

Autodesk FBX 2009.3 Features and Benefits

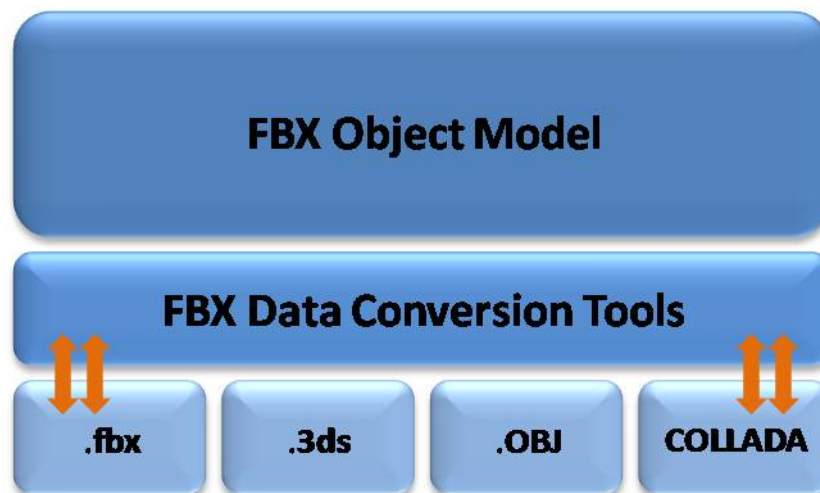
FBX 2009.3: The De Facto Standard for 3D Data Interchange

Autodesk® FBX® technology is a platform-independent 3D interchange technology designed to facilitate the exchange of rich 3D data. FBX technology comprises three core components to provide higher levels of customizability, extensibility and interoperability:

The FBX Object Model - The FBX Object model features a customizable scene graph designed to facilitate the manipulation of complex, animated 3D scenes.

FBX Interchange & Data Conversion Technology - The FBX processing and transport layer includes algorithms that convert geometry, animation, and rendering to and from the FBX object model, and publish to various file formats such as .fbx, .obj, and .dae (Collada). The FBX interchange and data conversion tools include various FBX plug-ins for third party 3D applications as well as the FBX converter.

The .fbx File Format - The .fbx file format enables efficient data exchange between 2D and 3D applications. It is fully extensible and can be used to publish scenes and transfer data between different applications and different parts of your pipeline.



With this latest release of the software, FBX 2009.3, Autodesk is publishing source code for the FBX and Collada readers and writers – enabling developers to extend and adapt the code for use in custom pipelines. FBX 2009.3 also offers significant advances in performance and stability, including a reduced memory footprint. Meanwhile, usability is enhanced through revamped, customizable user interfaces for the Autodesk® Maya® software and Autodesk® 3ds Max® software plug-ins, and an expanded documentation set that includes an all-new programmer's guide for the FBX software developer kit (SDK). The release also offers expanded functionality that will be of particular benefit to games developers and 3ds Max users, such as HLSL and CgFX hardware shader support, and the ability to bake animation in 3ds Max that is not directly supported by FBX.

New Feature Highlights

FBX 2009.3 includes the following new features and functionality:

Published Source Code — With the release of FBX 2009.3, Autodesk is publishing the source code for the FBX reader and writer. This allows developers to protect their investment in FBX, by being able to adapt and extend the FBX format for use in custom pipelines. Also in this version, the source code of the Collada reader and writer created by Autodesk will be made available.

Performance and Stability — The complexity and size of 3D data files continue to rise exponentially. In order to address this issue, FBX 2009.3 has undergone a number of performance and stability improvements that will help customers to efficiently transfer their large files. Enhancements include improved file I/O performance, reduced memory footprint, and fixes throughout many areas of the plug-ins, converter and SDK.

Usability — The FBX 2009.3 plug-ins for Autodesk 3ds Max and Autodesk Maya have undergone major usability improvements; most particularly a redesign of their user interfaces (UIs). The UIs of the plug-ins now have a similar look and feel and support a more efficient workflow. FBX documentation has also been improved as of this release.

Expanded Plug-in Functionality — Of particular benefit to games developers, HLSL and CgFX hardware shaders are now supported by FBX. For Autodesk 3ds Max users, the translator now has the ability to bake animation data not supported directly by FBX.

Published Source Code

FBX Source Code

With the release of FBX 2009.3, Autodesk is publishing part of FBX in the form of documented source code for the FBX reader and writer. This allows developers to adapt and extend the FBX format for use in custom pipelines, and thus protect their investment in their FBX plug-ins.

FBX Collada Translator Source Code

FBX has offered support for the import and export of Collada files for a number of years (via the SDK and the 3ds Max and Maya plug-ins). Now, developers not only have access to FBX Collada libraries created by Autodesk, they can obtain the source code of those libraries.

Performance

File I/O Performance

Large files now import at a much faster rate than with previous versions.

Reduced Memory Footprint

FBX plug-ins now use less memory when translating data, leaving more memory available for other functions and improving performance when importing large files.

Customer-Requested Fixes

The Autodesk FBX team has incorporated more than 300 major customer-requested fixes in this version.

Plug-in Workflow

Redesigned UI for 3ds Max and Maya plug-ins

The UIs of the 3ds Max and Maya plug-ins now have a similar look and feel, so that anyone working with the 3ds Max plug-in will have little difficulty working with the Maya plug-in and vice versa. The plug-in UIs are now also customizable.

Hardware Shader Support

Of particular benefit to games developers, HLSL and CgFX hardware shaders are now supported by FBX.

3ds Max Animation Baking

For Autodesk 3ds Max users, the translator now has the ability to bake out complex animation data as key frames.

IPV6 Compliance

FBX 2009.3 is IPV6 compliant.

FBX SDK Functionality

Support for User-Defined Objects

Developers can now extend the types of objects that can be handled by the FBX SDK.

Documentation

Programmer's Guide for FBX SDK

The Autodesk FBX SDK now includes a new programmer's guide designed to help FBX plug-in developers take full advantage of the features of the SDK.

Interoperability Primer White Paper

This new white paper is designed to help FBX plug-in users understand FBX technology in how it enables interoperability and improves workflow efficiency.

Overall Documentation Enhancements

FBX 2009.3 documentation has been reformatted providing superior navigation and more comprehensive information including workflow tips and instructions. Documentation for FBX 2009.3 is also available for download on the Autodesk.com website.

Recommended Minimum System Requirements

The 3ds Max FBX plug-in is compatible with the Windows® XP/Windows Vista® operating systems used for 3ds Max.

The Maya FBX plug-in is compatible with the Windows XP/Vista, Mac OS® X or Linux® operating system used for Maya.

The FBX SDK is compatible with the following development environments:

Platform	Target	Compiler
Windows	SDK single threaded	.NET2003
	SDK single threaded Debug	.NET2003
	SDK multi-threaded	.NET2003
	SDK multi-threaded Debug	.NET2003
	SDK multi-threaded DLL	.NET2003
	SDK multi-threaded DLL Debug	.NET2003
	SDK multi-threaded	.NET2005
	SDK multi-threaded Debug	.NET2005
	SDK multi-threaded DLL	.NET2005
	SDK multi-threaded DLL Debug	.NET2005
	SDK multi-threaded 64-bits	.NET2005 64-bits
	SDK multi-threaded 64-bits Debug	.NET2005 64-bits

	SDK multi-threaded DLL 64-bits	.NET2005 64-bits
	SDK multi-threaded DLL 64-bits Debug	.NET2005 64-bits
	SDK multi-threaded	.NET2008
	SDK multi-threaded Debug	.NET2008
	SDK multi-threaded DLL	.NET2008
	SDK multi-threaded DLL Debug	.NET2008
	SDK multi-threaded 64-bits	.NET2008 64-bits
	SDK multi-threaded 64-bits Debug	.NET2008 64-bits
	SDK multi-threaded DLL 64-bits	.NET2008 64-bits
	SDK multi-threaded DLL 64-bits Debug	.NET2008 64-bits
Mac OS 10.4	SDK (10.4) (PPC/Intel)	GCC 4.0 (UB)
	SDK Debug (10.4) (PPC/Intel)	GCC 4.0 (UB)
Linux	SDK (RHE 4, update 3)	GCC 3.4.4
	SDK (RHE 4, update 3) Debug	GCC 3.4.4
	SDK (RHE 4, update 3) 64-bits	GCC 3.4.4 64-bits
	SDK (RHE 4, update 3) 64-bits Debug	GCC 3.4.4 64-bits
	SDK (FC 5)	GCC 4.0.2
	SDK (FC 5) Debug	GCC 4.0.2
	SDK (FC 5) 64-bits	GCC 4.0.2 64-bits
	SDK (FC 5) 64-bits Debug	GCC 4.0.2 64-bits

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