

27 November 2008

By: Marius Oiaga, Technology News Editor

Windows
Microsoft

Windows 7 Direct3D 11 Features

A taste of DirectX 11 is already available for download

As of November 2008, Microsoft is delivering the [first taste of DirectX 11](#) for Windows 7 for download. A release aimed at developers, The November 2008 DirectX Software Development Kit, brings to the table the successor of Direct3D 10.1, namely Direct3D 11. In the SDK package, the Redmond company is offering a technical preview of Direct3D 11, but also the adjacent components and tools. Backwards compatible, content developed for Direct3D 11 hardware will also be compatible with earlier products supporting Direct3D 10 and 10.1 (in Vista SP1). Via the [Windows 7 Developer Guide](#), Microsoft provides an insight into the new features made available by Direct3D 11.

"Geometry and high-order surfaces can now be tessellated to support scalable, dynamic content in patch and subdivision surface representations. To make good use of the parallel processing power available from multiple CPU cores, multithreading increases the number of potential rendering calls per frame by distributing the application, runtime, and driver calls across multiple cores. In addition, resource creation and management has been optimized for multithreaded use, enabling more efficient dynamic texture management for streaming," Microsoft revealed.

According to the Redmond company, version 11 is designed to deliver an evolution of the functionality of the Direct3D 10 pipeline for Windows 7. In this regard, Microsoft has positioned Windows 7 to take advantage of the next generation of GPUs and multi-core processors when it comes down to the way the operating system will handle games and 3D applications. The software giant has indicated that Direct3D 11 in Windows 7 will support: Tessellation; Compute Shaders; Multithreaded Rendering; Dynamic Shader Linkage; Windows Advanced Rasterizer (WARP); Direct3D 10 and Direct3D 11 on Direct3D 9 Hardware (D3D10 Level 9); Runtime Binaries; D3DX11; Completely Updated HLSL and Direct3D Compiler; D3D11 Reference Rasterizer and D3D11 SDK Layers.

"New general-purpose compute shaders have been created for Direct3D 11. Unlike existing shaders, these are extensions to the programmable pipeline that enable your application to do more work completely on the GPU, independent of the CPU. DrawAuto, which was introduced in Direct3D 10, has been extended to interact with a compute shader. Several improvements have been made to the high-level shading language (HLSL), such as a limited form of dynamic linkage in shaders to improve specialization complexity, and object-oriented programming constructs like classes and interfaces," the company added.

The November 2008 DirectX Software Development Kit is available for download [here](#).

The November 2008 DirectX End-User Runtime Web Installer can be downloaded via this [link](#).

DirectX End-User Runtimes (November 2008) is up for grabs [here](#).