

Pelting Tools

the lab | hydralab

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HOW-TO

- normal mode
- some advanced topics
- parts mode

NORMAL MODE - body pelting

there's a basic video [here](#). This is the more in-depth how to.

1) Let's start with a basic body model. I've cut off the head here (I'll deal with parts pelting later) and I want to create my basic pelt.



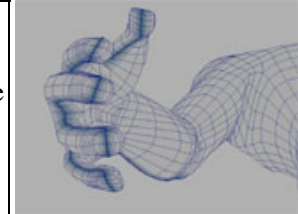
2) I select the body and enter a name into the pelt field and hit "Enter"



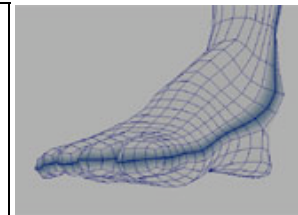
3) Using the **Cut** and **Loop** button I make cuts along seams. I choose to run a seam up the back, along the arms and down the back of the legs (you can see the vertex coloring)



4) For the hands I make sure my loop runs across the fingers and stops at the thumb.



5) For the legs and feet, I cut similarly down the leg and along the toes, stopping at the little toe.



6) When I'm finished, I select one edge in the seam and hit "**Add Continuous Edges**." This will add all the adjacent edges along the seam to our edge list (the edge color also turns red)



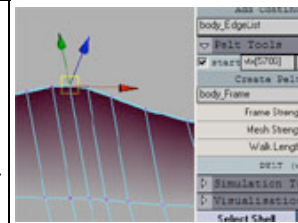
7) The "Pelt Tools" frame opens up, and I hit **Create Pelting Frame**. Using



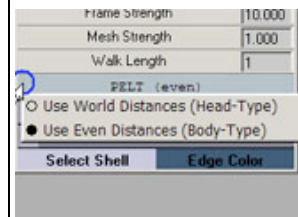
the buttons next to the pelting frame, I orient my frame to the right axis.



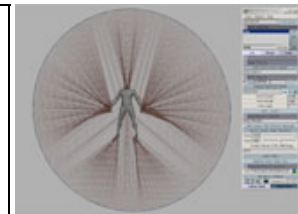
7a) The next part is optional: I select the front, middle vertex in the neck seam, enable the checkbox next to **Enter Orient** and hit the **orient** button. This vertex must be a part of your seam. When pelting, if this option is enabled, then the script will use this vertex for the first connection to the frame. Since the frame is oriented along the world axes, this ensures that your final pelt will also be oriented along the world axes. There's a video for it [here](#).



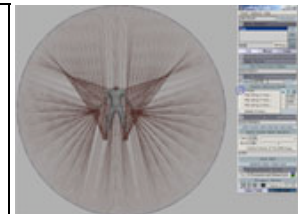
8) I leave the default values, and right-click on the **PELT** button. Here we see two options: Use World Distances, and Use Even Distances. World Distances will place springs around the frame based on relative world space distances. That means the springs along your hands will be more tightly bunched together than the ones along the back (since you probably have smaller edge lengths in your hands than in the back). "Even Distances" will place the springs evenly along the frame. I find "Even Distances" works better for bodies



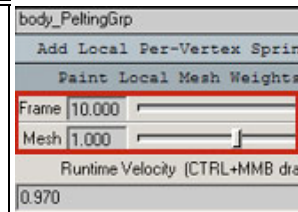
9) Then, hit **PELT**. You'll get something like this.



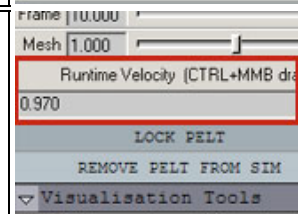
9a) If your frame looks like this, then right click in the field under "**Create Pelting Frame**" and flip the pelt so that it looks more natural.



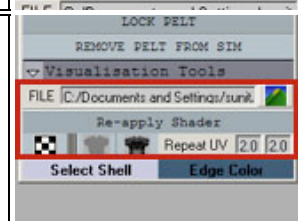
10) Adjust your timeline around 2000, and play the simulation. Adjust the strengths with the two sliders. I would recommend at first keeping the frame strength high and then decreasing as the animation plays. Eventually, you want your frame to be pulling very little on your mesh (just enough to keep the creases out).



10a) The "Runtime Velocity" controls the "speed" of your simulation. Think of it like the opposite of "damp" - the lower the number, the slower the simulation. (for those who know about maya particles, this command connects to the particleShape.conserve value).



11) Under the visualisation menu you can change a number of things. The checker button will show a textured version of the original mesh with updating uvs. You can choose any texture (use the browse button above) to display on your mesh.



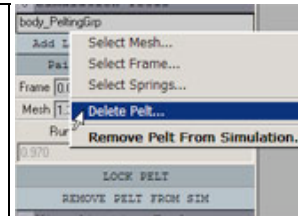
11a) The two buttons next to the checker toggle standard and "baked normals" view. Baked Normals for this mesh looks like this. **Repeat UV** will adjust the UV Repeat on the textured version.



12) Once you're done pelting, hit **REMOVE PELT FROM SIM** and a shader will be automatically assigned to your original mesh. The pelted mesh, along with your cut model is hidden, but toggling the **VIS** button in the **PELT GROUPS** will unhide it. There is a poly transfer node between the pelt and your original, so any changes to the uvs of the pelt will reflect on the original.

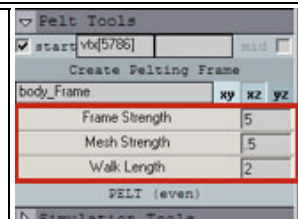


12a) If you need to delete your pelt and re-pelt - right-click in the field under "Simulation Tools." There you'll find a "Delete Pelt" menu item.

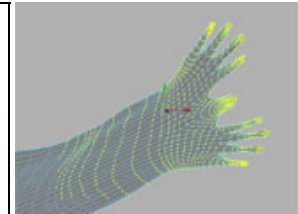


SOME ADVANCED TOPICS

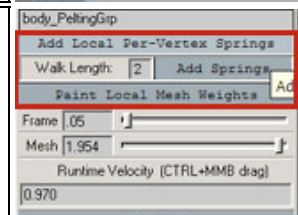
1) For complex models, a walkLength of "2" can work better than "1". Just make sure to turn down your mesh strength to about half.



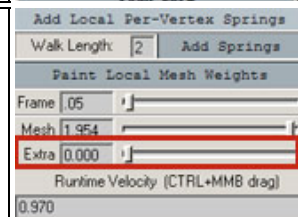
2) However, sometimes you want to be able to adjust specific areas. For example, say I want to strengthen the springs on the hands. First, I select the vertices I want to strengthen.



3) Then, I click on the **Add Local Per-Vertex Springs**. This opens a frame with some options, and also unhides my springs. I enter a walkLength value greater than my pelting walkLength (in this case 2, if my original length was 1), and hit **Add Springs**.



4) This unhides a new slider in my interface and also adds springs to the system. The playback reverts to the start of the time range and a warning appears prompting your to run the playback again.



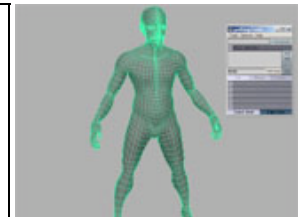
5) Re-simulate the mesh and increase the "extra" slider during playback. Make sure not to increase the slider more than the mesh strength - you'll get an unstable system. There's a video demonstration [here](#).



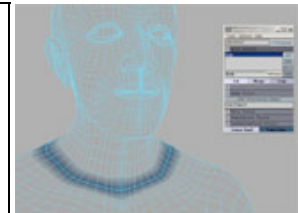
PARTS BASED PELTING

There's a basic video [here](#).

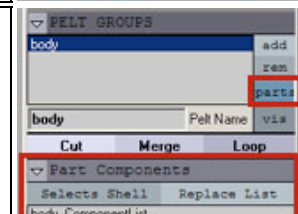
1) Parts pelting is a lot like the above method. I first select my model and enter a name in the name field.



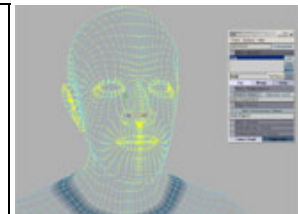
2) Then, I cut a seam between my two parts (in this case the head and the body)



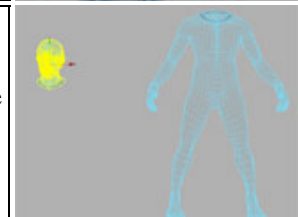
3) I click the **parts** button in the PELT GROUPS frame. This enables the Part Component frame.



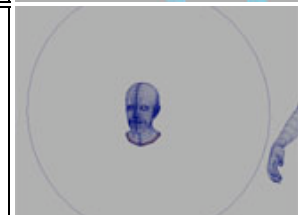
4) I select a component in the head and **Select Shell**. This converts the selected components to a component shell. Then I click **Replace List**.



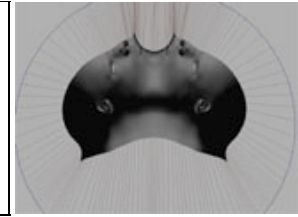
5) I can now take this shell and move it anywhere in 3d space. I then use the same method as above (for the normal pelting) for the head.



6) I cut the seams. Add continuous edges and create the frame.



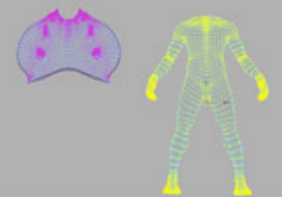
7) I then pelt and simulate.



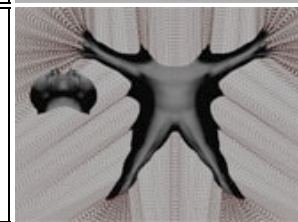
8) When I'm finished I hit **REMOVE PELT FROM SIM**. A prompt asks me to "remove" or "keep working". Since we're not quite done yet, I hit "Keep working".



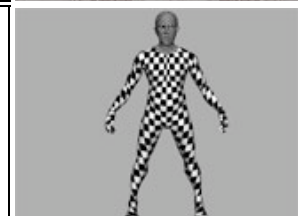
9) The script removes the head from the system and you start again, this time with the body. So I select a component on the body, then **Select Shell**, and then **Replace List** to set the new component shell.



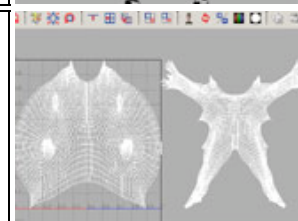
10) I cut my seams, **ADD CONTINUOUS EDGES**, create the frame and **PELT**. I end up with some like this:



11) I hit **REMOVE PELT FROM SIM**, and this time, at the prompt, hit "Remove." This hides my pelt group and applies a texture to my original in the viewport.



12) As long as you "Keep working" the script will also keep arranging your uvs into different ranges. The uvs for this model look like this.



13) Your pelt is also still in 3d space - which means, just like in standard mode, any changes you make to its uvs will reflect on your original.

