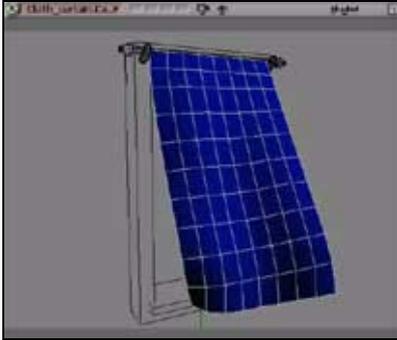


Simple Cloth



This tutorial requires the Cloth plug-in, which is available for either the SOFTIMAGE|XSI Essentials or SOFTIMAGE|XSI Advanced package. To activate it, you must purchase it separately. See your local Softimage Sales Office for details.

This is a typical cloth example: a curtain blown by the wind. Albeit simple, this exercise will show you the basic steps for simulating cloth in XSI.

Load the Cloth_curtain.scn scene to get started.

Setting the end frames

1. Set the end frame on the timeline to 200.
2. Select the cloth object (blue grid) and choose **Create > Cloth > From Selection** from the Simulate toolbar (press 4).
3. In the ClothOp property editor, change the simulation's **End Frame** to 200 so that there is enough time to see the simulation happening. Close the property editor.

Setting a local cloth cluster

4. In the Front view, tag the four vertices in the upper-left corner of the curtain and choose **Create > Cloth > Local Cloth Cluster**.
5. **Name** the cluster Cloth-leftnail, then select the **Nail** option to nail this cluster down.
6. Tag the five vertices in the upper-right corner of the curtain and choose the **Local Cloth Cluster** command again (middle-click on the **Cloth** menu button to repeat).
7. Name this cluster Cloth-rightnail, and again, select **Nail**.

Adding gravity and wind forces

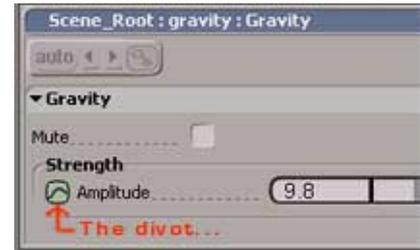
If you play the scene back, nothing happens yet because there are no forces!

8. Select the cloth object and choose **Get > Force > Gravity**.
9. Keep the Gravity property editor open to animate the gravity, giving the cloth a nice motion:
 - At frame 80, set the **Amplitude** to 9.8 (the default, which is earth's gravity) and set a key by clicking its animation icon (the little green box).
 - At frame 81, set a key with a value of 30.
 - At frame 96, set a key with a value of 9.8 again.
 - At frame 118, set a key with a value of 26.

Play back the simulation to test out the effect.



For faster playback of the simulation, press **g** to hide the viewport's grid and click the viewport's letter (A, B, C, D) to solo it.



Creating the “Woosh” Effect

Now add a wind force:

10. With the cloth object selected, choose **Get > Force > Wind**.
11. Rotate the wind icon -90 on its Y axis, then animate the wind’s **Amplitude** as well:
 - At frame 50, set a key with a value of 6.
 - At frame 52, set a key with a value of 0.2
 - At frame 110, set a key with a value of 3.7
 - At frame 113, set a key with a value of 0.2

Adjusting the Movement

When you play back the simulation, the curtain looks like a grid that's rotating. Here's how to adjust the movement:

12. In the explorer, click on the ClothOp icon under the Polygon Mesh node of the cloth object.
13. On the External Forces page of the ClothOp property editor, change the **Viscosity** to 0.01 and the **Noise** to 10.

The viscosity changes the “medium” in which the curtain is moving, and the noise adds some random movement.

14. Play back the simulation now to see better movement.

Adding an Obstacle

The curtain still goes through the window frame, so you need to set it as an obstacle.

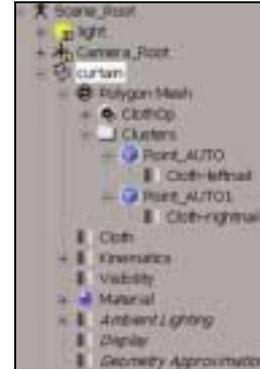
15. Select the cloth object and choose **Modify > Environment > Set Obstacle**, picking the window's frame as the obstacle. Right-click to finish picking.
16. In the Obstacle property editor, change **Obstacle Type** to Actual Shape so that the curtain flows around the real shape of the frame.
17. Change the **Push Length** to 0.23 units to create an invisible “buffer” around the obstacle.
18. Change the **Tolerance** to 0.01. Because there aren't many subdivisions on the window frame, lowering the tolerance helps prevent the curtain from passing through it.

Et voila! Play back to see the final simulation.

Want to Try More?

If you want to add a little more to the simulation, you can detach the curtain from its rod. To do this, you animate the **Nail** option for the clusters that you set in the previous steps.

1. In the explorer, expand the curtain's hierarchy to see its clusters.



2. Click the icon for the Cloth-leftnail to open its property editor. With the **Nail** option selected, set a key for it (click its animation icon) at frame 1.
3. At frame 60, deselect **Nail** and save a key for it.
4. Do the same thing for the other cluster (Cloth-rightnail), but instead, deselect **Nail** and set a key for it at frame 1.

When you play back, you should see the curtain start falling at frame 60.

This tutorial was written by Marc-Andre Carbonneau, a Softimage Certified Instructor.

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