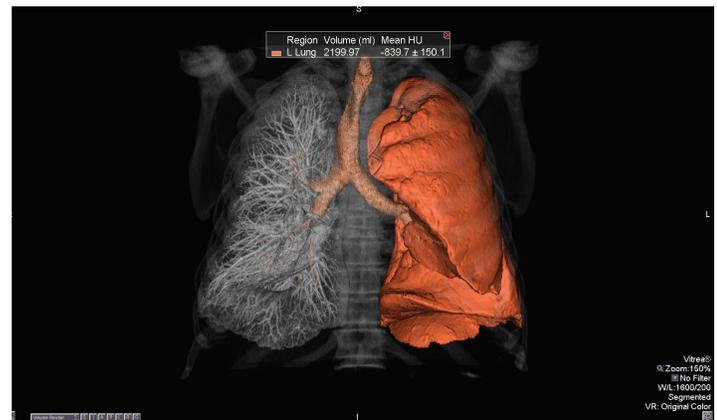


Image Courtesy of Vital Images

SOLUTION

Vital Images relies on NVIDIA's Quadro GPUs in order to keep Vitrea running like clockwork. "What we're looking for is performance, long-term stability, a seamless user experience, and easy manageability, and NVIDIA GPUs have helped us achieve all of that," explained Tim Dawson, Chief Architect at Vital Images. "Our goal is to help physicians focus on patient care and improve their services, and NVIDIA helps make that possible."

NVIDIA Quadro GPUs have been a longtime component of the Vitrea solution, and Vital Images continues to see unprecedented success with each new generation of cards. Currently running the Quadro K2000, Dawson reports that the Kepler-generation card performs almost twice as fast as its counterpart from the previous Fermi generation.

"One key to delivering higher quality, interactive 3D patient imagery to help clinicians make better diagnoses is NVIDIA GPUs – thanks to fast texture sampling and volume rendering," continued Dawson. "NVIDIA's stability and power efficiency are also key for us and for the IT teams

deploying Vitrea. A single Quadro driver supports multiple generations of cards, making the qualification and IT management much more simplified, and the power efficiency in the current Kepler generation is just incredible – they don't give off much heat and don't draw that much power, making it much easier and less costly for our customers to deploy GPUs in the server room."

IMPACT

Higher quality medical imaging technology also directly impacts patient decisions and experiences. Dawson explained, "GPUs even reach the patient directly. With Vitrea, physicians have the ability to show highly detailed images to their patients regardless of whether they're in an office or a hospital. This is crucial because patients respond much better and are more likely to make lifestyle changes when they can see their own internal symptoms in detail, such as how a heart valve may be becoming dangerously narrow."

In addition, the recent introduction of NVIDIA's GRID technology for GPU virtualization has Vital Images

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considering virtualizing its users' Quadro experience in the near future.

"The medical industry is definitely shifting toward private clouds, so we are very excited about NVIDIA's GRID K1 and K2 cards for GPU virtualization," said Dawson. "GRID will make GPU acceleration much more accessible, enabling both wider adoption and increased user density. We typically have to install many servers in each client's server room because each one only holds about one or two GPUs – but GRID will certainly change that. We have already begun evaluating the ideal GRID configuration for our users and are excited to move forward."

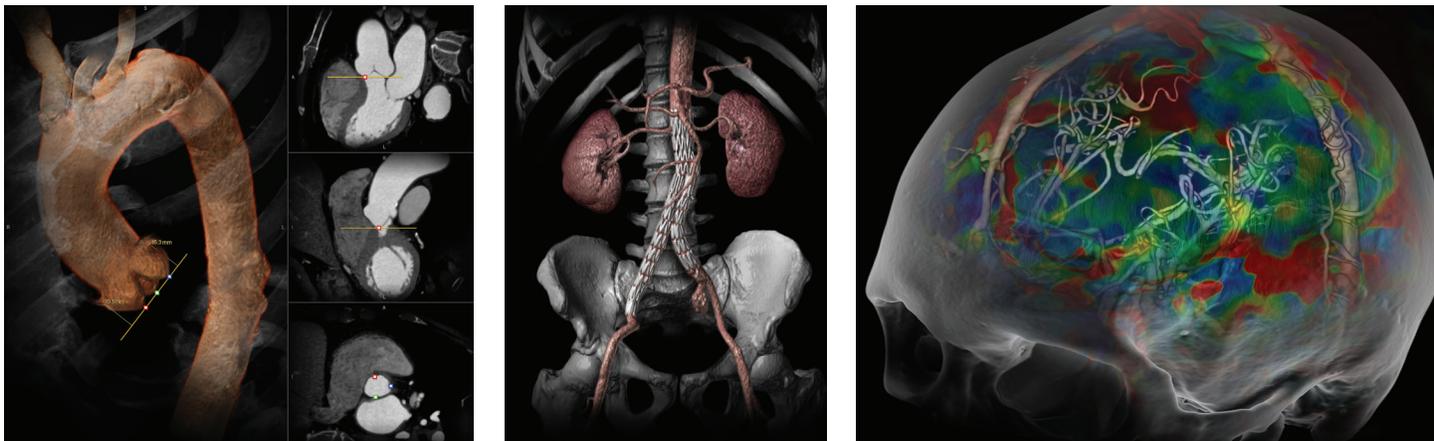


Image Courtesy of Vital Images

To learn more about NVIDIA Quadro, go to www.nvidia.com/quadro

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