

Getting Started with Programming in MotionBuilder

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March 2009



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MOTIONBUILDER 

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1.0 Installing MotionBuilder SDK Extras: Must Choose 'Custom'

This is definitely one of the most common issues developers encounter once they install, they cannot figure out why they do not see all the OR SDK and Python documentation or samples within MotionBuilder. This is because they went with the default 'Typical' install rather than selecting the 'Custom' install which provides you with extra goodies and learning resources which is crucial for the learning curve.

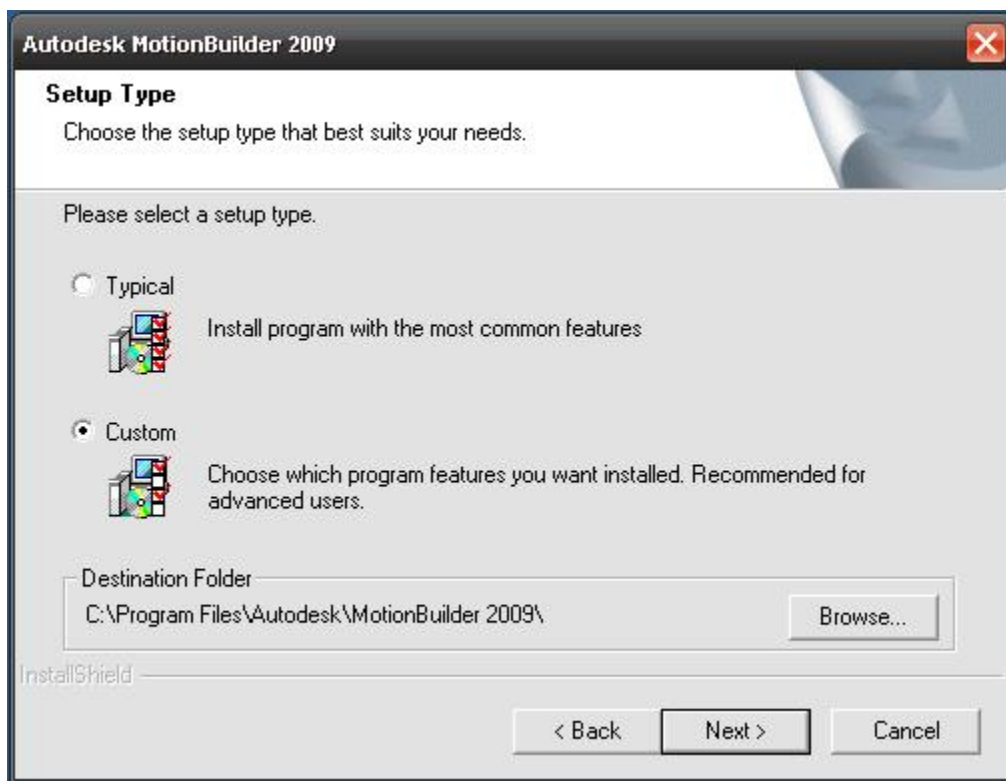


Figure 1 For OR SDK and Python Resources select 'Custom' Install

On the next 'Select Features' prompt box in the Wizard, you can just take the default of what is there, unless you feel you need more or less of what is available, it's really up to you but I always just take the default and click 'Next'.

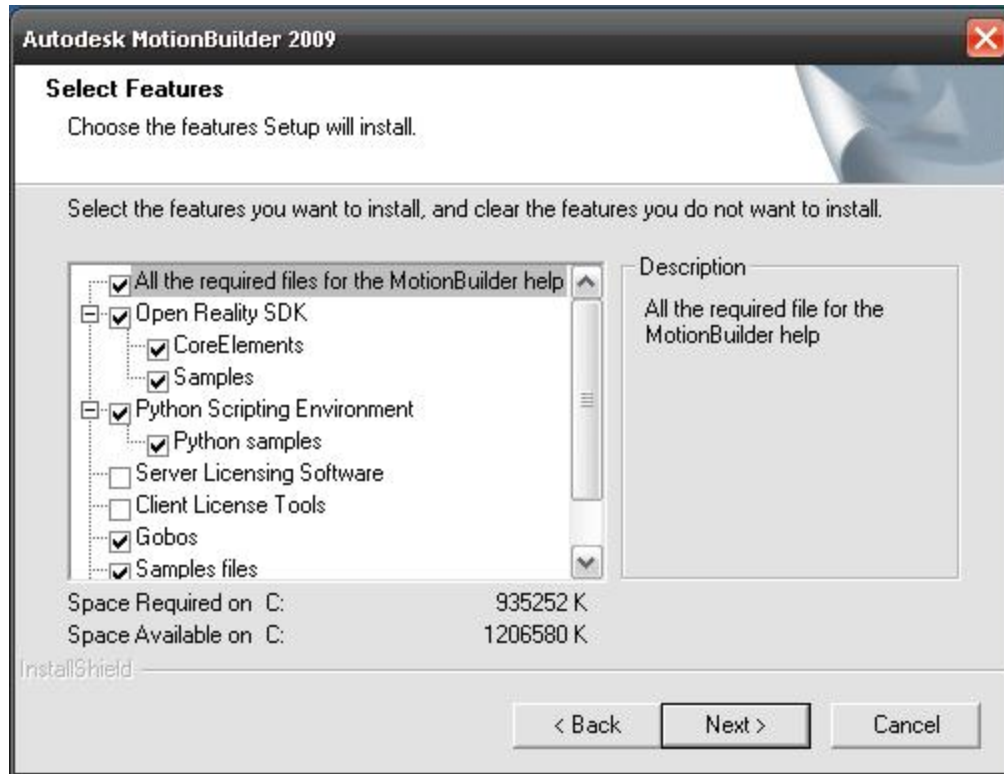


Figure 2 This is what will be Installed Additionally

For more details on the install process, see the Installation Guide.

1.1 Help Documentation

Most Current Version of Documentation

We will always ship Python/OR SDK documentation with each Major Release/Service Pack/Extension; however we also want to keep you up-to-date with the latest documentation even when there is no release, so we will be post documentation on the Autodesk website.

Download from here for the latest versions of the documentation:

<http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=9693656>

Documentation Structure

The MotionBuilder 2009 Help Documentation consists of the following .CHM documents:

1. **MotionBuilder 2009 Installation Guide**
2. **MotionBuilder 2009 User Guide**
 - Is designed to provide both reference and task-based information on every MotionBuilder window, editor and dialog box.

3. MotionBuilder 2009 Open Reality SDK Help

- Umbrella File for A and B, so that you can search both at the same time.
- A. *Open Reality SDK Developers Guide*
 - This documentation goes over the architecture and foundational knowledge needed to work with MotionBuilder from a programming level.
- B. *Open Reality SDK Reference Guide*
 - This is the class definitions, member lists and header files.

4. MotionBuilder 2009 Python Help

- Umbrella File for A and B, so that you can search both at the same time.
- A. *Python Developers Guide*
 - This documentation goes over the Python Editor and the User Interface helper classes.
- B. *Python Reference Guide*
 - This is the class definitions, member lists and header files.

The Developers Guide is targeted more at discussing what ways to work with the Python/OR SDK, currently this documentation focuses on some workflows; it is aimed at being written in structured English so you can learn more.

The Reference Guide is targeted at the technically savvy individuals who just want to look at the classes and see what parameters and return values they need to work within the SDK.

However, you will find that you will likely be working out of both, since you will be accepting whatever information you can get your hands on since there is not a lot on the necessary workflows.

TIP: Just because you are a Python Programmer don't be shy to the OR SDK documentation because you will notice there is a lot more information in its Developers Guide which is still relevant to Python, and they same Vice Versa if you are a C++ programmer using the OR SDK, don't forget to use Python as a resource as well because it is applicable to C++ mostly too.

1.2 Code Samples

The examples that come with MotionBuilder 2009 are one of the better areas to learn from, especially in this current release there was a big effort put into creating more Python examples.

The sample Python examples are located here:

C:\Program Files\Autodesk\MotionBuilder 2009\bin\config\Scripts

C:\Program Files\Autodesk\MotionBuilder 2009\PythonScripting\Samples

The sample OR SDK examples are located here:

C:\Program Files\Autodesk\MotionBuilder 2009\OpenRealitySDK\Samples

TIP: I am going to give you the same tip here as the documentation section, don't be shy looking for workflow information in the opposite language then you're working on because there are some samples only in OR SDK or only in Python. Just ignore the programming syntax and get an idea how to work with the classes and methods.

1.3 Additional Learning Resources

Autodesk MotionBuilder Programming Forums

- The AREA || Python
 - <http://area.autodesk.com/index.php/forums/viewforum/8/>
- The AREA || Python Archive
 - http://area.autodesk.com/index.php/forums_archive/topic_index/208/
- The AREA || OpenReality SDK
 - <http://area.autodesk.com/index.php/forums/viewforum/11/>
- The AREA || OpenReality SDK Archive
 - http://area.autodesk.com/index.php/forums_archive/topic_index/207/
- CG Society: Society of Digital Artists || Everything MotionBuilder
 - <http://forums.cgsociety.org/forumdisplay.php?f=85>
- David Lanier's 3D Community MotionBuilder
 - <http://dl3d.free.fr/phpBB2/viewforum.php?f=6&sid=491e7fa7c270eaa403764a750490c749>

MotionBuilder Blogs

- MotionBuilder Blog by Kevin O'Neal
 - http://area.autodesk.com/index.php/blogs_curtis/blog_list/
- Stumbling Toward 'Awesomeness' by Christopher Evans
 - http://www.chrisevans3d.com/pub_blog/?cat=12
 - http://www.chrisevans3d.com/pub_blog/?cat=3
 - http://www.chrisevans3d.com/pub_blog/?cat=5

MotionBuilder Python Tutorials

- Creating Interactive MotionBuilder User Interface Tools by Christopher Evans
 - <http://chrisevans3d.com/tutorials/mbui.htm>
- MotionBuilder Driven Key Importer by Jason Parks
 - http://www.jason-parks.com/Pipeline_Tools/MotionBuilder_Scripts.html

Web Resources for Python

- Python.org the Official Location for Python information
 - www.python.org
- Download Python 2.5 Software
 - <http://www.python.org/download/releases/2.5.1/>

Books

- Learning Python by Mark Lutz and David Ascher
- Python Cookbook by David Ascher
- Python in a Nutshell (2nd Ed.) by Alex Martelli
- Programming Python by Mark Lutz
- Dive into Python by Mark Pilgrim
- Python.org gives you a whole list of good Python Books
 - <http://wiki.python.org/moin/IntroductoryBooks/>

1.4 Let us know about MotionBuilder Defects or Wish list Items

If you ever encounter something that does not work as it should in MotionBuilder or it causes the application to crash please let us know, we want to fix it, but we don't always know it's there, so you need to tell us.

Log all MotionBuilder Software defects here:

www.autodesk.com/motionbuilder-bugreport

Any items that you would like to see in MotionBuilder or are not exposed yet, log your wish list items here:

www.autodesk.com/motionbuilder-sug