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AMD Open Physics Initiative Expands Ecosystem with Free DMM for Game Production and Updated version of Bullet Physics

-- Updated Pixelux and Bullet Physics offerings enable more realistic games that run on any OpenCL(TM)- and DirectCompute-capable platforms --

SUNNYVALE, Calif.--(BUSINESS WIRE)-- AMD (NYSE:AMD) today announced that, along with partners Pixelux Entertainment and Bullet Physics, it has added significant support to the Open Physics ecosystem by providing game developers with access to the newest version of the Pixelux Digital Molecular Matter (DMM), a breakthrough in physics simulation. In addition, to enabling a superior development experience and helping to reduce time to market, Pixelux has tightly integrated its technology, DMM, with Bullet Physics, allowing developers to integrate physics simulation into game titles that run on both OpenCL- and DirectCompute-capable platforms. And both DMM and Bullet work with Trinigy's Vision Engine to create and visualize physics offerings in-game.

"Establishing an open and affordable physics development environment is an important accomplishment for both game developers and gamers, signaling a move away from exclusionary or proprietary approaches," said Eric Demers, chief technology officer, AMD Graphics Division. "Not only does the integration of Bullet Physics into partner middleware help drive broader adoption of physics in games, it ensures that when those games are released, all gamers, regardless of the hardware in their PC, can benefit from the more realistic experience enabled by those effects."

AMD's announced open physics development environment now adds Bullet Physics as the default rigid body physics system provided with Pixelux's DMM2 material physics engine. Developers can now design and interact with rigid body systems familiar to them and easily add DMM objects incrementally enabling them to bend and break based on real physical properties.

In addition, AMD is announcing its sponsorship of FREE DMM2 for the PC platform. The Free PC version has no DMM license fee for development or production deployment and includes all the features of the premium version including GPU acceleration.[1] Free PC DMM2 is expected to be made available shortly to interested developers.

"With today's announcement, the incredible physical simulation effects seen in the latest games and blockbuster films can be used by all developers - a tremendous milestone for the industry," said Mitchell Bunnell, chief executive officer, Pixelux. "Working closely with AMD and Bullet's main author, Erwin Coumans, we've enabled tight integration of our DMM2 system and Bullet Physics, giving developers a sophisticated, yet easy-to-use physics pipeline they can use to create things that have never been seen before".

"At Trinigy, one of our guiding principles is ensuring game developers have the freedom to use the tools they need to create the effects they want," said Danie Conradie, president and chief executive officer, Trinigy Inc. "AMD's Open Physics Initiative with Pixelux DMM and Bullet Physics, coupled with our long-standing relationship with all three companies, helped us deliver on that core philosophy by giving developers access to these state-of-the-art technologies for producing advanced effects in games."

All of the Bullet Physics implementations described above can be run on any OpenCL- or DirectCompute-capable platform. On AMD platforms, ATI Stream technology is used to drive the enhanced game experience. As a further enhancement, AMD has developed new parallel GPU accelerated implementations of Bullet Physics' Smoothed Particle Hydrodynamics (SPH) Fluids and Soft Bodies/Cloth. The new code written in OpenCL and Direct Compute will be contributed as open source.

Supporting Resources

- Press release: AMD Announces Open Physics initiative.
- AMD.com: Learn more about OpenCL, DirectCompute and ATI Stream technology.

About AMD

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[1] Free DMM2 has a reduced set of DMM components available relative to the premium DMM version, however the component limit in the free version should still be adequate for most games. For no component limit, a Premium version of DMM2 is available. The Premium version also supports the Xbox360 and PS3 console platforms.

Source: Advanced Micro Devices, Inc.