

FBX SDK

FBX EXTENSIONS SDK PROGRAMMER'S GUIDE

2009.3

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Contents

Introduction	4
Two meanings of the word “plug-in”	4
What is FBX Extensions SDK.....	4
Installing and configuring.....	5
Contents of the FBX Extensions SDK distribution	5
Development environments	5
Runtime environment.....	5
Downloading and installing.....	6

Introduction

Welcome to FBX Extensions SDK.

This document assumes that you are a developer who is familiar with Autodesk FBX SDK. For information about FBX SDK, see FBX SDK Help, which is distributed with:

- FBX Extensions SDK.
- FBX SDK.

NOTE: Study the sections in FBX SDK Help on supporting additional file formats, and on the MyOwnWriterReader sample program.

Two meanings of the word “plug-in”

In this document, the word “plug-in” is used in two different ways:

3ds Max/Maya plug-ins	The FBX plug-ins to Autodesk 3ds Max or Autodesk Maya. These plug-ins have a graphical user interface which allow users to import and export scene data stored in FBX files, Collada files, and a few other file formats. You can install the most recent releases of these plug-ins from www.autodesk.com/fbx . The installers include full documentation for 3ds Max/Maya users.
I/O plug-ins	Scene I/O plug-ins to FBX SDK. I/O plugins do not have a graphical user interface. Each plug-in performs the scene I/O to read and write scene data using one particular file format: see “Scene I/O” in FBX SDK Help. FBX Extensions SDK includes the source code for the I/O plug-ins that support FBX files (versions 5 and 6) and Collada files.

What is FBX Extensions SDK

FBX Extensions SDK allows you to extend FBX file format (versions 5 and 6) and the Collada file format.

FBX Extensions SDK contains:

- Source code and project files for the I/O plug-ins that read and write scenes to FBX files.
- Source code and project files for the I/O plug-ins that read and write scenes to Collada files.
- Library files (for Windows only) that link to the 3ds Max/Maya plug-ins.
- The same include files that are distributed with FBX SDK.
- The document that you are currently reading: *FBX Extensions SDK Programmer’s Guide*.
- The documentation files that are distributed with FBX SDK.

As a developer, you can:

- Extend the FBX and/or Collada file format to support additional kinds of data.
- Extend the functionality of the FBX plug-ins for 3ds Max/Maya to support the reading and writing of files that use your file format.
- Use FBX SDK directly to read and write files that use your file format, without passing through 3ds Max or Maya.

Installing and configuring

There are separate distributions of FBX Extensions SDK for Linux, Mac OS, and Windows. The structure of the FBX SDK distribution directory is, however, identical on all these platforms.

To download and install FBX SDK, follow the instructions for your development platform.

Contents of the FBX Extensions SDK distribution

The structure of the FBX Extensions SDK distribution is very similar to the FBX SDK distribution, and contains many of the same folders. Here are the key differences:

- Instead of an examples directory, there is a plugins directory. This directory contains:
 - The actual source code and supporting files for the writer, reader, and plug-in registration that FBX SDK uses to support FBX files.
 - The actual source code and supporting files for the writer, reader, and plug-in registration that FBX SDK uses to support Collada files.
 - Source code and supporting files for MyOwnWriterReader, the FBX SDK sample program that supports CustomWriter files (see *FBX SDK Programmer's Guide*). This version of MyOwnWriterReader can be used to extend the FBX plug-ins for 3ds Max and Maya.
- For Windows, the lib folder contains small .lib files that link to the appropriate executable file of the FBX plug-in for 3ds Max or the FBX Plug-in for Maya. These .dll files contain the executable code for FBX SDK classes. Note: if you do not intend to use either of these plug-ins, link to the .lib files distributed with FBX SDK itself.
- For Mac OS and Linux, no files are required to link with the Maya plug-in.
- The doc directory contains the documentation for FBX SDK, but also contains *FBX Extensions Programmer's Guide* (the document that you are now reading).

Development environments

FBX Extensions SDK uses the same development environments as FBX SDK: see FBX SDK help for more information.

Runtime environment

To *run* any software that you develop with FBX Extensions SDK 2009.3, you need one of the following installed:

Any Maya plug-in for 2009.3.	Your I/O plug-in will link to the library file for the Maya plug-in (in Windows, a DLL). You do not need to install FBX SDK.
Any 3ds Max plug-in for 2009.3.	Your I/O plug-in will link to the library file for the 3ds Max plug-ins (in Windows, a DLL). You do not need to install FBX SDK.
FBX SDK 2009.3.	Your I/O plug-in will link directly to the library file for FBX SDK.

You can, however, *install* FBX Extensions SDK without having any of the above installed.

To allow Maya users to use your I/O plug-in, place your .dll file in:

- MAYA_INSTALL_FOLDER/bin/plug-ins/fbx/

To allow Maya users to use your I/O plug-in, place your .dll file in:

- MAX_INSTALL_FOLDER/plugins/fbx/

Downloading and installing

You can install FBX Extensions SDK in any location on your computer.

Windows

Downloading and installing FBX Extensions SDK

To download and install FBX Extensions SDK on your Windows computer:

1. Go to <http://www.autodesk.com/fbx>.
2. Navigate to the Downloads page, and follow any instructions.
3. Find the Windows distribution file for FBX Extensions SDK 2009.3.
4. Download the distribution file to your computer. The distribution file is a Setup program, i.e., an executable.
5. Run the Setup program, and follow the instructions.
6. The Setup program will let you specify a destination folder. Specify a folder which is new or empty.
7. Read `readme.txt`, located in the destination folder.

Notes:

- The Setup program does not modify the Windows Registry or the Windows Start menu.
- You can have more than one version of FBX Extensions SDK installed on your computer, providing you install each version in a separate folder.

Uninstalling FBX Extensions SDK

To remove FBX Extensions SDK from your computer:

- Run `uninstall.exe`, located in the FBX Extensions SDK distribution folder.

Mac OS

The procedure is the same as for FBX SDK for Mac OS.

Linux

The procedure is the same as for FBX SDK for Linux.