Dassault Systemes Accelerates Computer-Aided Engineering by Using NVIDIA GPUs

World's Top Design & Manufacturing Companies Cut Engineering Simulation Times in Half Using GPU-Accelerated Abaqus FEA

SANTA CLARA, CA -- Dassault Systèmes today announced that Abaqus 6.11 -- the new release of the leading unified finite element analysis (FEA) product suite from Dassault's SIMULIA brand -- leverages NVIDIA Quadro® and Tesla™ GPUs, coupled with CPUs, to run computer-aided engineering (CAE) simulations twice as fast as with CPUs alone.

Two of the largest automakers in Europe evaluated Abaqus FEA to analyze the structural behavior of large engine models. In each case their NVIDIA GPU-accelerated simulations were completed in half the time it would have taken using CPUs alone. For the automotive industry, this acceleration enables CAE engineers to perform more analyses in a given period of time, identifying issues earlier and decreasing time to market.

"Automotive customers are looking to use GPU-acceleration in Abaqus 6.11 to help them create a better product, with reduced development costs and quicker time to market," said David Watters, senior director, Manufacturing and Design Industry, NVIDIA. "This acceleration will enable them to run more design iterations and find innovative ways to reduce the weight of every component of the vehicle, increasing fuel efficiency, without sacrificing quality or safety."

In addition to the automotive industry, SIMULIA's Abaqus Unified FEA suite is addressing the needs of many other simulation-driven market segments, such as aerospace, energy, electronics, life sciences, industrial equipment and consumer goods.

NVIDIA GPUs are based on the CUDA® parallel processing architecture and can be programmed using industry-standard languages such as C, C++, and Fortran. A broad range of computing applications has been modified to take advantage of GPU acceleration. With power-efficient cores and increasingly fast access to memory, mechanical simulation software from SIMULIA enables design companies and manufacturers to use computer simulations instead of expensive prototyping to design higher quality and more efficient products.

"When addressing the industry's toughest engineering challenges, product quality and time to market are the ultimate measures of success," said Matt Dunbar, chief software architect at SIMULIA. "The acceleration available in the latest version of Abaqus demonstrates how GPUs can be used to dramatically reduce CAE simulation times which will help customers deliver higher quality products and shorten design cycles."

For more new Abaqus 6.11 features and enhancements, please go here.

About NVIDIA
NVIDIA (NASDAQ: NVDA) awakened the world to the power of computer graphics when it invented the GPU in 1999. Since then, it has consistently set new standards in visual computing with breathtaking, interactive graphics available on devices ranging from tablets and portable media players to notebooks and workstations. NVIDIA's expertise in programmable GPUs has led to breakthroughs in parallel processing which make supercomputing inexpensive and widely accessible. The Company holds more than 1,800 patents worldwide, including ones covering designs and insights that are essential to modern computing. For more information, see www.nvidia.com.

Certain statements in this press release including, but not limited to, statements as to: the availability, benefits and impact of NVIDIA Tesla GPUs; and the impact 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: our reliance on third parties to manufacture, assemble, package and test our products; global economic conditions; development of faster or more efficient technology; the impact of technological development and competition; 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 in the reports NVIDIA files with the Securities and Exchange Commission, or SEC, including its Form 10-K for the fiscal period ended January 30, 2011. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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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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Media Contacts

Hector Marinez
+1 408 486 3443
hmarinez@nvidia.com

Andrew Humber
(408) 486-8138
ahumber@nvidia.com