Introduction

The sole purpose of this tutorial is to introduce you to the world of dynamic cloth props, and the infamous, and seemingly complex and daunting, Poser 5 Cloth Room. For many, this room is very intimidating, and a very frustrating one to attempt to use. However, once you understand the principles upon which the room is designed, you will say, "Aaah-haaah," and begin to take command of, and to truly enjoy, a very powerful and elegant feature of Poser 5.

This little tutorial is not intended to give you a comprehensive look at the capabilities of the room, but only a functioning overview of how it works, so you will then be free to play with it on your own. It also presumes you are reasonably comfortable working in the Pose Room already, and have at least familiarized yourself with the terms and layout of both the Poser 5 Animation Controls Panel and the Cloth Room. If you follow the text carefully, you won't need pictures.

OK. Let's get started.

What is a Dynamic Cloth Prop?

Simply put, a dynamic cloth prop is like a conforming piece of clothing that functions like a smart prop, with one big difference: all the natural characteristics of the cloth are automatically simulated to reflect what cloth does naturally, on its own, when worn by the figure in that pose.

You do NOT control or adjust with morphs and parameters what mother nature does quite well on her own, thank you, thru gravity, movement, wind and friction. However, you DO define the characteristics of the cloth mother nature will work on, e.g., define if the material is light, slippery and floating like silk, or heavy, clingy and not easily folded like carpet.

Think of dynamic cloth another way, instead of tweaking a thousand little facial features, you give the character a personality, and then say, "Smile." The personality of the character does the rest for you. Most dynamic cloth props have this cloth personality already built into them, so you don't have to worry about creating or tweaking any of its characteristics in the Cloth Room, although you can.

Now for some comments about the key terms and functions of the Cloth Room.

What is Draping?

After loading a dynamic cloth prop, you do NOT "conform" or "parent" the prop to the figure. Instead, you must first "drape" it to the figure in the Cloth Room. This means, when you instruct it to do so, the Cloth Room will automatically custom fit the prop to the current pose of your figure. Most dynamic cloth props are automatically parented to the figure, so you don't have to worry about parenting the prop either.

Draping is, essentially, a one-time operation, roughly the equivalent of fitting the clothes to the figure. If all you want to do is put a dynamic cloth prop on a figure, you first load and pose your figure, then load the dynamic cloth prop, enter the Cloth Room, and drape the prop to the figure. The prop will then rest perfectly on the figure the way mother nature would do it with a real person in that pose. It's that simple. Whallah! You're done.

What is Simulation?

Once the prop is clothed, or draped, on your figure, you must then "simulate" what the cloth prop will do EVERY time the figure changes its pose.

Contrary to intuitive thinking, and something Mother never told you, a dynamic cloth prop does NOT automatically conform to a new pose.

If, after draping a figure with a dynamic cloth prop, you CHANGE the pose, you will notice, to your frustration and despair, that you seem to have done something wrong. The prop does NOT conform itself to the new pose.

To get the prop to conform to the new pose, you must re-enter the Cloth Room, and run a "Calculate Simulation" to conform the prop to the new pose. In essence, simulation is no different than draping, except that draping is the essential first step that zeroes the prop to the body coordinates of the figure, whereas simulation conforms the prop to the figure, from pose to pose.

At this point you're probably wondering why you have to go through all the grief of running a simulation to re-conform the prop to the figure each time you re-pose your figure?

Read on.

What is Animation?

We are now at a point where an understanding of the essential design of the Cloth Room is critical. Something Mother never told you is that the Cloth Room is primarily designed, in terminology and function, to be a SUBSET of the Animation functions of Poser 5. That's right. Once you understand this, so much becomes absolutely clear. The "Aaah-haaah" light goes on.

Initial Setup

In our entire discussion of this issue, we will limit ourselves to a simple 15-frame animation example.

First, open the Animation Controls Panel at the bottom of the Poser 5 window [Window => Animation Controls]. Swipe the "of" field in the middle of the control panel with the default number 30, and change it to 15. We will now be working with a simple 15-frame animation sequence.

Drag the little yellow triangle, called the Scrubber, in the time-line slider, to the far left position, if it is not there already.

In the right-hand control set, click the "Previous Key Frame" and "Next Key Frame" buttons. The little yellow triangle should not move. If it does, click the minus-sign "Delete Key Frames" button each time the yellow triangle moves to a new setting on the slider. Your starting point for this example should be one with NO key frames, and the little yellow triangle set far left to Frame 1.

What is a Key Frame?

Simply put, a Key Frame is a snapshot of a single static pose of your figure. You will use four different snapshot poses of your figure in our animation example, which means you will have to create four Key Frames: one opening pose or Key Frame snapshot at Frame 1 to start, another new target pose or Key Frame at Frame 5, a third pose or Key Frame at Frame 10, and a terminating Key Frame at Frame 15.

Key Frames are simply new target poses you want to transition to, from pose to pose. All the frames in between the Key Frames are automatically filled in, or simulated, by the animation program, with transition poses that get you from the pose of one Key Frame to the pose in the next Key Frame. Easy enough to understand so far, right?

Has the "Aaah-haaah" light gone on yet? You have all the clues. That's right! The "Calculate Simulation" button in the Cloth Room is the gizmo that generates all the transition frames between the target poses or Key Frames of an animation sequence, for BOTH the figure AND the cloth prop.

So if you wonder why your dynamic cloth prop doesn't automatically conform to a new pose, or Key Frame, you have to shift from your standard pose-render-conformed-prop mindset and think with an animation mindset. The dynamic cloth prop doesn't automatically conform to a new pose because its transition frames from one pose to the next haven't been calculated yet. Your dynamic cloth prop is, in one way, very dumb. It needs frame by frame road maps to tell it how to get from pose A to pose B. Got it? That's what the "Calculate Simulation" button does. A dynamic cloth prop is essentially designed for an animation environment. So if you don't run the "Calculate Simulation" button in the Cloth Room from pose to pose, this smart animation prop isn't given any instructions about how to transition from one Key Frame pose to the next Key Frame pose. Kapeesh?

Getting Started

This instruction set presumes you set up the 15-frame animation sequence we talked about earlier. If you haven't done that yet, please do it now.

1 In the Pose Room, load a naked figure, in its default "T" cruciform pose.

While it is not necessary to start with a default pose, using this pose now will let you see how the draping function in the Cloth Room zeroes the prop to the figure coordinates. Once you have loaded the figure, just leave it in its default load state. I suggest for this example you start with the naked default V3 figure.

2 Turn all figure Inverse Kinetics off.

Since we will be using four different poses of the same figure, we don't want the figure's hands or feet nailed down.

3 Load a dynamic cloth prop of your choice.

Make sure the prop is a dynamic cloth prop, and one designed to fit the figure you have chosen. Do nothing more than load the prop, then don't touch it. Most of the time you will initially see all kinds of misaligned and tear-thru areas. Ignore them. The dynamic prop is now in the same state as a conforming piece of clothing that has not yet been conformed to the figure. Just leave it exactly as it loaded, doing nothing more. I suggest using, aka svdl, Stephen van der Linden's sensuous "Dynamic Kimono for Victoria 3," available from Free Stuff at Renderosity at:

http://www.renderosity.com or http://www.matters-of-heart.com/tutorials

Search Free Stuff for the keyword "kimono." A word of caution. If you have also downloaded svdl's "Dynamic Lingerie for Victoria 3," he has a DIFFERENT Kimono in that package with the SAME filenames. So make sure to install the .pp2 and .png files for one or the other in a separate subdirectory in Props => Dynamic Clothing => svdl => Victoria 3. =)) A fixed version of the file is available at my website.

4 Set Main Camera View

Set your camera to a single camera position and leave it there, preferably the Main Camera, zoomed out so you can see the entire default figure. Animation can also track shifts in camera movements between Key Frames, but we're not going to go there now. Our objective is to create a very simple animation sequence that will allow you to see how the dynamic cloth prop works in the Cloth Room. This is our only objective. So once you set your Main Camera view, please don't change it again until we are done. Also do not rotate or alter the initial load positions of either the figure or the prop. We are trying to keep this simple.

5 Click the plus-sign "Add Key Frames" button in the Animation Controls panel.

Provided you haven't changed the position of the little yellow triangle from the setup section, and provided it is still sitting on Frame 1 like it should be, you have now taken a snapshot of your figure and prop and camera position, and made them all your first Key Frame pose, at Frame 1. Notice that the prop is NOT yet conformed, or draped to your figure. To double check you have done this right, and that there are no other Key Frames in the sequence, simply whack the slider back and forth, from one end to the other. You should see absolutely NO change in the figure or prop or camera position.

Now, a word of caution. Know that WHENEVER you even touch a figure or prop or camera position during this exercise to move it, a Key Frame is AUTOMATICALLY inserted at the current frame number. Key Frames are automatically created in the time-line scale EACH time you move a figure, prop or camera. So if you just fiddle around during this exercise, you will have a jumbled mess of Key Frames in the stew.

6 Click the Cloth Room Tab to enter the Cloth Room.

Everything you need to do from here on out can be done in the Cloth Room, but we will jump back and forth between it and the Pose Room, so you get an idea of how they work in relation to each other. Things you would normally do in the Pose Room, we will do in the Pose Room. Things you would normally do in the Cloth Room, we will do there.

In the Cloth Room:

1. *Click the "New Simulation" button*
2. *Name the simulation "Kimono"*
3. *Set "Start frame" to 1, and "End frame" to 15*
4. *Check ONLY the "Cloth self-collision" box*
5. *Set "Drape frames" to 5*
6. *Click OK. The popup disappears*
7. *Click the "Clothify" button*

8 For "Object to clothify" select Props => Kimono
9 Click the "Clothify" button in the popup window
10 Click the "Collide Against" button
11 Click the "Add/Remove" button in the popup
12 In the Hierarchy popup, click only the "Figure 1" box
13 All the body subparts of Figure 1 will also automatically be checked.
14 Click OK. The Hierarchy popup disappears
15 Set "Collision Offset" to 0.500
16 Set "Collision Depth" to 0.500
17 Check the "Start draping from zero pose" box
18 Check ONLY the "Ignore head collisions" box
19 Click OK. The popup disappears
20 Click the "Simulation Settings" button
21 Move the popup window off the figure window so you can see the figure
22 Note that now the "Calculate Drape" button is active. Click it.
23 Wait and watch while the prop is draped and zeroed to the figure
24 A draping popup appears, showing the draping frame progress
25 Finally, all popup windows disappear, and the Drape Frame shows at 4.
26 Five drape frames have been created, 0 thru 4 = 5
27 You are done with the most important part, draping your figure

Let's take a breather now to assess what we have done so far.

First off, if you want to, you can quit now while you're ahead, since the procedure to this point is all you ever have to do to simply conform a dynamic cloth prop to a figure. So if you only want to render a single pose with a dynamic cloth prop, simply pose the figure and load the prop in the Pose Room, then go to the Cloth Room and execute the 27 steps above.

But here's the good news.

If you have already done all the steps once, just make sure the right simulation for the prop, e.g., "Kimono," is selected, and hit the "Simulation Settings" button and then the popup "Calculate drape" button. Let the drape complete on the new pose, then return to the Pose Room, rotate cameras as desired and render. You're done.

Two words of caution. One, by default, draping only works for the figure pose sitting in Frame 1. It can start other places, but that means changing the start-stop frame settings, and we're not gonna go there now. Two, a dynamic cloth prop can be assigned to only ONE named simulation at a time. So don't think about a "Kimono 2" setup. If you want a different simulation for Kimono, delete the first simulation and create a new one.

Now, if you are a glutton for punishment and summore fun, continue reading.

As you review the instructions above you will note we set the cloth to collide with itself and not tear thru itself, regardless of how the figure is posed. The cloth will bunch up and fold upon itself, rather than blow through its other surfaces.

We set the drape frames to 5. This is usually the minimum setting you want to use, inasmuch as drape frames start aligning themselves to the figure's body from the center of the body parts and move out to their extremities. Think chest, collar, shoulder, arm, and hand for each successive drape frame. But there are no hard and fast rules here, ok? Please check "Endnotes 1 and 2" for more info.

Next we "Clothified" the Kimono prop. What this means in truth is that we have made the prop a dynamic clothing prop, capable of simulating real cloth. If we hit the "Unclothify" button, we would turn the formerly dynamic cloth prop into a regular vanilla smart prop whose cloth does not dynamically change to conform to the figure.

Next we set the prop to collide with the whole body of the figure, Figure 1, which, in our case, is the entire naked V3 figure. This means that wherever a body part is, the cloth is not. We also set the Kimono's "Collision Offset" and "Collision Depth" so the cloth can be very close to other surface things outside the body, like itself (offset), and very close to the body itself (depth). These settings are good for a clinging fabric like lingerie, where it hangs from and touches the body, rather than for a loose-fitting item like a cloak or shawl.

We set draping to start 5 frames from the zero pose, which means, in terms of our animation, that all the draping will be done in 5 negatively numbered frames PRECEDING Frame 1 of our animation. This means that our first Key Frame, at Frame 1, will always show a prop perfectly fitted to its figure. We then calculated this draping function, in effect, conforming the prop to the figure.

If we return now to the Pose Room, we will see a prop perfectly conformed to the figure, with our animation still sitting on our first Key Frame at Frame 1.

7 Click the Pose Room Tab to enter the Pose Room.

You are now looking at a beautifully fitted dynamic cloth prop. You may want to render this first Key Frame setup to give yourself a sense of what you have just accomplished, and a chance to see how beautiful it looks. But remember for now, and the sake of this exercise, please DO NOT touch the figure or prop, or camera settings.

8 Advance the animation frame slider button until the frame count reads 5.

We have now positioned ourselves to create our second Key Frame snapshot at Frame 5 of our 15-frame animation. If everything has been done right to this point, none of the figure, prop or camera settings should have shifted.

9 In the Pose Room, load a new pose to your figure.

Preferably, select a pose like "V3 Backturn" where your character is standing proud, with breasts uplifted and chest out. This kind of pose will show you how the prop will shift as it falls away from the figure's body when it is moved.

Note that the prop is NO LONGER conformed to the body. Don't panic. This is normal. Note also, that simply changing the pose of the figure, by loading a new pose to it, causes a new Key Frame snapshot pose to be AUTOMATICALLY inserted at the Frame position. You DO NOT have to click the plus-sign "Add Key Frames" button. This feature has its advantages, although most of the time it just gives you an opportunity to screw up by accidentally adding a Key Frame where you don't want one.

10 Advance the animation frame slider button until the frame count reads 10.

We have now positioned ourselves to create our third Key Frame snapshot at Frame 10 of our 15-frame animation. If everything has been done right to this point, none of the figure, prop or camera settings should have shifted.

11 In the Pose Room, load another new pose to your figure.

Preferably, select a pose like "V3 Beach 01" where your character is now kneeling. This kind of pose will show you how the light silk cloth will lift up and bunch under her breasts as her body falls to its knees from the previous "V3 Backturn" pose. Again, ignore the fact that the prop is not conformed to the body.

This is a great place now to make another note. This is where you can really see how wonderful dynamic cloth props can be.

The Cloth Room always runs its simulations for a new Key Frame pose RELATIVE to the figure's position in the PREVIOUS Key Frame pose, if there is a previous pose. A swiftly falling body, that shifts quickly from a standing to a kneeling position will temporarily cause the silk to lift away from her body and then bunch up under her breasts, before it falls back to rest on her thighs. All these stages are captured by the animation.

When the "Cloth Simulation" is calculated, these rushing, twisting, body motions and sweeping arm movements are also captured, as well as the effect they have at that motion-moment on the cloth. These motion-related dynamic cloth affects can be captured only by transitioning a character from pose A to pose B. You could never achieve them by attempting to recreate them working with a single pose alone because, in the instance of a single pose, with no PREVIOUS pose reference point, the calculations will always simulate the cloth AT REST and not IN MOTION on the figure. Got it?

12 Advance the animation frame slider button until the frame count reads 15.

We have now positioned ourselves to create our fourth and final Key Frame snapshot at Frame 15 of our 15-frame animation. If everything has been done right to this point, none of the figure, prop or camera settings should have shifted from the previous Key Frame at Frame 10.

This time we are going to do something special. We are going to give the kimono a chance to come to rest on her thighs, by inserting the identical pose from the previous Key Frame into our last Key Frame.

13 In the Pose Room, load the IDENTICAL pose as Step 11 to your figure.

Make sure to click on the SAME pose, and load it AGAIN. The animation program interprets this as a change, and therefore inserts the pose as a new Key Frame.

In our example, this is the "V3 Beach 01" pose again, the kneeling figure. This repeated pose, where there is NO ACTUAL CHANGE in the figure, allows the Cloth Room to calculate letting the kimono now settle, and come to rest on the figure's thighs. If we did not add this identically posed Key Frame at the end of the sequence, the position of the kimono would stay uplifted as it was in the initial fall. Again, ignore the fact that the prop is not conformed to the body.

Finally, as a last insurance, with the frame slider still set to Frame 15, click the plus-sign "Add Key Frames" button.

We are now finally ready for the real fun! The big kahunah!

14 Click the Cloth Room Tab to enter the Cloth Room.

We are now ready to run the "Calculate Simulation" on the entire 15-frame sequence.

15 Click the "Calculate Simulation" button.

The simulation now runs through the entire sequence of events. It first calculates again the drape conforming sequence to the default cruciform figure, at Frame 1, and then proceeds to calculate, frame by frame, all the transitions, for BOTH figure AND prop, between all the Key Frames we have created.

Sit back, and watch in awe, as each new frame transitions to the next. Watch in joy and wonder as the cloth responds not only to the change of the figure's position, but also to its speed and direction of motion. Watch as the Kimono's ties fly away from her body as she falls.

Several cautions here. Unless you have an extremely powerful computer, each phase of this calculation can take up to 5 minutes or more to process.

So DO NOT BECOME IMPATIENT with your little machine. Love it, as it chugs its lil heart out for you. Note also that you may not see a blinking light at your puter's box.

All of these computations are being performed by the CPU in RAM, targeted to a cache the Cloth Room sets up from the moment calculations were started. I don't presume to accurately understand the granular stuff here. I am only sharing my own experience and intuitions about it with you.

Please check "Endnotes 3" of this tutorial for benchmark stats on how this ran on my computer. It will give you some frame of reference on processing times that you can then roughly compare to your own computer.

After some initial lag when you see nothing, you will see the "Draping" progress popup window appear in the lower left hand corner of the window. If it progresses from drape frame to drape frame methodically, however slowly, your program is ok. I have never experienced a crash or lockup in the "Draping" phase.

Note that there will be a SIGNIFICANT lag between the disappearance of the "Draping" popup window and the appearance of any progress in the "Calculating dynamics" progress popup window that takes its place. Initial calculations for the first real frame of your animation takes some time before the progress bar shows the first frame.

If your program is going to lock up at all, it will be across this transition.

If you don't see Frame 1 after some time, 5 minutes or so, do a CTRL+ALT+DELETE to check your Task Manager to see if Poser is "running" or "not responding."

If Poser locks up, my experience has been that even the Task Manager cannot kill it, but you can try. You may have to simply reboot. =((

As the calculations move along, you will get a good feel for their frequency and rhythm.

Also understand that certain frames, due to some peculiarity in their configuration, may take longer than others to render, like frames where the cloth is all bunched up under her breasts as she falls.

When the calculations are done, the progress popup window disappears and you are now ready to view your work.

16 DESELECT the TINY "Loop" button in the lower left hand corner of the Animation Control Panel

If you do not deselect this button, the "Play Simulation" button in the Cloth Room, as well as the "Play" button in the Animation Controls Panel will cause the animation to loop again and again. If that's ok with you, leave it alone.

17 DESELECT the TINY "Skip Frames" button in the lower right hand corner of the Animation Control Panel

If you do not deselect this button, the "Play Simulation" button in the Cloth Room, but NOT the "Play" button in the Animation Controls panel, will cause the animation to skip random frames of animation. This feature is designed to move swiftly through a lengthy animation that may be running at 30 frames per second. Since we are working with only 15 treasured little gems, we want to see every one of them, so toggle this little sucker OFF.

18 SLIDE the Yellow Triangle from Frame 15 back to Frame 1

For reasons known only to Mother, if you don't slide the yellow thingy off of its last position at Frame 15 back to Frame 1 following a "Calculate Simulation" run, the "Play Simulation" button in the Cloth Room won't work. You only need to do this once, and you're fine from then on. Doncha jus luv it!

19 CLICK the "Edit Keyframes" Key Icon button in the middle of the right hand key frame control button set

Our ONLY reason for dabbling with this popup now is to change the frame rate of our animation on playback. Please DO NOT investigate or dabble with any elements of this gizmo now. This is the domain of another month of research if you are not intimately familiar with this kind of animation-events palette.

The Key Frames Edit popup window should open on its default "Key Frames" tab. If that tab is not on top, click it to bring it to the top. In the upper left hand corner of this tab page, find the "Rate:" field. Swipe the default value of 30 that you find there and insert a 1. Our animation playbacks will now be viewed at the rate of 1 frame per second.

Click the Key Icon button again to close this puppy.

If we did not make this change, our little 15-frame animation would have blistered past our eyes at the rate of 30 frames per second. This means that the playback viewing time on our 15-frame masterpiece would have lasted all of 1/2 a second. Now we can view and relish each frame at the comfortable viewing rate of 1 frame per second.

With all the work we have done on items related to the Animation Controls, you can see again why I made the point early on in this tutorial, that the functions of the Cloth Room are really and truly, for all practical purposes, a SUBSET of features that support the animation process. Mother is completely mum on this whole issue. Baaad Mum.

If you were fat, dumb and happy about attempting to use the Cloth Room WITHOUT benefit of the Animation Control Panel, you can see now where you would be tearing your hair out, gnashing your teeth, and screaming like a banshee in short order. =))

20 In the Cloth Room, click the "Play Simulation" button

The animation will play through its entire sequence, at the rate of 1 frame per second. Click again on the button each time you want to see the sequence again.

Another note. If you want to save your work, including the calculation sequence that took all that time to process, you must save the entire Poser file one time. This is the only way to save the calculation simulation itself.

It is stored by name in a separate .dyn file in the same directory as the Poser file that generated it. When you re-open the Poser file, you will see it available to you as a pull-down option at the Step 1 Cloth Simulation section. It remains available to this file until you hit the "Delete Simulation" button.

You are now ready to enjoy the fruits of all your labors.

21 Click the Pose Room Tab to enter the Pose Room.

By using the slider button, or the frame buttons at the left of the Animation Control Panel, you can view and render each scene of your completed sequence.

Time for two more caution notes. First, understand that the moment you move your camera, or rotate your figure, the original view of what you created will be lost. Figure positions and cloth configurations will not change, unless you choose to change them. It's a good idea, before changing camera angles and rotating your figure, to add the default Camera position to your "Cameras" Library. This way at anytime in your play, you can return to the default view you started with.

Second, and most important, there is NO WAY to turn off the automatic introduction of Key Frames to the animation sequence if you want to temporarily re-pose a figure. You are then back to ground zero, with the need to re-calculate and re-conform the prop to the figure. We are not gonna go there now. If you do change poses, the prop remains frozen in its previously calculated position, until you execute a new "Calculate Simulation" on the entire sequence, or on a selected number of frames in the sequence. But we're not gonna go there now either.

For the time-being, to conclude this grand experiment, I suggest you simply move from frame to frame, without altering anything except the cameras and their rotations, and make selective renders of what you have created.

I believe you will be truly fascinated by what you see, and that it will trigger the creative juices in you to dabble in this genre a little more.

Renders I have done using this prop are attached here below.

Phewwwwwwwwwww.
Ahhh-bahhh-beee. Ahhh-bahhh-beee. Ahhh-bahhh-beee. That's all folks!!!

Closing Comments

I enjoyed preparing this, because I know the bitch of a time I had learning this the hard way.

As I said in the intro, this tutorial is not god's answer to mankind. Nor do I, in any way, shape or form, consider myself to be an expert on this stuff. I do know it was important enough to me to spend the time to share what I do know, however warped the knowledge may be.

I also know if you follow the instructions to the letter, you will have a satisfying run.

If you have any comments or compliments or suggestions for improvement, please give me a holler. Just note that I consciously avoided all kinds of screen capture illustrations. I am just not up for it, ok. =)

Take care, and have a good journey in this life.

Jusletgo
Wednesday, March 17, 2004, Rev 03
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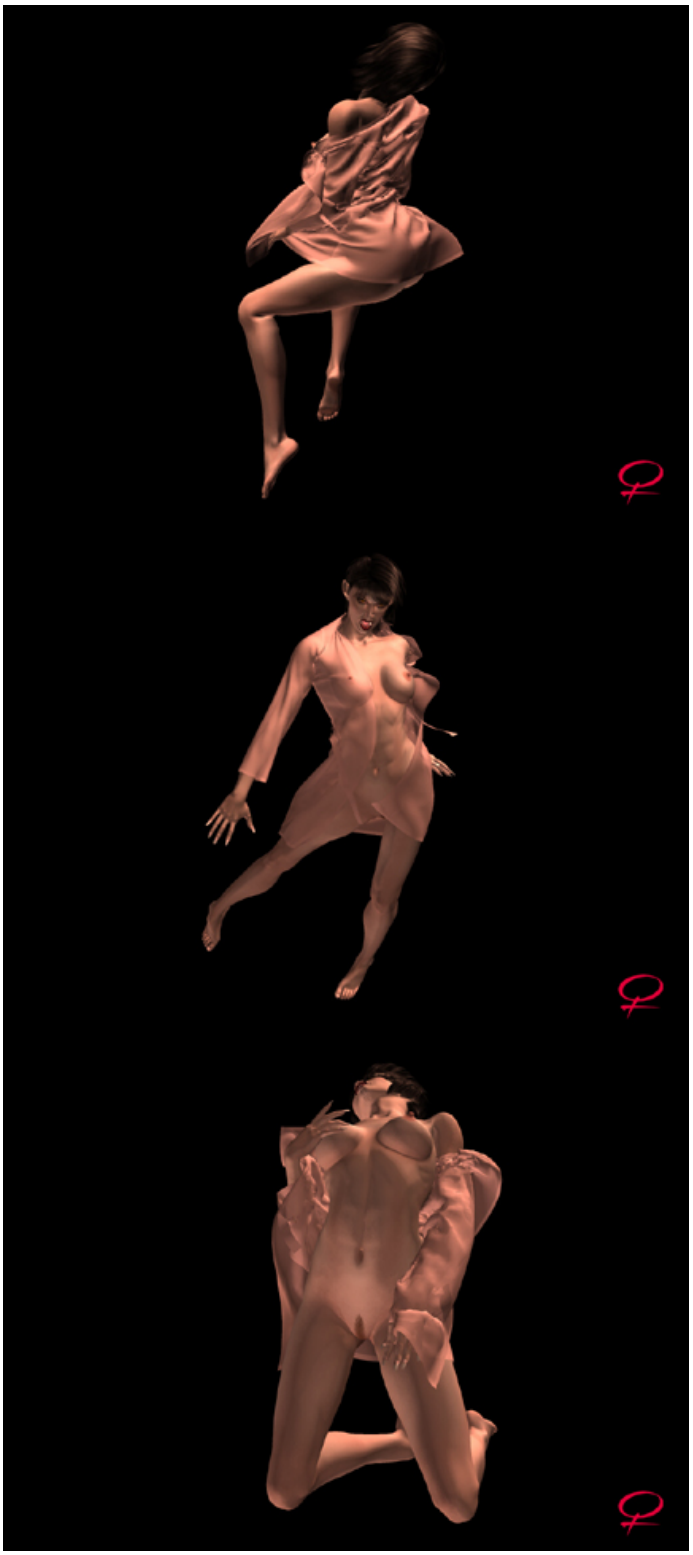
PDF copies of this doc can be downloaded from my website at:
http://www.matters-of-heart.com/tutorials

Sample Pics



You can view my gallery of images at:
http://www.renderotica.com

Endnotes 1: Drape Frames

Since most of you are rendering static poses, instead of animating sequences, I thought it important to comment a little more on the issue of drape frame numbers, outside the narrative of the actual tutorial.

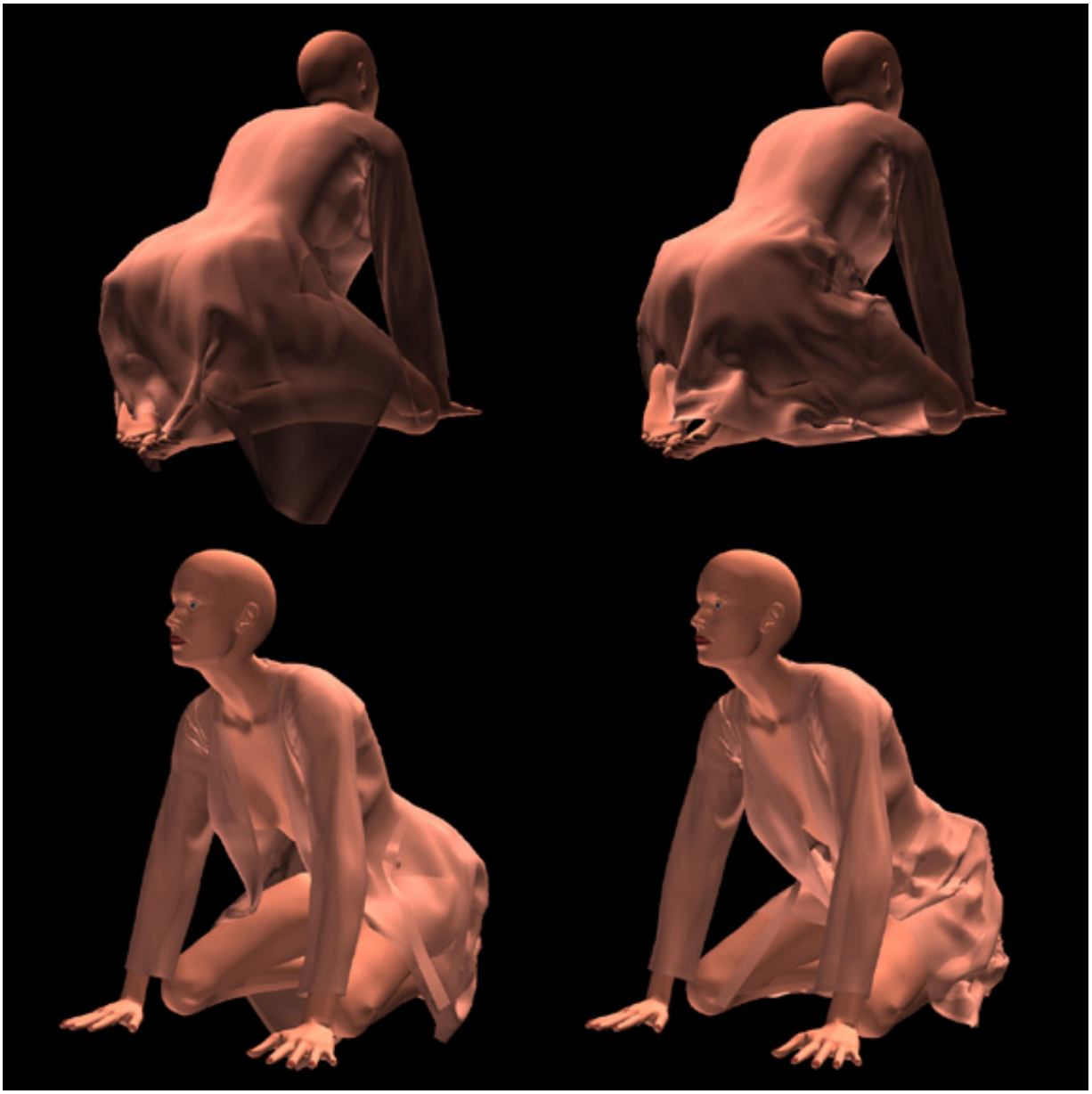
As I said, there are no hard and fast rules here. For the sake of our experiment, 5 drape frames were sufficient, and it also kept the calculation times down for the sake of convenience and an economic use of resources.

In point of fact, the number of drape frames you may need to use varies with the design of the prop itself, its cloth characteristics, how simple or complex, or contorted, or squished, or prone, the figure is. In most instances it is an artistic call, not an absolute. You may like what you see at 5 drape frames, or you may not be satisfied with 30.

For most poses similar to the standup default pose, 5 to 10 drape frames is normally sufficient. For poses that are leaning over, bending down, squatting, kneeling, or lying on the ground, you may well need 10 to 20 or more.

A simple rule of thumb is this, once the drape frames have basically fitted the prop to the pose of the figure, use as many additional drape frames as it takes to get the look you want, or until you no longer see change in the appearance of the cloth.

In the illustration on the next page, you are looking at four views of the identical pose. Since she is on all fours, the cloth conformed more slowly, and the full descent of all bottom hem elements, including the Kimono ties, took a little longer. I used a 20-frame drape count to get the look I wanted for this sample pose.



The two views on the left show the result of using only the figure itself as a "Collide Against" object. Note how the cloth falls below the plane of the ground.

The two views on the right show the result of ADDING the "GROUND" object to the "Collide Against" items. Note how the cloth rumples around her body at ground level now.

Endnotes 2: Zeroing a Figure

A little "Neat-oh" for the creative anal retentives among us who love to tweak, and who are disturbed looking too long at an undraped dynamic cloth prop that loads "misaligned" and showing "tear-thrus."

Most default figures when loaded are not actually "zeroed" to their precise geometric posture. Designers of conforming clothing, smart props, and dynamic cloth props use this "zeroed" state of the figure to precisely align their products.

If you ever want to "zero" a figure, simply do the following:

1 Load the default "T" cruciform figure
2 Select the "Hip" body part
3 Open the Joint Editor popup from the main menu: Window => Joint Editor
4 Click the "Zero Figure" button, and watch the figure snap to attention
5 Then place a zero value in each of the "xrot," "yrot," and "zrot" fields
6 Close the Joint Editor
7 Load your dynamic cloth prop

It should load perfectly fitted to your figure now, the way the designer designed it to do. Neat, huh?

Why the default figures do not load in this zeroed state is another question for Mother. =))

Endnotes 3: Benchmark Stats

To give you some benchmarks on the computing times required for calculations on the sample 15-frame animation, I have profiled the basic configuration of my puter and given you the times it took for this puter to compile the calculations.

My Puter:

Windows XP Pro
Running Poser 5
Pentium 4 2.53 GHz CPU
Kingston 2.00 GB RAM
Leadtek WinFast A250 Ultra TD Graphics Card with
128 MB of Onboard DDR RAM, powered by an
NVIDIA GeForce4 Ti 4600 GPU

"Calculate Simulation" Times on the combined 5-frame drape and 15-frame sample animation:

From the click of the "Calculate Simulation" button to completion of calculations:
16 minutes

Average calculating time per frame for 20 frames (5 Drape + 15 Animation):
48 seconds per frame overall

I mention the 5 minute per frame window as a wild-ass guess of an outside range for an average computer. If you would care to, please give me some feedback on your own experience, and I'll incorporate it into the notes here.

Thank you.

Jusletgo