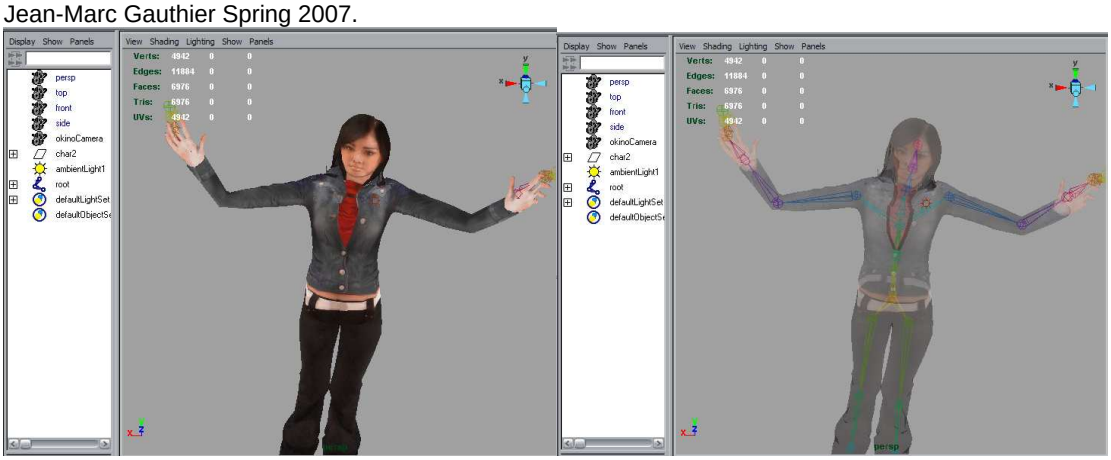
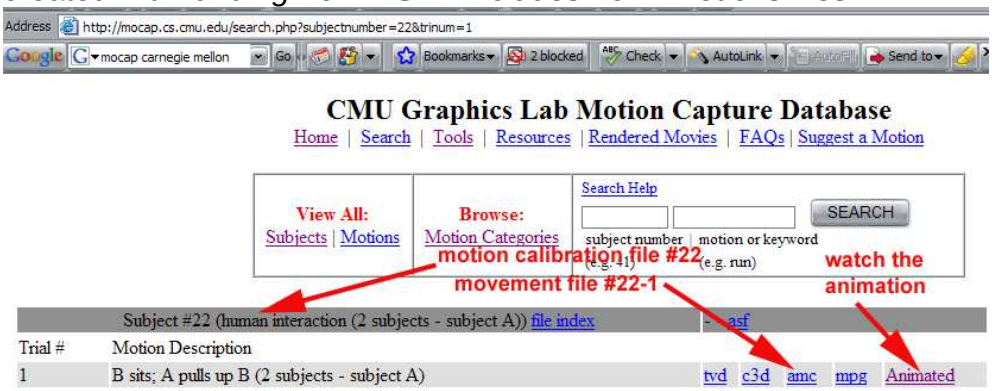
Character animation using motion capture files in Maya

With special thanks to the CMU Graphics Lab Motion Capture http://mocap.cs.cmu.edu
Jean-Marc Gauthier Spring 2007.

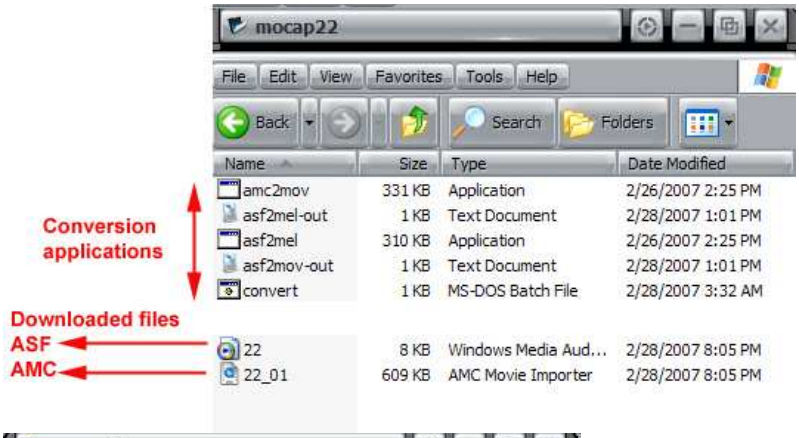


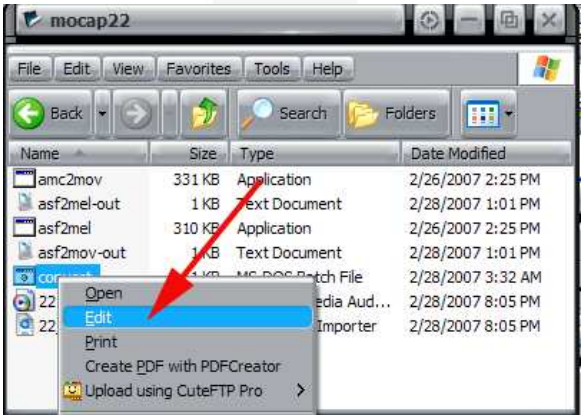
This tutorial shows how to animate a character using motion capture files in Maya. We download a motion capture file from the Carnegie Mellon Motion Capture Database and use with a 3D character.

"*The data used in this project was obtained from mocap.cs.cmu.edu. This data is free for use in research and commercial projects worldwide. The database created with funding from NSF"* includes 2622 motions files.



Go to http://mocap.cs.cmu.edu/asfamcmel/asfamcmel.php Download amc2mov asf2mel and convert and save inside a new folder called mocap. Download the asf and amc files for the motion of your choice inside the mocap folder.



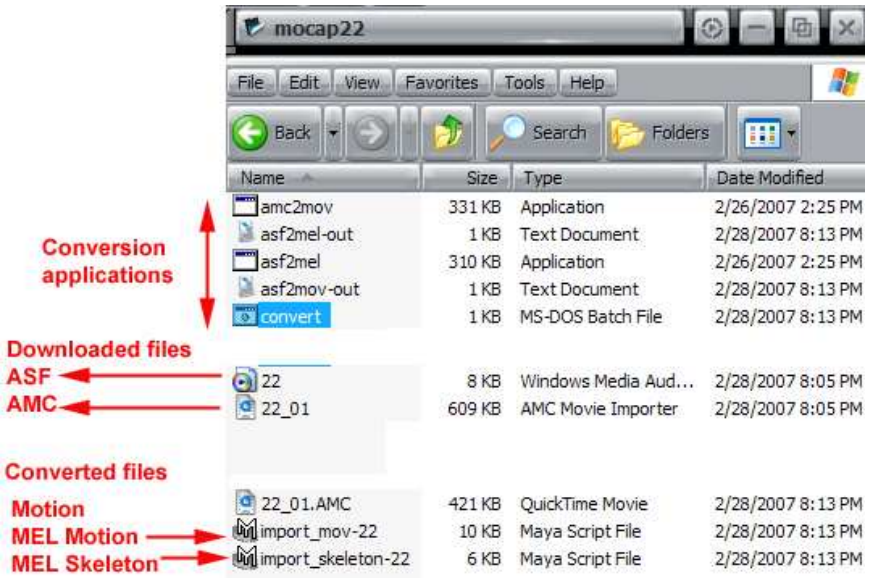


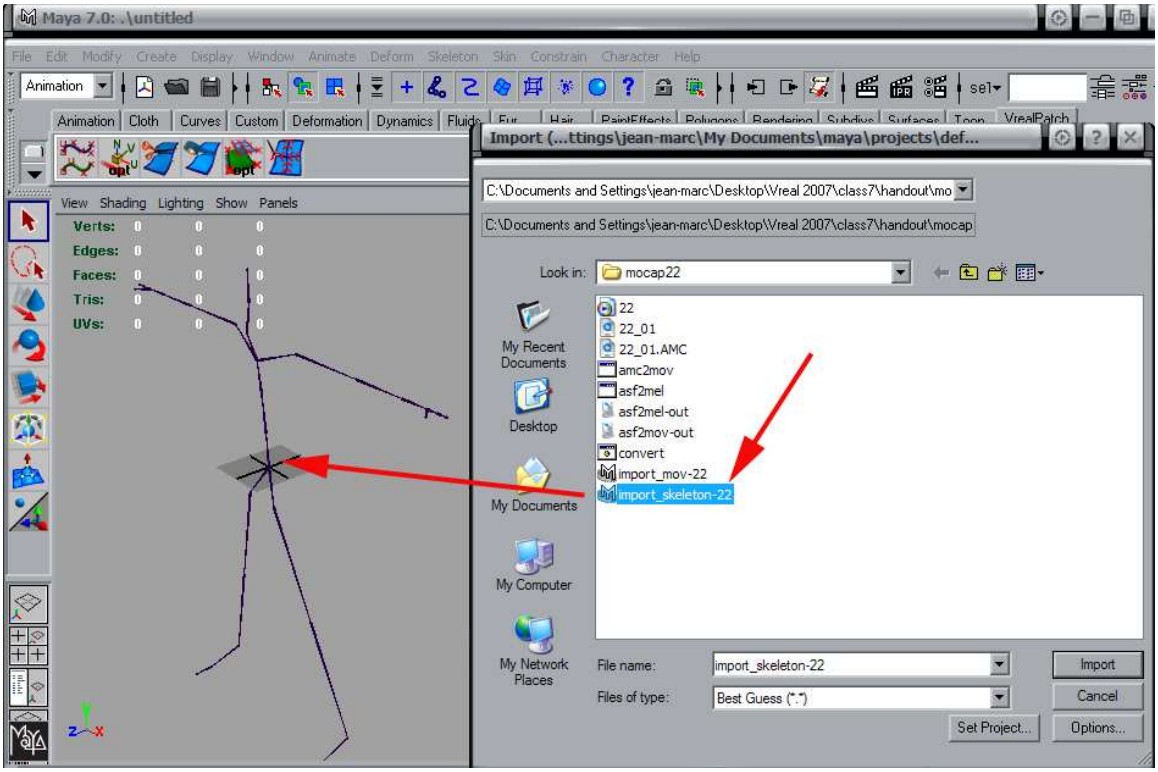
LMB on the convert application > select Edit. Edit the text in Notepad

The original text is
asf2mel -f asffile.ASF import_skeleton-asffile.mel > asf2mel-out.txt
amc2mov -f asffile.ASF amcfile.AMC 60 import_mov-asffile.mel
amcfile.AMC.MOV > asf2mov-out.txt

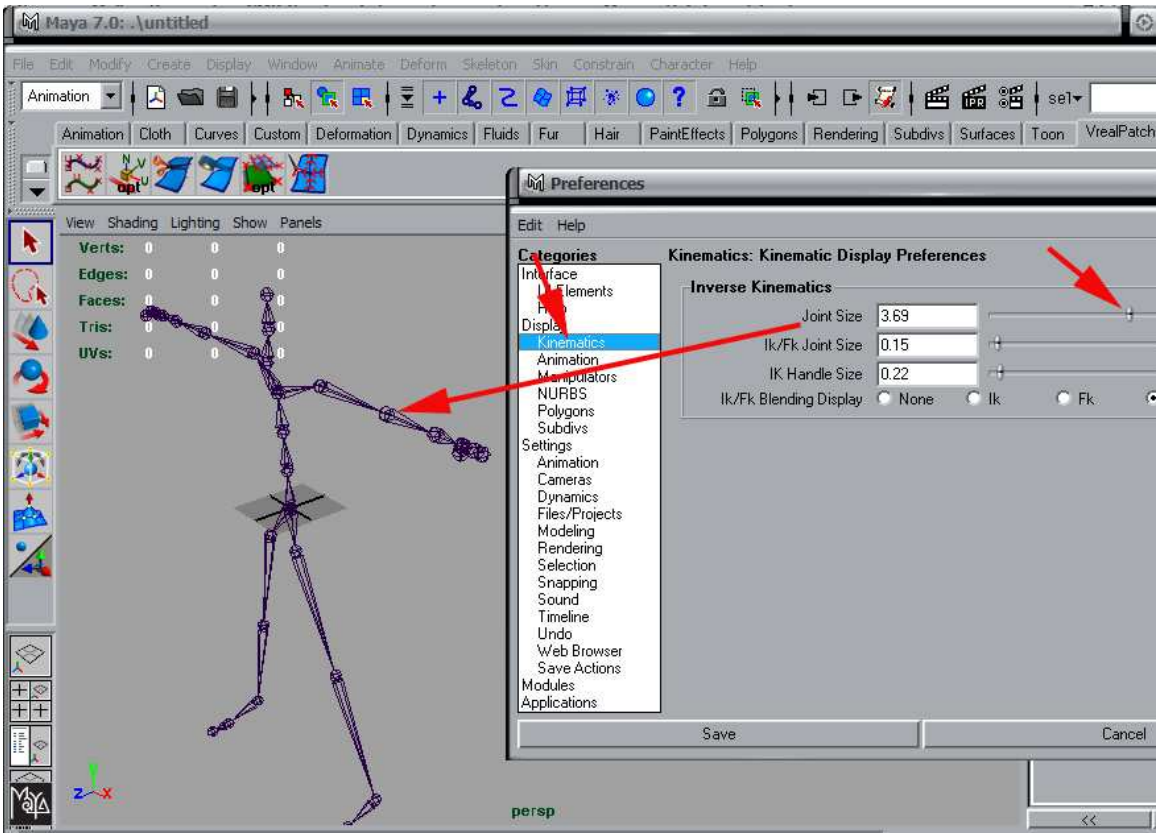
The edited text in this example is
asf2mel -f 22.ASF import_skeleton-22.mel > asf2mel-out.txt
amc2mov -f 22.ASF 22_01.AMC 60 import_mov-22.mel 22_01.AMC.MOV >
asf2mov-out.txt

After the conversion, three converted files are added to the folder:

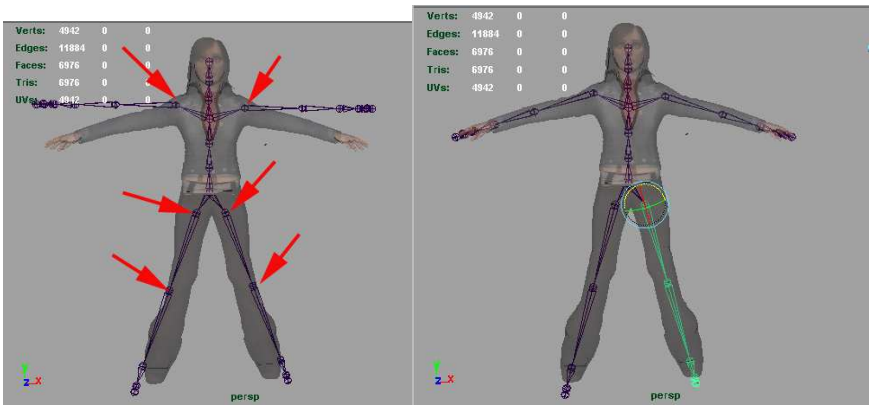




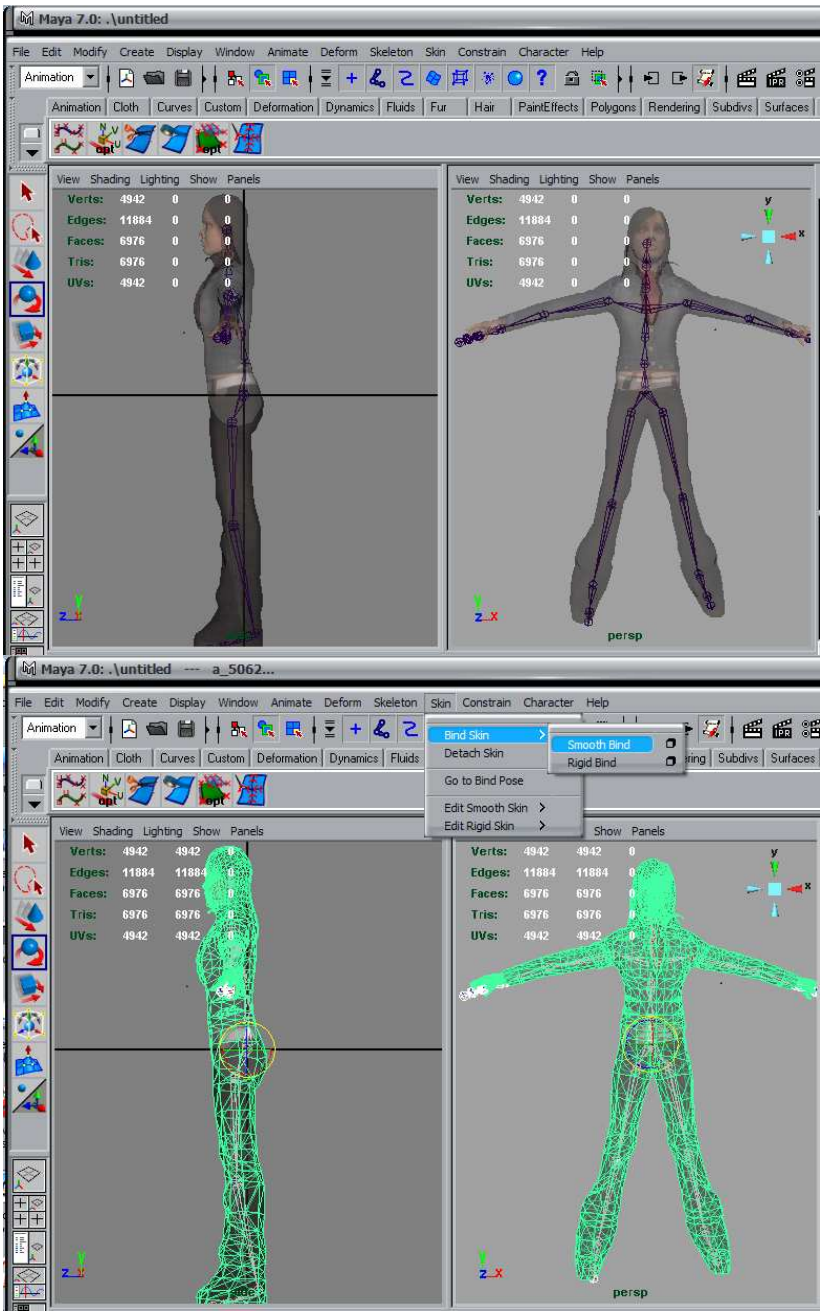
In Maya, open import_skeleton-22



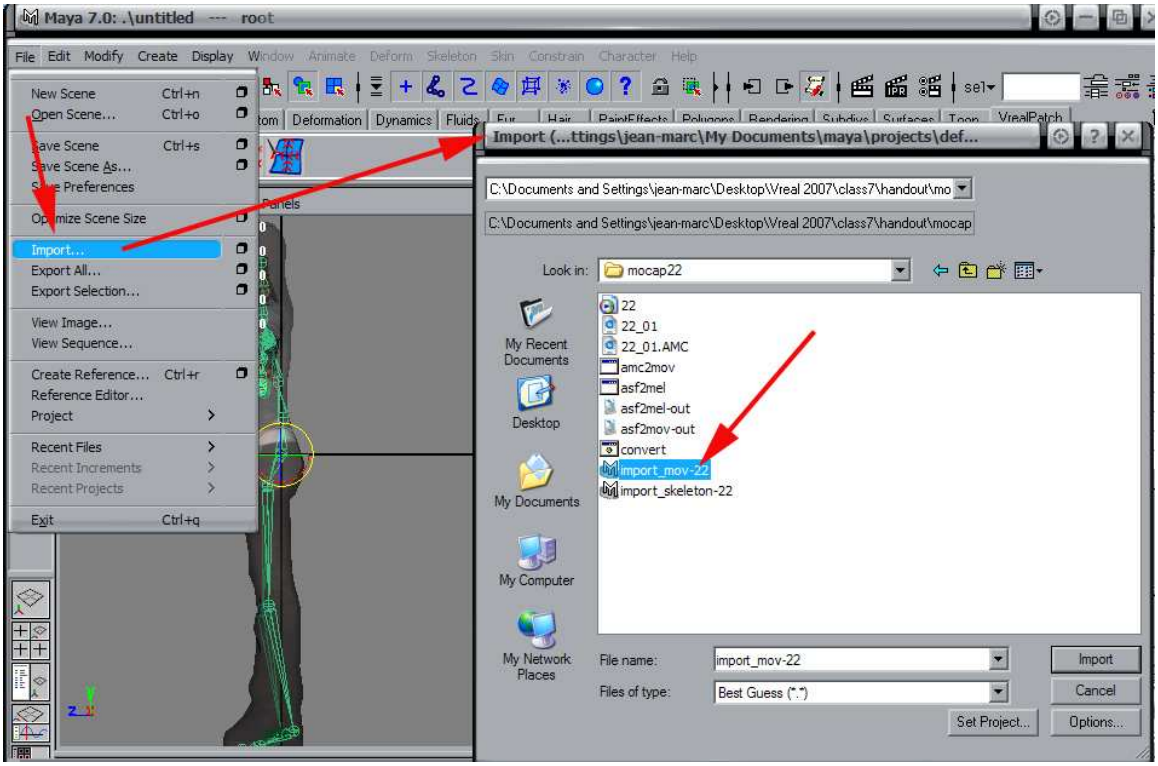
Resize the joints if needed.



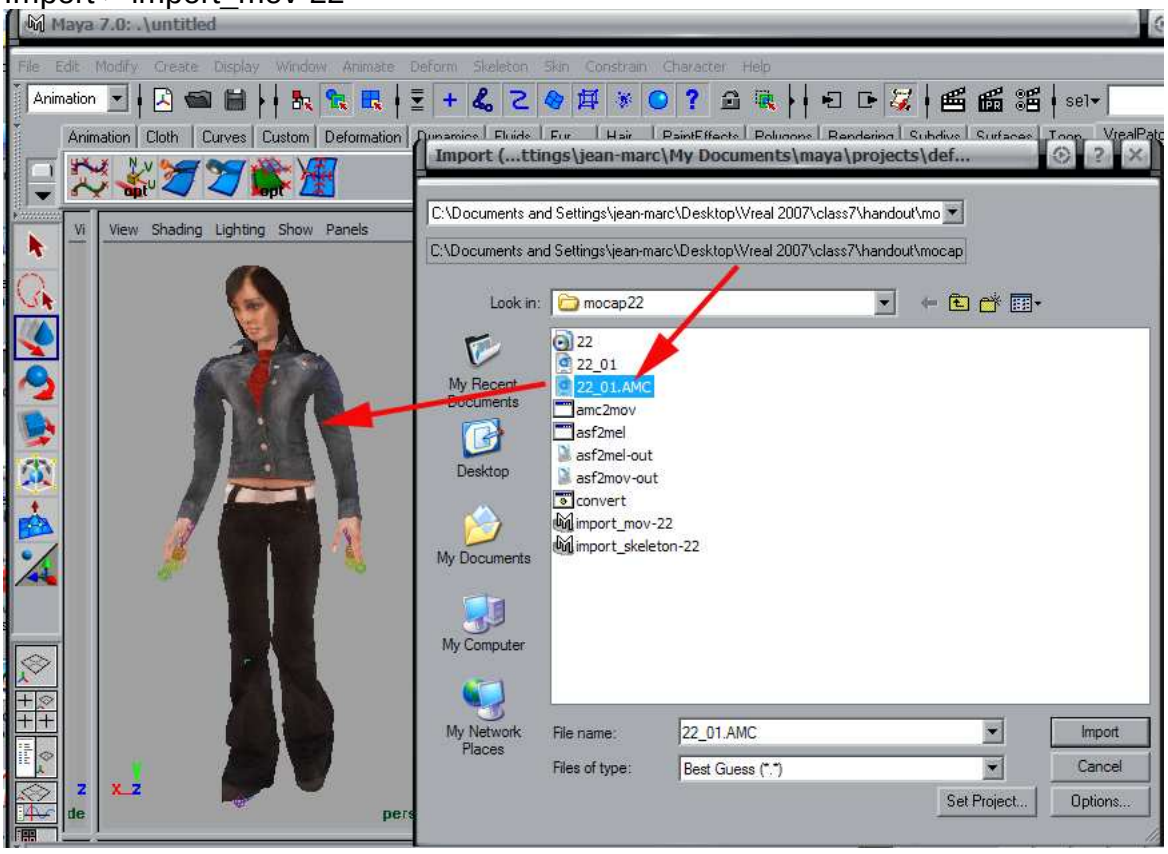
File > Import, select the mesh of the character created in Maya. Resize the mesh. You can rotate the skeleton in order to fit nicely inside the mesh. Please note DO NOT MOVE or SCALE the skeleton. This can affect the motions applied to the skeleton.



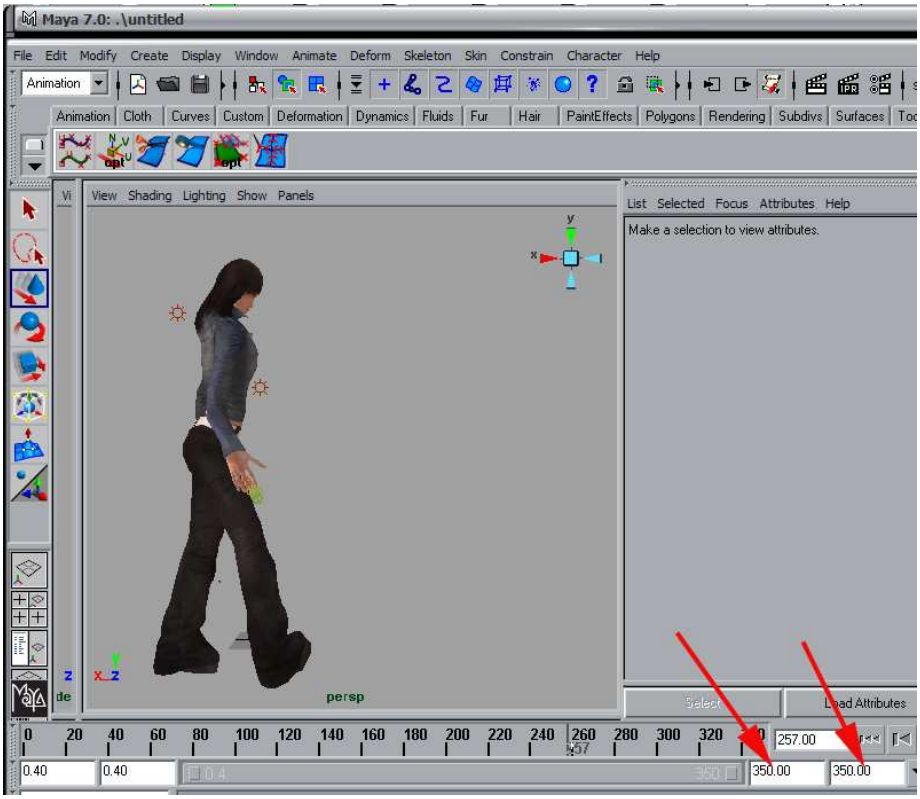
Go to Animation > Bind Skin > Smooth Bind. You may also need to paint weight maps around the upper arms joints. Go to Animation > Edit Smooth Skin > Paint Skin Weight Tools



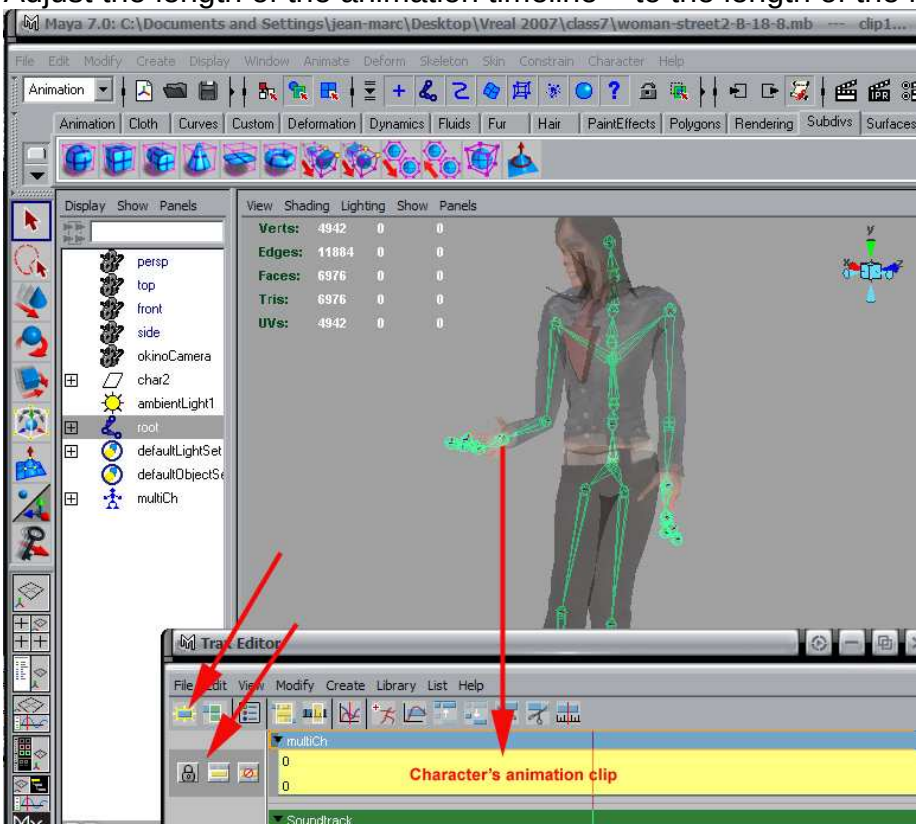
Import > import_mov-22



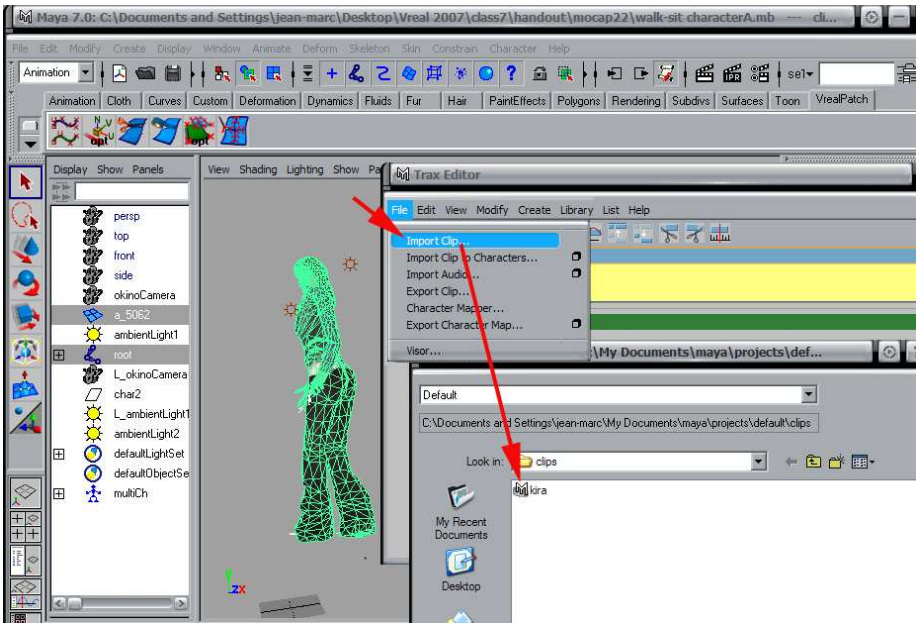
In the second pop up window, select 22_01.AMC



Adjust the length of the animation timeline = to the length of the motion file



Go to Windows > Animation Editors > Trax Editor, select the character, Create the character's animation clip.



You can export the motion clip and save as a Maya .ma file inside the project > clips folder or in the Visor folder.

You can import a motion clip and edit several motion clips together. For example, blending animations.