Bugbear's FlatOut to use a new kind of visibility technology

Bugbear Entertainment's new game FlatOut uses Hybrid Graphics's sPVS technology for game world visibility computation

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Finnish game developer Bugbear Entertainment's much-awaited racing game FlatOut is the first to take advantage of Hybrid Graphics's sPVS visibility determination software.

In FlatOut the player gets to race American muscle cars in a highly realistic environment. Racing inevitably leads to crashes, and once the game gets going the air is soon filled with car parts, drivers and other flying debris from impressive looking collisions. This can all be attributed to FlatOut's dynamic environment, never before seen in a racing game. Thanks to the game's impressive physics engine the cars and other objects behave like the good doctor Newton prescribed. Hybrid's technology has had a very important role in the creation of the visually convincing surroundings.

"Hybrid's sPVS is an essential part of the technological lead we showcase with Flatout", says Tatu Blomberg, Bugbear's Chief Technology Officer. "Integrating sPVS into our existing technology was a snap. The most important feature of sPVS is its ability to perform computations extremely rapidly allowing us to edit the game environment faster than ever before. Hybrid's sPVS provided significant gains in efficiency. We have made a first-rate choice."

Hybrid's sPVS is a tool for computing visibility relations in 3D-worlds. It lightens the load of the graphics processor (GPU), since objects that remain hidden from the actual view need not be processed by the GPU. What sPVS does for the GPU is analogous to an artist painting scenery. The artist only paints things he can see. Computers without visibility optimization paint everything, regardless of whether the painted objects will be visible in the final image or not. Visibility computation eliminates unnecessary work. The graphics resources saved with Hybrid's technology can be used for making the visible world look as good as possible. No need to worry about things that are not visible.

"sPVS is the result of long and intense development, and is the top of the line product of its kind in the world", says Ville Miettinen, CTO of Hybrid Graphics. "FlatOut has been an excellent test-case for sPVS. Hybrid's other visibility tools are used in the majority of latest generation Massively Multiplayer Online Games such as Star Wars Galaxies and the newer installments in the EverQuest series, including the upcoming EverQuest 2. With the reference provided by FlatOut we expect interest towards our new tools to increase significantly."

Hybrid Graphics

Hybrid Graphics Ltd. develops graphics technology for computers and wireless devices. Its other products in addition to sPVS are standard API implementations for mobile graphics, graphics rasterizers and a dynamic visibility determination library dPVS. For more information about Hybrid see www.hybrid.fi

Bugbear Entertainment

Bugbear Entertainment Ltd. is an award-winning Finnish game developer concentrating on immersive and advanced racing games. The company's first international breakthrough was the critically acclaimed title Rally Trophy in 2001. Fall 2004 will see the worldwide launch of the innovative and much-awaited title FlatOut on PS2, XBOX and PC. For more information about Bugbear see www.bugbear.fi

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