



Leap Motion plug-in for Autodesk Maya 2014



This plug-in provides access to the Leap Motion Controller from within Autodesk Maya 2014. The Leap Motion Controller produces a stream of motion tracking data as a set of higher order objects. The objects consist of hands, fingers, tools as well as gesture events. The plug-in exposes this information through nodes and attributes. Connecting these attributes to other elements in the Maya scene allows for true 3D interaction. For example, sculpting, object picking, blend shapes control, camera control, etc...

There are examples and video tutorials provided to illustrate the use of this plug-in and hopefully stir your imagination and allow you to design and create new and wonderful things.

Visit: <http://area.autodesk.com/MayaLeapPlugin>

Installing

Autodesk Exchange Apps: When acquired from Autodesk Exchange Apps, the plug-in should already be installed for Autodesk Maya 2014

Other Sources: Please follow the installation instructions provided by the alternate source.

Uninstalling



Windows: To uninstall this plug-in, simply rerun the installer by downloading it again from Exchange, and select the 'Uninstall' button, or you can uninstall it from 'Control Panel\Programs\Programs and Features' (Windows 7) or Add/Remove Programs (Windows XP), just as you would uninstall any other application from your system. The panel on the Plug-ins tab will not be removed until Maya is restarted.

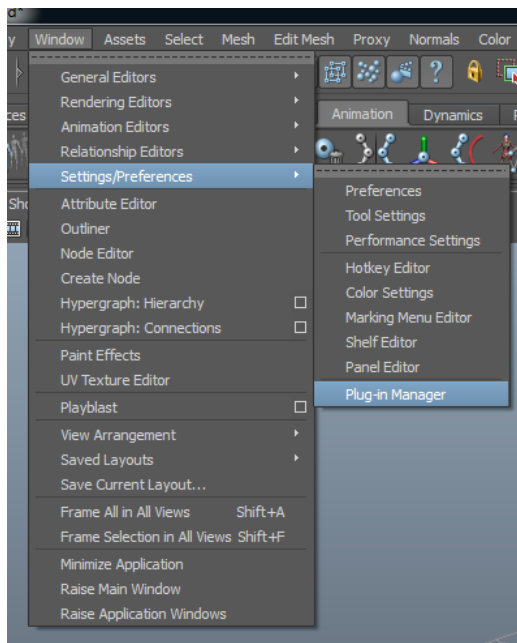


OSX: To uninstall this plug-in, simply delete the plug-in's module directory from your system. The panel on the Plug-ins tab will not be removed until Maya is restarted.

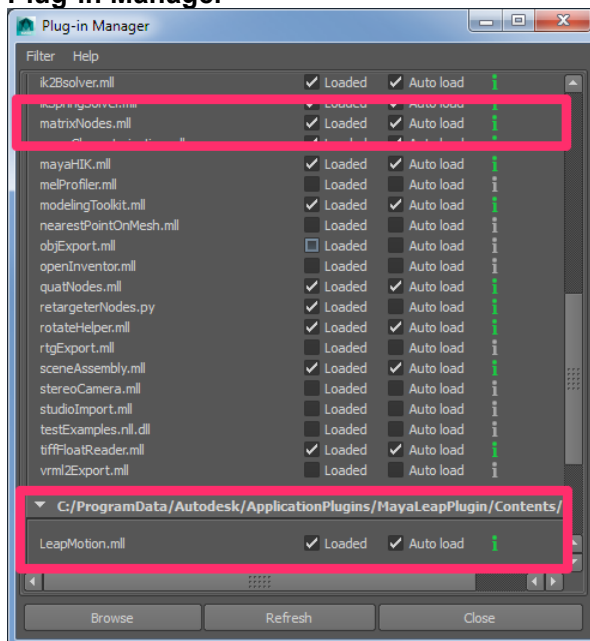
Getting Started

After running the installer, the Leap Motion plug-in should be enabled within Maya. To verify that the plug-in is installed and enabled, open the plug-in manager and search for the **LeapMotion.mll** entry. The **Loaded** checkmark should be set if the plug-in is

loaded. You may checkmark **AutoLoad** if you wish to automatically load the plug-in each session. Additionally, the plug-in requires the existing **matrixNodes.mll** plug-in which should also be set to **Loaded** and **AutoLoad**.



Plug-in Manager



Enable Plug-in

Usage

The first time you start Maya after installing the plug-in, you will see a newly created shelf named Leap. The Leap shelf contains 4 buttons that allow access to the plug-in as described below.



Toggle Leap Motion

Creates the LeapHands and LeapGestures nodes if they don't exist, toggles the *Live* state of these nodes, and then selects the LeapHands node. The icon will be green when enabled and black when disabled.



Select LeapHands Node

Selects the LeapHands node and displays its attributes.



Select LeapGestures Node

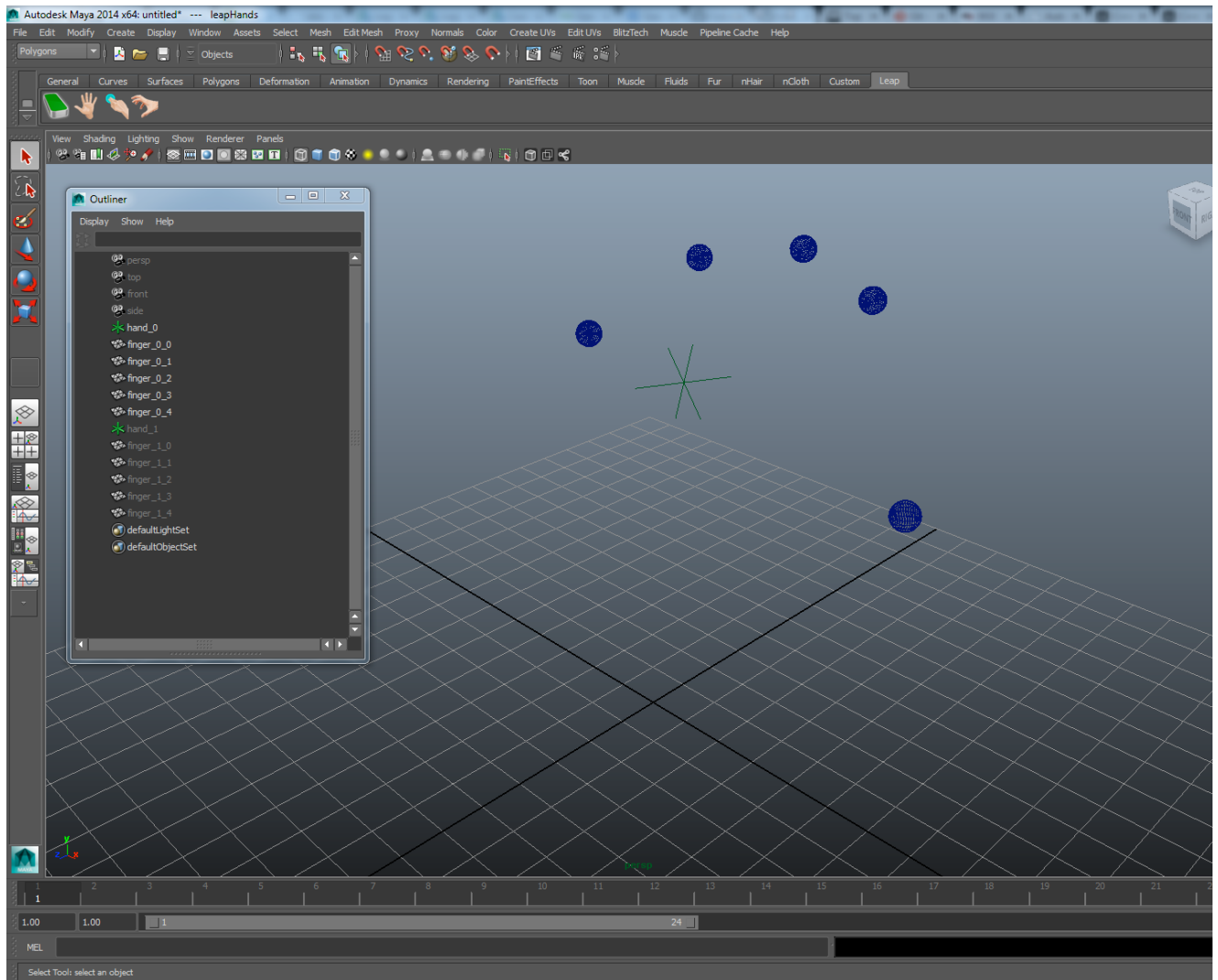
Selects the LeapGestures node and displays its attributes.



Select LeapGrab Node

Selects the LeapGrab node and displays its attributes. Allows you to manipulate meshes in the viewport. The node contains a *GrabEnabled* attribute that enables or disables the grab functionality.

The screenshot below shows a new scene in Maya with the Leap Motion plug-in enabled. The locator and spheres within the scene represent a hand and fingers that are visible by the Leap Motion Controller. The plug-in creates 2 locators (one for each hand) and 10 spheres (one for each finger) to use when tracking the data. These objects become visible when hands and fingers are captured by the Leap Motion Controller. The Outliner Window, also shown in the screenshot, can be used to view and select these objects.



LeapHands Node in viewport

When the LeapHands or Leap Gestures node is selected, the Attribute Editor will display various attributes exposed by the node. Several of these inputs control how the Leap values are effected:

- **Scale:** The Leap generates real world coordinates in millimeters. This attribute can be used scale the incoming values to better match the dimension of the scene.
- **Offset:** This attribute offsets the origin of the Leap coordinates.
- **Relative To Camera Rot:** If checked, the Leap rotation will be parented to the viewport camera.
- **Relative To Camera Pos:** If checked, the Leap position will be parented to the viewport camera.

Adjusting these values can improve the experience of interaction. For example, by better scaling the physical space with the virtual space. In a default scene, try using the following values:

- **Scale** = 0.1
- **Offset** = 0.0, -10.0, 0.0

Known Issues

- Manually toggling the *Live* attribute of the nodes from the attribute window can throw off the node enabled state. Use the **Toggle Leap Motion** button on the Leap shelf to restore enabled/disabled state.
- The finger spheres will remain visible when the **Toggle Leap Motion** button disables the plug-in. Move the fingers outside of the range of the Leap Motion Controller before toggling disabled.

More Information

- Maya AREA Community: <http://area.autodesk.com/products/view/maya>
- Developing with Maya: <http://autodesk.com/developmaya>
- Maya Information and Free Trial: <http://autodesk.com/maya>

Support Information

If you do encounter issues with plugin please contact Autodesk by email:
MayaLeapFeedback@autodesk.com

Version History

1.0.4

Public release.

1.0.0

Original release

This plug-in was written by the OCTO research group