

FTV501085

Multitouch Maya

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Learning Objectives

- Understand faster and more efficient ways to use 3d software in workflow.
- Learn how multitouch technology can be put to every day use in a Windows environment.
- Understand why the traditional mouse and keyboard is limiting speed and efficiency potential.
- Learn ways to prevent RSI through hotkeys and ergonomic workflows.

Description

In this class I will show you how to get the best from Autodesk Maya using a multitouch Interface. I'll give you my tips and tricks to get the best out of Multitouch on a windows compatible device and show you how to set Maya up for Multitouch. We'll see how quick and easy it can be to design in Maya and discuss how you can reduce RSI and work more productively using a Multitouch interface. If you have any doubts as to how the following hotkeys work with multitouch, please check this video to see Multitouch in action with Maya.

<https://www.youtube.com/watch?v=B>

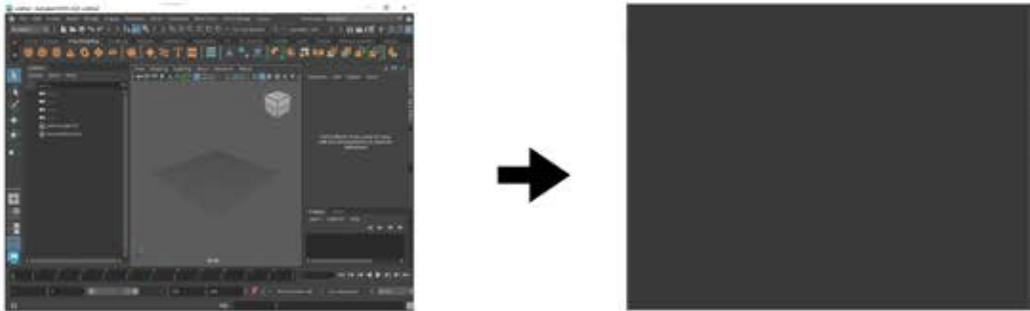
Speaker



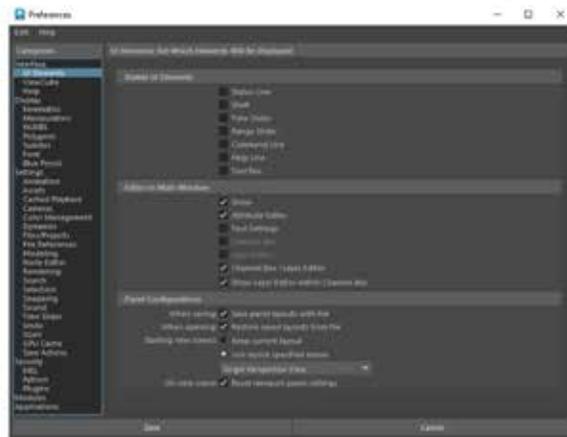
My career spans work in VFX for film, television, music videos and video game cinematics. I also have experience rendering within the automotive, architectural and product design industries having spent eight years as a rendering product specialist working with clients and demonstrating at CGI shows worldwide. I have been working with the Arnold renderer for over 11 years. I currently work as an in-house artist at Autodesk where I test, document and tutorialize the various Arnold plugins for Maya, 3DS Max, CINEMA 4D, Houdini and Katana. My work with Arnold has been featured on The Discovery Channel, CNN and Colossal among other places.

Minimise the UI (multitouch doesn't need it).

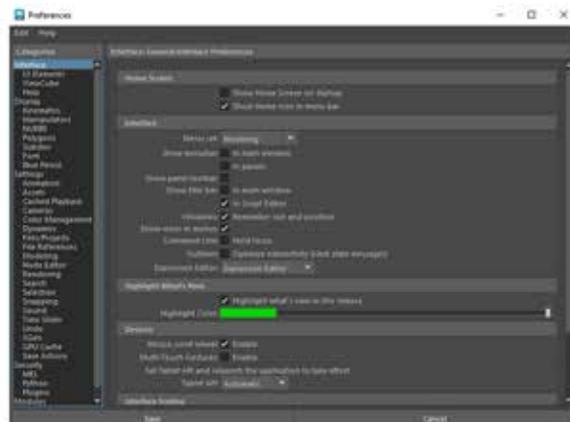
Mapping hotkeys to multitouch gestures requires less reliance on menus, icons and shelves in general. Therefore we can disable these interface options that clutter up the screen. This will give us more real estate and allow us to focus on our work better and allow us to be more creative and focused on our work! We can turn Maya's default UI into something that resembles a blank canvas.



- Open the Maya Preferences window and select 'UI Elements'.
- Disable all of the 'Visible UI Elements' and also 'Tool Settings'.



- Disable 'Show menubar In main window' & 'In panels'.
- Disable 'Show panel toolbar' and 'Show title bar In Main window'.
- Alternatively, press Ctrl + Spacebar will go into 'Full screen view'.
- Alternatively, add the following mel command to a hotkey:
`setAllMainWindowComponentsVisible 0;`



Search engine

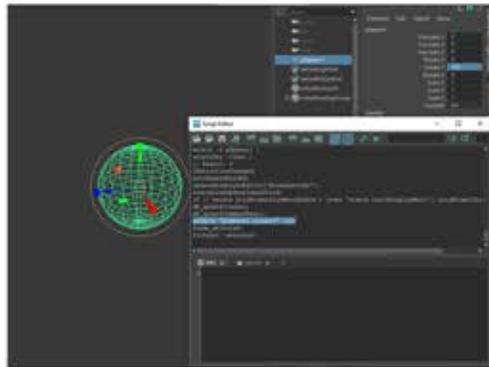
Now that we have stripped the UI from Maya, how can we perform commands? Quite easily using the Search engine!

- Press Ctrl+F to bring up the search engine. Now you can type any command that you need.

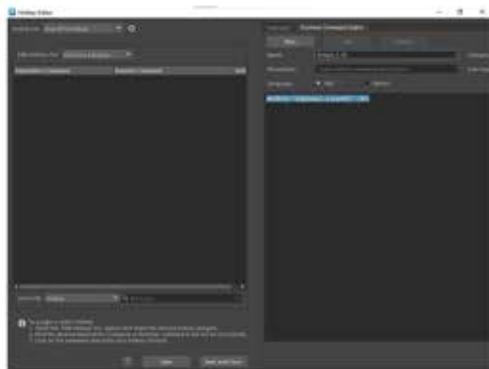


Custom rotation hotkey

- Now lets look at ways to set up some custom hotkeys that will work well with multitouch gestures.
- Create an object and rotate it 30 degrees in Y in the channel box.
- Open the Script Editor window and copy the mel command that was used to rotate the object.



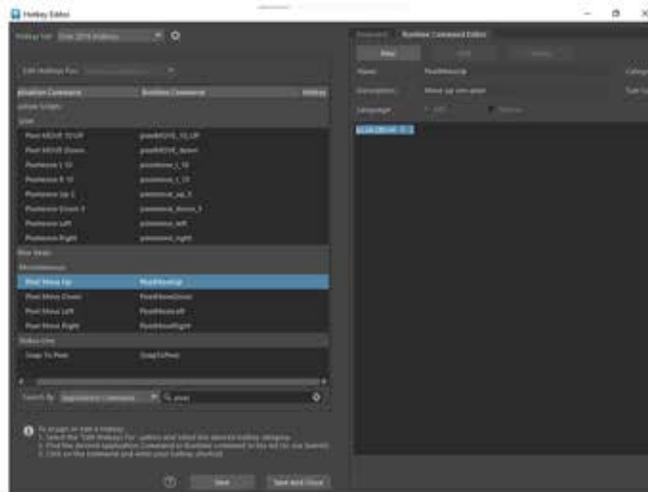
- Open the Hotkey Editor and create a new hotkey.
- Paste the mel command from the Script Editor into the new hotkey and assign a key to it. We can then assign that same hotkey to a rotate multitouch gesture. Now when we do the gesture we will rotate the object 30 degrees. This can be a huge time saver and is a more intuitive way of rotating objects.



Custom move hotkey

- Now we will assign hotkeys to move objects, lights and cameras using the pixelMove mel command. The pixelMove command moves objects by what appears as pixel units based on the current view. The further away the object is from the camera the greater the distance it will move. Vice versa, move the camera closer for fine-tuning your movement. These hotkeys work beautifully and intuitively when mapped to multtouch gestures and feels like you are moving the objects with your fingers instead of having to use manipulators to move, rotate and scale objects, lights and cameras.

- In the Hotkey Editor, type 'pixel' in the Search By: (Application Command).
- It should show you the pixel move Up, Down, Left and Right commands.
- Assign the relevant Up, Down, Left, Right keys to the pixel move equivalents.



- However, before we move or rotate an object, camera or light, we need to select it first. Assigning hotkeys to create and select objects is a huge time saver and works well in combination with the move, rotate, scale hotkeys.
- Create a camera and rename it 'RenderCam'. Select it and in the Script Editor you should see the following mel command: `select -r RenderCam ;` Assign that to a hotkey.
- You could also create a hotkey for creating a camera called RenderCam:


```
select -r persp ;
Duplicate;
rename "persp1" "RenderCam";
```

Dolly hotkey

The middle mouse button can creates some large increments when dollying the camera. We can use the dolly -distance mel command to dolly the camera in smaller increments, thereby, creating a smoother experience.

- Create two hotkeys called 'Dolly out' and 'Dolly In'.
- Add the following mel to the 'Dolly out' hotkey: `dolly -distance 1;`
- Add the following mel to the 'Dolly in' hotkey: `dolly -distance -1;`

DVORAK keyboard layout in Windows

The QWERTY keyboard layout was designed to stop the metal hammers on old typewriters from hitting each other. It is completely inefficient and yet we all use it. The DVORAK layout is a much faster and more ergonomic alternative to QWERTY. It requires less finger motion and as a result reduces errors, increases typing speed, reduces repetitive strain injuries, and is simply more comfortable to use than QWERTY. On windows this can be found under:

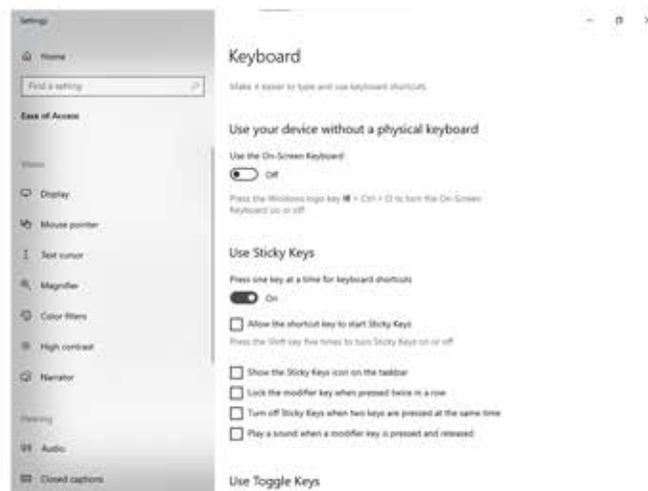
Settings > Time & Language > Language > English (United States) > Options > Keyboards > Add a keyboard



Ease of Access Center: Sticky Keys

Sticky Keys is an accessibility feature to help Windows users with physical disabilities reduce the sort of movement associated with repetitive strain injury. This feature serializes the keystrokes instead of requiring users to press multiple keys at the same time.

- Press the Windows logo on your keyboard, or click the Windows icon at the bottom left of your screen on the Taskbar.
- Search for "Ease of Access."
- Select Ease of Access keyboard settings in the search results. Choose "Ease of Access keyboard settings." ...
- Toggle the switch under Use Sticky Keys to Off.



Useful links

My portfolio site: www.leegriggs.com

My Arnold renderer blog: www.arnoldrenderer.com

Arnold website: www.arnold-rendering.com

Arnold renderer YouTube channel: <https://www.youtube.com/arnoldrenderer>

Multitouch Maya YouTube video: https://www.youtube.com/watch?v=B-JV8_AU9a8&t=140s

Fingerworks multitouch company: <https://en.wikipedia.org/wiki/FingerWorks>

Magic Trackpad: <https://www.apple.com/shop/product/MK2D3AM/A/magic-trackpad-white-multi-touch-surface>

DVORAK layout in Windows 10: <https://www.computerhope.com/issues/ch001637.htm>

Sticky Keys in Windows 10: <https://www.businessinsider.com/how-to-turn-off-sticky-keys-windows-10>

RSI prevention tips:

<https://www.nhs.uk/conditions/repetitive-strain-injury-rsi/>

<https://www.rsiprevention.com/prevention>

<https://ehs.ucmerced.edu/general-safety/ergonomics/repetitive-strain-injuries>