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CG² WINS U.S. NAVY SBIR CONTRACT TO ADVANCE STATE-OF-THE-ART IN REALTIME SENSOR SIMULATION

SBIR Phase II Award To Enhance Sensor Simulation on PC-based IGs for High Fidelity Sensor Training Applications

Orlando, FL– December 2nd, 2002 – CG², a Quantum3D[®], Inc. company, today announced at I/ITSEC 2002 that it has received a Phase II contract from the Office of Naval Research through the U.S. Navy Small Business Innovative Research (SBIR) program to advance realtime graphics rendering methods for texel-level sensor simulation on PC-based systems. The results of this effort are aimed at enabling Commercial-off-the-Shelf (COTS) PC-based Image Generators (PC-IGs) to generate extremely high-fidelity, simulated sensor displays in realtime, which should result in enhanced sensor-based synthetic environment training and reduce both acquisition and life-cycle costs for military training applications that employ sensor simulation. The Phase II contract is a continuation of the Phase I contract CG2 secured last year to advance this technology. Sponsored by Naval Air Systems Command (NAVAIR), this Phase II contract is valued at up to \$750,000 over the course of two years. This contract win, coupled with additional program and SBIR awards, including the recently announced Phase II SBIR Contract to Implement Material Encoded Textures for Enhanced Computer Generated Forces Applications (see http://www.cg2.com/press/2002/11_26_02_sbir.htm) illustrates CG2's momentum in providing integrated, innovative solutions and services that address complex realtime visual computing problems.

During the Phase I effort, CG² developed sophisticated realtime algorithms that accurately render materially classified terrain, culture and models in order to simulate the "view" seen by IR and NVG sensors. Important innovations that resulted from the Phase I effort included the use of "shader" technology found on current generation programmable Graphics Processing Units (GPUs), including NVIDIA[®] GeForce4™ and Quadro4™ GPUs found in COTS PC-IGs to render physics-based, dynamic sensor scenes at the "texel" level, which provides significantly enhanced realism. Employing this innovative approach with COTS graphics hardware enables new levels of realism and fidelity in sensor simulation, while simultaneously enabling low-cost and widespread deployment, by virtue of the low initial and life cycle cost of today's open architecture PC-IGs.

In the Phase II effort, CG² will further the advances initiated in Phase I by developing enhanced sensor algorithms that exploit the latest innovations in programmable GPU technology and PC-based IGs that incorporate same-- including enhanced color precision capabilities and the use of Cg, the new high-level language developed by NVIDIA and Microsoft for programming GPUs. Key areas of investigation within Phase II include enhancing dynamic calculation efficiency and developing advances in realtime atmospheric that provide a level of fidelity beyond any commercially available product in the market today.

“CG² is leading the way in R&D for physics-based sensor simulation on open architecture platforms”, said Chris Blasband, director of Sensor Technology at Quantum3D. “The new capabilities that result from our current efforts will significantly further the state-of-the-art in sensor simulation, as well as enable wider adoption of precision sensor simulation technologies by greatly enhancing the fidelity and performance we achieved in our prior efforts.”

CG² and Quantum3D brings its unique expertise in real-time, physics-based, dynamic sensor simulation and industry leading PC-based image generation hardware and software to this project. Quantum3D anticipates that the technology developed under this Phase II SBIR effort will be integrated into viXsen™ and Mantis™, Quantum3D’s advanced realtime image generation software products, and will be deployed on Quantum3D’s Independence™, AAgility™ and Obsidian® families of open architecture IGs equipped with NVIDIA GPU technologies and nVSensor™, Quantum3D’s advanced sensor post processor, including. Demonstrations of viXsen, Mantis, nVSensor and the complete line of Quantum3D products and solutions and CG2 services for the realtime visual computing market will be conducted at I/ITSEC 2002 in Orlando, FL in Quantum3D Booths No. 852 and 1220 and in numerous partner booths.

About CG²

Founded in May 1995, CG2, Inc., a Quantum3D company, is a leading supplier of affordable services, software, digital media and integrated products for the realtime visual computing market. CG2’s award winning products and capabilities include realtime multi-spectral 3D model and database development and conversion, turnkey solutions for institutional, appended and embedded training applications and development, operations and support of “hardware-in-the-loop” sensor simulation applications. For more information about this contract or other CG2 services and solutions please see www.cg2.com or contact info@cg2.com. For more information about Quantum3D or any of the Quantum3D family of realtime visual computing products, please see www.quantum3d.com or contact salesinfo@quantum3d.com.

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