AUTODESK® MOTIONBUILDER™ 7.5 EXTENSION 2 FOR MICROSOFT® WINDOWS® AND APPLE® MACINTOSH®

RELEASE NOTES

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The Autodesk MotionBuilder 7.5 Extension 2 software for Microsoft Windows and Apple Macintosh is now available for download at the Autodesk website.

For additional last minute information about the MotionBuilder software, or for any downloads, consult our Support page at: http://www.autodesk.com/motionbuilder-support.

You can find information about the MotionBuilder software at: http://www.autodesk.com/motionbuilder.

For information about the Autodesk Media & Entertainment products and solutions, please visit: http://www.autodesk.com.

The release of the Autodesk MotionBuilder 7.5 Extension 2 product addresses the integration of the FBX® SDK, the interoperability of the product via FBX, as well as performance and stability issues. This release also includes new features and enhancements, as well as support on Windows XP 64-bit version computers and Intel® Core Duo™ Mac® computers.

Notes About Installation

Install the Autodesk MotionBuilder 7.5 Extension 2 software by following the installation instructions on the screen.

The default installation path for MotionBuilder 7.5 Extension 2 on the Windows platform is *C:\Program Files\Autodesk\MotionBuilder 75 Ext2* and on the Macintosh platform is *Macintosh Hard Drive/Applications/Autodesk/MotionBuilder 7.5 Extension 2*.

Note: The MotionBuilder 7.5 Extension 2 software is not certified or supported with Windows Vista™.

For information on qualified system requirements, please visit: http://www.autodesk.com/qual-charts.

New Features and Enhancements

The following describes the new features and enhancements for this release.

Support on Windows XP 64-bit version and Intel Core Duo Mac Computers

- This release of the MotionBuilder software extends support to the 64-bit Intel and AMD based Windows platform and to the Intel Core Duo Mac computers.

  This release provides a Universal Binary version of the MotionBuilder software to ensure the software runs on both – Power Mac® G5 computers and Intel Core Duo Mac computers.

File I/O Changes

- There is now a new way to open files exported from other software packages such as Autodesk 3ds Max® and Autodesk Maya®.

  For example:
  Use the Open/Merge option to load scenes created and saved in MotionBuilder. You can also use this method for scenes exported from a 3D application, using an Autodesk FBX plug-in saved with the "MotionBuilder 7.5" *.fbx* format option however, this functionality will be removed in future versions of the software.
  Use the FBX Plug-in Open/Merge option to load scenes exported from a 3D application (such as 3ds Max or Maya) via the FBX Plug-in. If the scenes were saved using the "MotionBuilder 7.5" *.fbx* format, you can also use Open/Merge to load these scenes however, this functionality will be removed in future versions of the software.

  Note: If you use the FBX Plug-in Import and FBX Plug-in Merge functions to open a file created in MotionBuilder, the file does not open and a dialog box instructs you to use instead Open, Merge, or Import.

  Note: If you use the Open or Merge options to open a file created with the FBX Plug-ins, the file opens in MotionBuilder, but a dialog box appears recommending that you use instead FBX Plug-in Import and FBX Plug-in Merge functions.

Finger and Toe Reach Settings

- There is now a reach setting for character fingers and toes so you can specify the percentage you want each finger and toe of your character to reach toward its motion source.

  These settings give you the same reach functionality for Character fingers as the Character head, arms, legs, and spine. There is a reach property for the index, middle, ring, pinky fingers, thumb, and extra finger.

You can use the Finger reach settings for Actor retargeting but Actor toes will not be affected.

You access the Finger Reach properties via the Character settings pane Reach area when you expand the Left or Right Hand settings.

Finger Solving

- There is now a finger solving feature to capture finger animation through the actor. Five new cells were added at the end of each hand in the Actor representation. You can also select Fingers in the Actor controls.

  The finger solving cells behave the same as the other Actor cells, except that you can only assign one marker per finger cell.
  This new finger solving feature enables you to retarget actor to character fingers and control the Reach T (Translation), and Reach R (Rotation) for each finger in the Character settings.

Bone Length in Motion Analysis *.htr* Files

- There is now a custom property called HTR_BoneLength in the FBXSDK so that Motion Analysis *.htr* files can keep their bone length data.

  On import, this appears in the MotionBuilder software as a green property on any bone that is classified as HTR_BoneLength and the bone length data is written into the *.htr* file on export.

Shoulder in the Story Window

- A character's shoulder is now considered as a sub-body part of the arm in a Story window Character track or subtrack.

  Consequently, any Character tracks from previous versions of the software that have the chest active but not the arms will include the shoulders without the rest of the arms. This preserves any animation done on the shoulders from earlier versions of the software where these were considered part of the Chest in the Story window.

3ds Max Biped Template

- There is now a new character template – the 3ds Max Biped Template – in the Characters folder in the Asset browser. The 3ds Max Biped Template is created for 3ds Max Bipeds and is identical to the MotionBuilder standard Character constraint, but it uses the 3ds Max Bipeds naming convention instead.

  For example, if you drop the 3ds Max Biped Template on a skeleton, the character is re characterized using a 3ds Max Biped-specific naming template.

  Note that the MotionBuilder 3ds Max Biped Template supports up to 10 neck bones whereas the 3ds Max Bipeds support up to 25 neck bones.

Normals Support for Shapes

- The MotionBuilder software now supports Normals for shapes. To activate this support, you must modify the application configuration *.txt* file by setting ShapeBlendNormals under the [Display] heading to Yes.

  On the Windows platform, the *<computername>.Application.txt* file is located by default in the following directory: *C:|Program Files|Autodesk|MotionBuilder75 Ext2|bin|config*.
  On the Macintosh platform, the *<computername>.Application.txt* file is located by default in the following directory: *Macintosh Hard Drive/Users/<user name>/Library/Preferences/Autodesk/MB-7.5 Extension 2*.

Custom Camera Film Formats

- If you change the Film Format setting for a custom camera in the Camera Settings Advanced pane, the Viewer window view does not change. This is because the new Film Format settings (for example the Focal Length or Optical Center) adjust to match the display of the current camera view in the Viewer window. This enables you to use the Viewer window to set up shots more accurately.

  If you want the current camera view in the Viewer window to reflect the change to the Film Format settings, you must change the settings in the Advanced pane manually.

File I/O Speed

- Various improvements have been made to file load times and to the software's memory footprint.

Resolved Issues

The following describes the issues addressed by this release.

Stability

- The instability issue when creating File > New after loading a video file is now resolved.
- The instability issue after loading a file, selecting File > New and then loading the file again is now resolved.
- The instability issue created by Network Client/Server devices that use custom properties is now resolved.
- The instability issue created when trying to manually edit the value of a key in the FCurve window is now resolved.

Duplicate Textures

- You can no longer apply the same texture more than once to an object. When you attempt to apply the same texture to an object a second time, only Replace by Type is offered in the contextual menu.

Audio on the Macintosh Platform

- Numerous small audio problems in the software running on a Macintosh platform are now resolved.

Tutorial *.fbx* Files on the Macintosh Platform

- The *.fbx* files that accompany the MotionBuilder software tutorials are now automatically installed when you install the software on the Macintosh platform from the Installation CD.

Maya Keyboard Shortcuts on the Macintosh Platform

- The Maya (software) keyboard shortcut configuration on the Macintosh platform no longer cause instability.

  Now, any shortcut set to an invalid keyboard key is ignored.

Maya Cameras in MotionBuilder

- Now, the MotionBuilder software retains the Maya cameras' Focal Length values on saving scenes even if there are no keyframes set.

  Previously, the software replaced the Focal Length custom values with the default settings when there were no keyframes set.

Insert Current Take

- A problem where incorrect scaling on a character's hips caused the Insert Current Take option to interpret animation incorrectly in the Story window is now resolved.

  The animation now behaves as expected when using the Insert Animation option in the Story window to retarget animation on characters with unwanted hips scaling.

Undoing Keyframes with Degrees Of Freedom (DOF)

- You can now undo keyframes set on top of other keyframes that contain DOF rotation properties.

  Previously, DOF rotation properties on keyframes interfered with the deletion of keyframes, even if the DOF properties were disabled.

Character Controls Default Settings

- Now, when you load a scene that has multiple characters, the Character Controls' Current Character menu automatically defaults to the first character the Characters folder in the Scene browser.

Simple IK Conversion

- A problem causing the IK Solver to freeze when converting unsnapped Simple IK constraints to Chain IK constraints is now resolved. Enhancements have been made to previous validation processes and modifications have been made to the code so that local translation of nodes is evaluated even if no snapped values are available.

Duplicate Producer Cameras

- Problems when loading or saving scenes that contain duplicated Producer cameras are now resolved.

Refresh Problem when Rendering

- A refresh problem caused by camera visibility in the Story window where animation would flicker or shudder when played back is now resolved.

Insert Current Take in Story Window

- The Insert Current Take function in the Story tool now functions properly even if one axis (x, y or z) lacks sufficient data.

Notes in the Scene Folder

- Now, when you attach a note to an object, it displays in the Scene folder of the Scene browser as an attribute of that object, as well as in the Notes folder.

Inability to Set Keyframes

- You can now set keyframes on animation in layouts that do not contain the Key Controls window.

  Previously, if the Key Controls window was not included in the current layout, you could not set keyframes.

Selecting Hidden Objects

- Now, when you select an object and disable its Visibility property, the object is hidden and cannot be selected in the Viewer window.

Python Missing class FBAudioClip in pyfbsdk

- The class FBAudioClip is now exposed to Python scripting, enabling you to read/change an audio clip's properties.

  Consult the Open Reality SDK 7.5 Help for more information about this class.

OR SDK GoToStance Method Added to FBCharacter Class

- The new GoToStance (pPushUndo, pIncludeCharacterExtensions) method enables you to set a character in stance pose.

The GoToStance method accepts the following boolean parameters:
pPushUndo: enables you to specify whether an undo transaction is pushed on the undo stack.
pIncludeCharacterExtensions: enables you to specify whether the character extension should go to stance pose as well.
For example, to set a character and its character extension to the stance pose and not push an undo transaction on the undo stack, you would call FBSystem().Scene.Characters[0].GoToStancePose(False,True).

Python FBApplication::FileExport

- Exporting a motion file using FBApplication::FileExport no longer results in all takes being exported regardless of the take specified by the pTake parameter.

OR SDK FBMemo Adds Extra Carriage Returns to Text

- When using FBMemo, extra blank lines are no longer added to text that contains line breaks.

  Previously, if you typed for example the following in FBMemo:

  foo<Enter>
  bar

  the text became:

  foo
  <extra line>
  bar

OR SDK Application Error on Exiting After Adding FBCameraSwitcher

- Exiting after calling the FBCameraSwitcher constructor is now managed properly and no longer results in an application error.

Python ClearAllProperties Method Added to FBTake Class

- The new ClearAllProperties method enables you to clear the animation on all properties associated with a take. The ClearAllProperties method accepts a boolean parameter that enables you to clear the animation on all properties (false) or clear the animation on the currently selected properties (true).

  For example, to clear the animation on all properties, you would call FBSystem().Takes[0].ClearAllProperties(False).

  The ClearAllProperties method is available to both the Open Reality SDK and Python Scripting.

Python FBObjectPose, FBCharacterPose, and FBFolder

- The classes FBObjectPose, FBCharacterPose, and FBFolder are now available for Python scripting. The Python reference has been updated accordingly.

  Previously, it was difficult to distinguish FBPoses in the Poses folder from other poses. In addition, since FBComponent did not have a folder property (as in the Open Reality SDK), it was difficult to organize poses in folders.

  Consult the Open Reality SDK 7.5 Help for more information about these classes and methods.

Python suspendMessages Command for Disabling Notifications

- You can now launch the MotionBuilder software using the new -suspendMessages command to disable all warnings and dialogs. This command is useful for automation purposes.

Python Filter Properties Accessible Through Python Scripting

- You can now access filter properties such as Start, Stop. Also, the Frame Rate of the Reinterpolate Filter works as expected.

  Previously, Start\Stop Public Attribute was not defined and Attribute "ResampleFrameRate" of Reinterpolate didn't work. For example, calling lFilter.PropertyList.Find ('Key Sync').Data = True did not set the Key Sync property to true.

  The following filter properties now work correctly:
  Start\Stop (common)
  lFilter.PropertyList.Find ('Start').Data = FBTime(0, 0, 0, 1)
  lFilter.PropertyList.Find ('Stop').Data = FBTime(0, 0, 0, 10)

  Butterworth
  lFilter.PropertyList.Find ('Cut-off Frequency(Hz)').Data = 7.0
  lFilter.PropertyList.Find ('Key On Frame') = True

  Constant Key Reducer
  lFilter.PropertyList.Find ('Keep At Least One Keyframe').Data = False

  Key Reducing
  lFilter.PropertyList.Find ('Key Sync').Data = True

  KeysOnFrame
  lFilter.PropertyList.Find ('Frame Rate').Data = 120.00

  Reinterpolate
  lFilter.PropertyList.Find ('Resample').Data = True
  lFilter.PropertyList.Find ('Resample Frame Rate').Data = 120.0

```
Resample
   lFilter.PropertyList.Find ( 'Frame Rate' ).Data = True
   lFilter.PropertyList.Find ( 'Keys On Frame' ).Data = True
   lFilter.PropertyList.Find ( 'With interpolation' ).Data = True

Smooth
   lFilter.PropertyList.Find ( 'Width' ).Data = 4
   lFilter.PropertyList.Find ( 'Sample Count' ).Data = 8.00
   lFilter.PropertyList.Find ( 'Use Quaternions' ).Data = True

SmoothTranslation
   lFilter.PropertyList.Find ( 'Width' ).Data = 8
   lFilter.PropertyList.Find ( 'Factor' ).Data = 1.50
   lFilter.PropertyList.Find ( 'Sample Count' ).Data = 8.00

Transformation
   lFilter.PropertyList.Find ( 'Translation' ).Data = (0.00, 0.00, 0.00)
   lFilter.PropertyList.Find ( 'Rotation' ).Data = (0.00, 0.00, 0.00)
   lFilter.PropertyList.Find ( 'Scaling' ).Data = (0.00, 0.00, 0.00)

UnrollRotation
   lFilter.PropertyList.Find ( 'Quality' ).Data = 0.25
   lFilter.PropertyList.Find ( 'Path' ).Data = True
```

Crash on Setting RootModel.Selected to True

- In this version of the Open Reality SDK, setting the Selected property of RootModel to True no longer causes an unidentifiable C++ exception or the software to crash.

Real-time Optical Device Plug-ins

- When you save and load scenes using real-time optical devices, the optical markers now retain their data correctly.

LoadAnimationOnCharacter and SaveCharacterRigAndAnimation Exposed in Python

- The LoadAnimationOnCharacter and SaveCharacterRigAndAnimation methods are now available through python scripting.

  Consult the FBFbxManager Class documentation in the Open Reality SDK 7.5 Help for more information on these methods.

FBCharacterPose Exposed in Python

- The FBCharacterPose class is now available through python scripting.

  Consult the Open Reality SDK 7.5 Help for more information about this class.

FBApplication().FileMerge

- FileMerge now works properly. When calling FileMerge using python scripting, the merge setting for all objects is now correctly set to merge.

Python FBFbxManager::LoadBegin()

- If you are loading a file using FBFbxManager and the file neither has objects nor takes in common with the current scene, setting pMerge to true will have the same result as setting pMerge to false. Since there are no objects or takes in common, the contents of the file being loaded will be appended to the current scene.

  For example, if your current scene contains a cube with no animation and you are merging a scene with the same cube but animated, setting pMerge to true (merge) will result in a scene with a single animated cube. Setting pMerge to false (append) will result in a scene with two cubes: one animated and one not.

Unresolved Issues

The following describes the outstanding issues.

Dongle Support

- The MotionBuilder licensing can optionally work with a dongle. This allows a single license to be moved to different workstations as long as the dongle is connected to the workstation. However, running the MotionBuilder 7.5 Extension 2 software with a dongle on Mac Intel computers or on Windows XP 64-bit platforms will not work as the dongles drivers for these computers and platforms are not available.

Macintosh Operating System Support

- The MotionBuilder 7.5 Extension 2 software is not supported on the Macintosh OS® X v10.3.9.

  The workaround for this issue is to upgrade the OS to OS v10.4.

MotionBuilder Keyboard Configuration Settings in Online Help

- The keyboard configuration settings listed under the MotionBuilder online help topic “MotionBuilder interface > MotionBuilder menu bar > Settings menu >Settings > Keyboard Configuration” should also include the MotionBuilder Classic keyboard configuration setting.

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