Importing Poser Characters into trueSpace 5 and 6 with the Luuv Plug-in

If you want to import Poser characters into trueSpace, you can use Clinton Grant's excellent free plug-in called luuv. This plug-in can import and export .obj files with their textures. To download a copy, go to

http://www.pinacoderm.com/tsx/luuv

1. Inside Poser

Pose and texture your character inside Poser before exporting it.

Luuv needs to have the textures in the same folder as the .obj file. For easy texturing inside trueSpace, the best thing to do is to make a new folder inside your trueSpace folder where you will save your .obj file and where you can place copies of all the textures used for that object.

When you are ready to export your object, go to File/Export/Wavefront OBJ. In the Hierarchy Selection window, first uncheck everything by clicking in the box in front of "Universe", then select the object(s) you want to export. (Figure 1.1) If you are exporting a group of objects (e.g. a character with hair and clothing), don't forget to scroll down and check all the items.
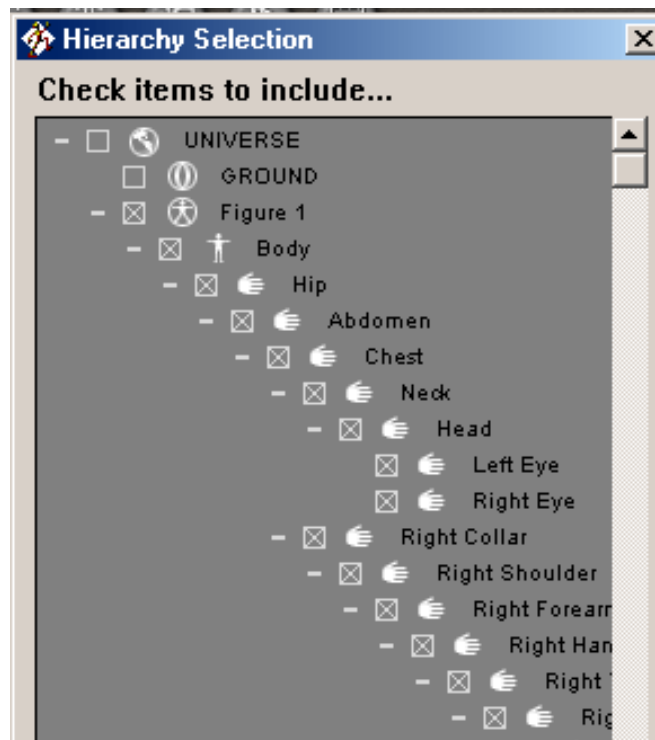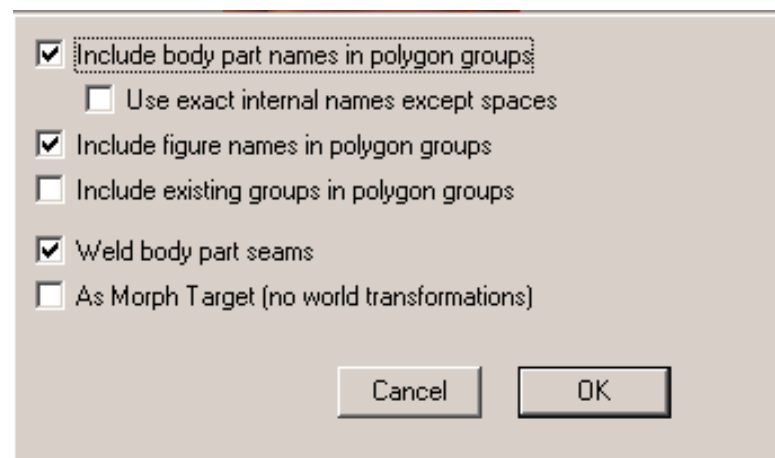
Figure 1.1

For the save options, choose the following:
- Include body part names in polygon groups
- Include figure names in polygon groups
- Weld body part seams

(Figure 1.2)

Figure 1.2

2. Opening luuv in trueSpace and choosing the options

To load luuv, click on "install new trueSpace extension" and navigate to the folder where the plug-in is located (e.g. trueSpace5/Tsx/luuv), then double-click luuv.tsx.

If you right-click the plug-in's icon , you get a pop-up window with the options. (Figure 2.1)

Figure 2.1

Let's go through these options to see what exactly they do and when/if we might need to change them:

Export options

Preserve groups

> If you are exporting a grouped object you can choose whether or not you want it exported with its groups. If you don't, then uncheck the "Group by material" option. This will enable the "Preserve groups" option, so you can uncheck that, too. In this case a single mesh will be exported. If you open this in [UVMapper](www.uvmapper.com) (www.uvmapper.com), there will only be one item listed in the Groups, but if the object had more than one texture applied to it all of these textures will be listed under the Materials, so you can still choose particular materials and assign them to new groups or map them separately inside UVMapper.

Group by material

> Luuv exports the texturing information when you save your mesh as an .obj file. This is very useful, because by giving different colors or textures to different parts of your object you can later isolate these parts inside UVMapper for individual mapping or for assigning them to groups. For example, you could paint the collar of a shirt with a different color than the body of the shirt. Then, inside UVMapper, you could select the collar by going to Select/Select by/Material and select the collar's material. Then you could use planar or spherical UV mapping on the collars while using cylindrical UV mapping on the rest of the body.

> Another helpful step to take before exporting your object is to give names to the different parts of a group. For example, if you named a part of your object "Wood", then you can go to "Select/Select by/Group" and a window will pop up listing the different groups with their names, one of them being something like "NoName, 1 Wood". This would make it easier to identify the different groups of your object in UV Mapper. (Figure 2.2)

> Whether or not you enable the "Group by material" option inside Luuv doesn't seem to make a big difference; the different materials will still get listed inside UVMapper. The difference I can see is how the groups and materials will be listed in UVMapper (whether or not they will be split up according to material inside the Select by Group window).

Figure 2.2

Copy texture files

If you use image files for the textures of your object you can choose whether or not you want to save those image files in the same place where you're going to save your .obj file. Procedural textures will not be exported, since they are program specific. (But they will still be listed as different materials inside UVMapper.)

Import options

Preserve groups

Whether or not you want to preserve the groups of your object when importing depends on how you intend to use it inside trueSpace. If you are importing a character to make a clothing item for it, it's best to import with the groups preserved. This way, you can easily select and delete unnecessary parts. For example, if you are modeling a skirt, you could delete the head, arms, chest, etc of the character object. Also, when setting up the groups for exporting the clothing item, it will be easier to see which part of the clothing should go with which body part of the character for conforming. However, if you are importing a character to place in a scene and render in trueSpace, you might not want to import with the groups preserved. The reason for this is the following: It seems that when you import a character with the groups preserved, the texture of the different parts might look slightly different. (Figure 2.3)
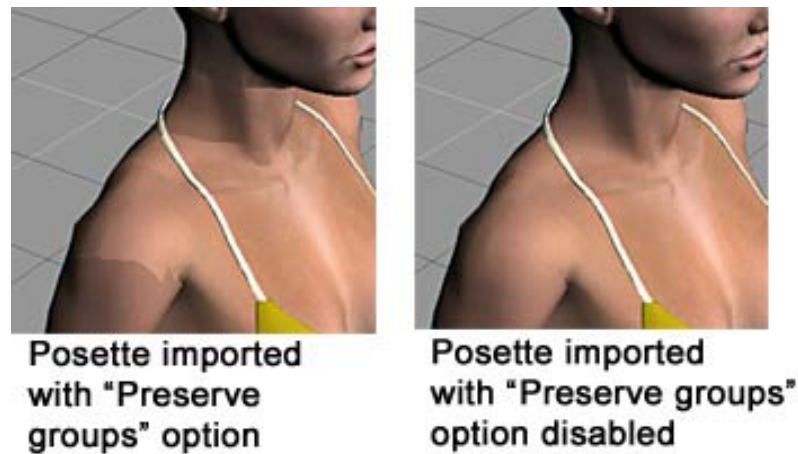
Posette imported
with "Preserve
groups" option

Posette imported
with "Preserve groups"
option disabled

Figure 2.3

Autoscale

When you import an .obj file from Poser, it's very, very small in the trueSpace scene. You can enable the Autoscale option to automatically make the object bigger when importing. In some cases, however, you might want to uncheck this option and do the scaling yourself. For example, if you are bringing in a character to build a clothing item around and you intend to export this clothing item to use in Poser, it's better to uncheck the Autoscale option. Then, once your object is in the scene, open the Object Info panel and scale your object manually. To do this, go to the Size row and multiply the x, y, and z values by the same amount (the easiest is to multiply them by 10, e.g. x*10). You can enter mathematical equations in each field and tS will calculate the amount. (Figure 2.4) Then, when you are ready to export your clothing item, just divide the x, y, and z sizes by the same number (e.g. x/10). When you import your clothing item into Poser, uncheck all options and the size should be just right.

Figure 2.4

Scale factor

If you enable the autoscaling, you can set the scale factor in the options window. This is a good solution if you are going to use the imported object inside trueSpace and you are not going to export the mesh or the mesh built around this object. The autoscaling is based on the biggest dimension and its aim is to make the object a good size to work with, but it does not scale the object by multiplying each dimension by the same amount (e.g. by 10). If you need to do the scaling that way, it's better to scale manually (see previous example).

Autofacet angle

The autofacet angle will determine how smooth the model will look inside trueSpace. You can adjust it here before importing the model, or later within the Material Editor. (Right-click on the Autofacet icon within the Material Editor to bring up the Autofacet control.) A value of 80-120 seems to give good results.

Ambient factor

You can set the material ambient factor before importing the object. If you leave the value at 0, then the ambience value will remain how it was set up in the originating program. If you change this number in the options window before importing (to a number between 0 and 1), then this new value will override the original value.

Specular factor

Similar to the ambient factor, but for specularity: if you leave the value at 0, then the original specularity setting will remain; if you change the value, then this new specularity setting will be applied to the object upon importing.

Miscellaneous - Show warnings

Luuv needs to have the textures in the same folder as the .obj file. If you import an object without the textures being in the same folder, the plug-in will warn you about the missing textures. (Figure 2.5) Just click OK. You can also disable the warnings and then the warning dialogs will not be shown.
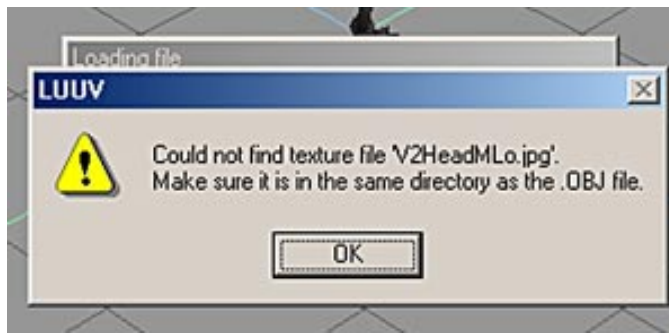
Figure 2.5

Help

Click on Help to learn more about the plug-in.

3. Importing a DAZ character

All right, after all those preparations, now you're ready to import your character into trueSpace.

Open up the plug-in, navigate to the folder where you saved your character and double-click it. Luuv will start working on importing the object and the textures and setting up the groups, if you enabled the "Preserve groups" option.

Once your character is in your scene, you'll notice that the transparency maps are not transferred over in the .mtl file, so you'll have to set them up yourself within trueSpace.

3A. The Eyes

Let's start with the eyes. DAZ characters' eyes prior to Victoria 3 were made up of two spheres: the outer eyeball, which needs to be transparent and shiny and the inner eyeball, which has the eye texture. Victoria 3's eyes are a little different: they have 4 material zones and they are made up of two objects: a sphere (actually the back part of the sphere is sliced off so it's not a whole sphere) and a disk behind the sphere. The sphere's eyewhite part is textured with the eye texture and its cornea part is textured transparent. The disk has the iris and the pupil texture. (Figure 3.2)

There are several different methods that you can use to texture the eyes. Which method you'll choose will probably depend on which figure you're importing, how you're going to use the character in trueSpace and which method works best for you. If you're going to have a close-up of the character's face in a scene, it might be best to break the eyes up into their groups so that you can texture each part correctly and in the most realistic way. (Victoria 3, however, might not need this step - see below.) If you are not going to have a close-up of the character, then for figures other than Vicki3, you can make the outer eye sphere transparent without decomposing the character or the eyes. This will show the iris and the pupil underneath, but it seems that for some reason the eyewhite part of the eye will be totally white, without the eye texture (which usually has pinkish areas and little blood vessels) applied to it. Another method would be to make a new eye texture for the outer eye which would include the eyewhite, iris and pupil areas and to apply this texture to the outer eye sphere. I will describe texturing Victoria 3's eyes separately.

- **Breaking the eye up into its groups**

  First of all, make sure that the "Enable raytracing" option is on in the render options toolbar and don't forget to save the .obj, .mtl and texture files inside the trueSpace folder. (The .mtl file includes the texturing information and is automatically created when you save your character in the .obj file format.)

  If you imported your character with the **"Preserve groups" option enabled:**

    - Open up the list of parts in the Keyframe Editor (tS5) or Scene Editor (tS6), and select one of the eyes.

    - After selecting the eye, click on "Decompose into objects". (Figure 3.1) In tS5, click on the Refresh button in the Keyframe Editor's toolbar to show the new hierarchy. In tS6, scroll down until you find the newly created eye group. Click on the + sign in front of the eye group and select the first object in the group; this is the sphere that needs to be transparent.

Figure 3.1

- Load the glass shader from the Reflectance Shaders Library, make it shiny and set the transmission and refraction values at 1.

- Click on the Paint Object tool to apply the transparent and shiny material to the outer eye.

- Now select the second object in the eye group. Load your eye texture map and set the reflectance shader to "matte" (the matte reflectance shader is also in the Reflectance Shaders Library). Apply the texture to this object with the Paint Object tool.

- Repeat the whole procedure for the other eye.

If you imported your character with the **"Preserve groups" option disabled**:

- First you'll have to decompose the mesh into its parts. Just select the character, then click on "Decompose into objects".

- Open up the list of parts in the Keyframe/Scene Editor. You'll see that now the different parts do not have their descriptive names, only "NoName" and a number. Set the display option to wireframe. Click on the items in the list and you'll be able to see which part is which.

- As you go down the list, find the eyes and you'll see that they are already broken up into their 2 separate parts. Again, in each group, the eye part that is listed first (and is a little bigger than the other eye part) is the one that needs to be transparent. So, load the glassy texture and apply it to this one. Then, load the eye texture map and the matte reflectance shader and apply that to the second part.

- Do this for both eyes.

- **Making a new eye texture for characters**

The eye texture of DAZ characters before Victoria 3 were included in the head texture file. If you look at the UV template, you can find the area where the outer, transparent eyeball is mapped. This is usually left white. If you copy and paste the eye texture to this area and scale it to the appropriate size, you can apply this eye texture to the outer eyeball inside trueSpace. This way you just have to texture the outer eye and don't have to worry about breaking up the eyes into groups, and texturing two separate spheres. So it's a faster way of texturing the eyes, but as I pointed out before, for close-ups you might still want to go with the previous technique.

I describe the steps of making this new eye texture in detail in the Tips and Tricks area.

- **Making the outer eyeball transparent**

Another method is just to make the whole outer eyeball transparent and shiny with the glass shader. This will reveal the pupil and iris texture underneath, but there are some drawbacks. One of them is that for some reason the eyewhite part will be all white and without the eye texture applied to it, and the other is that later on you can't easily change the eye texture if you want to (other than breaking the eye up into groups after all or applying the eye texture to the outer eyeball). You can make the outer eyeball transparent without breaking up the character or the eyes into their groups by loading the glass shader, then clicking on the eye with the "Paint over existing Material" tool .

- **Texturing Victoria3's eyes**

As I mentioned earlier, Vicki3's eyes are a little different than the earlier DAZ characters and they are a little easier to texture inside trueSpace. Here are some methods that you can use:

- Load the glass shader (with the same settings as I mentioned above) and click on the middle of the eye, where the pupil would be, with the "Paint over existing Material" tool . This should make the cornea transparent and now the pupil and the iris should become visible.

You might also want to click on the eyewhite part of the eye with the "Inspect" tool to load the eye texture, make it a little shinier, then click on the eyewhite part with the "Paint over existing Material" tool to apply the new, shinier eye texture to it.

- You can decompose the character or the eye the same way as described above and texture the eye parts individually. For the outer eye sphere, you'll need to load the eye texture and click on the eyewhite part with the "Paint over existing Material" tool, then load the glass shader and click on the cornea part with the "Paint over existing Material" tool. For the iris/pupil part, just load the eye texture and apply the material to the whole object with the "Paint Object" tool.
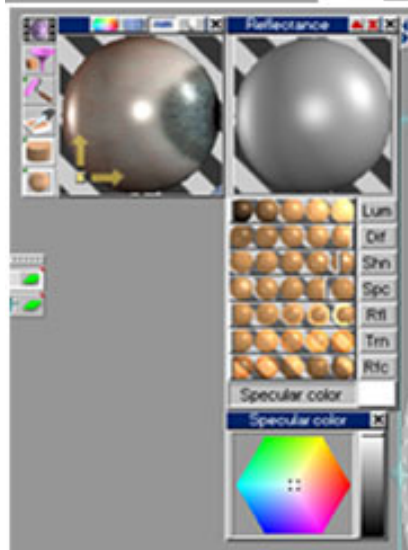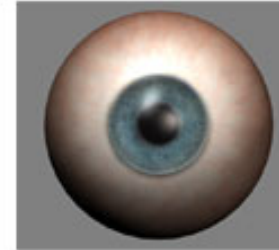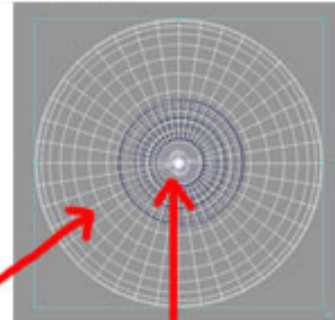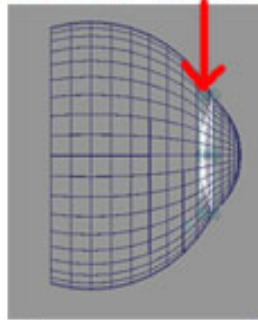
- Since Vicki3 has a separate eye texture map, you could apply this texture to the outer eye sphere without breaking the eye up into its groups. To do that, load the eye texture, then click on the eyewhite and also the cornea part with the "Paint over existing Material" tool.
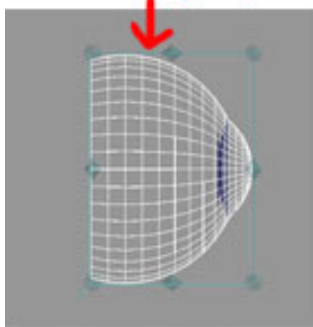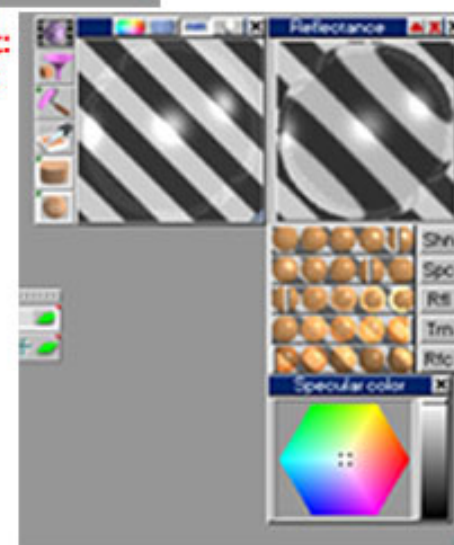
Figure 3.2

3B. The eyebrows and eyelashes

Now that our character can actually see, let's turn our attention to the eyebrows and eyelashes.

- Select the character again. Then click on the Inspect tool in the Material Editor (1).

- Click on one of the eyebrows (2). This will load the eyebrow color.

- Go to "Transparency: transparency map" in the color panel (3) and load the transparency map (4).

- Now apply the transparency map to both eyebrows at the same time by selecting the "Paint over existing Material" tool in the Material Editor (5), then clicking on one of the eyebrows with this tool (6).
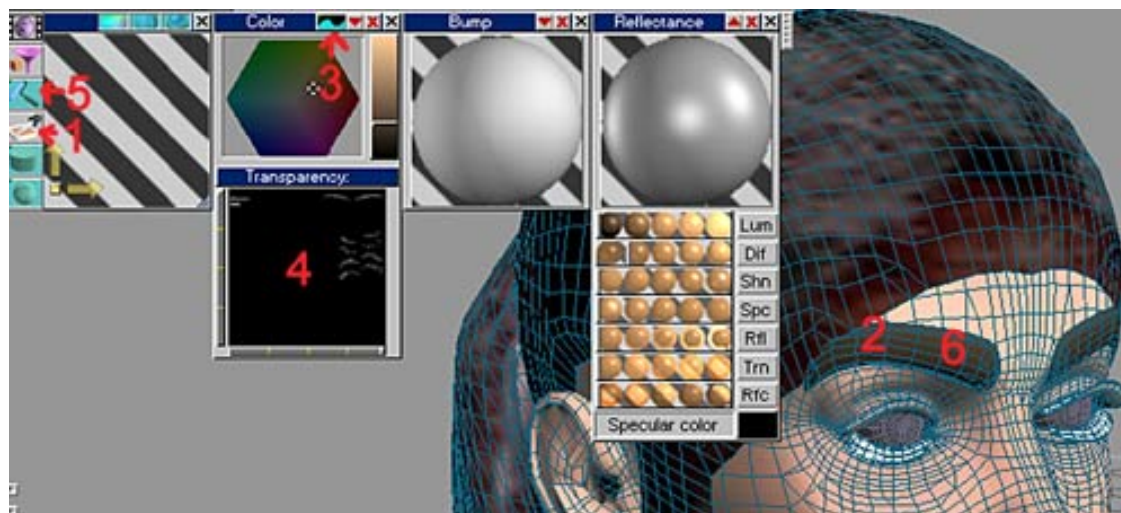
(See Figure 3.3)

Figure 3.3

Now let's do the eyelashes:

- If you want the eyelashes to have the same color as the eyebrows, then just click on one of the eyelashes with the "Paint over existing Material" tool (the Material Editor should still have the eyebrows' color and transparency map loaded).

- Or, if you want the eyelashes to have a different color (e.g. darker brown or black), then choose the new color in the Color panel, then click on an eyelash with the "Paint over existing Material" tool. This will apply the color and the transparency map to all the eyelashes.

3C. The hair

The hair also needs a transmap. The hair that I'm using here (ponytail hair by Kozaburo) is one object in my scene, but it is actually made up of several parts and it uses two different textures and transmaps: one set of texture/transmap for the hair cap and one set for the ponytail parts. To apply the two different textures and transmaps to the hair, we can use the same method that we used for texturing the eyebrows and eyelashes:

- Open up the Material Editor and click on the Inspect tool.

- Click the hair cap. This will load the texture used for that part.

- In the Color panel, navigate to the "Transparency: transparency map" option and load the transparency map for the hair cap.

- Apply the texture and transparency map to this part only by choosing the "Paint over existing Material" tool, then clicking on the hair cap.

- Do the same thing for the ponytail part: load the ponytail's texture with the Inspect tool, open up its transparency map, then apply it to the ponytail parts with the "Paint over existing Material" tool.

If you imported your character with the groups or if you broke your character up into its groups inside trueSpace then you can just select the different parts and apply the texture and the transparency maps to them with the "Paint Object" tool.

Bump maps also don't get transferred from Poser, so if you are using any bump maps, you'll have to load those individually, too. Just load the texture of the particular part, load the bump map, change the amplitude, if needed, and apply the texture with the "Paint over existing Material" tool. (For the character's bump map, I've found that I have to lower the bump amplitude significantly, to about 0.03-0.04.) Remember, the DAZ characters have separate texture maps for the head and the rest of the body, so if you make any changes to the skin texture, you have to do it for both areas: for the head, just click on the head to load and apply the texture, and for the body, click anywhere on the body to load and apply the texture. If you imported the character with the "Preserve groups" option enabled, then you can select the different body parts and texture them individually.

Finally, here's Vicki 2 after applying the textures in trueSpace:

4. Importing default Poser characters

Importing default Poser characters is very similar to importing DAZ characters, with just a couple of differences:

Poser 4 characters

The skin texture of the Poser 4 characters have both the head and the body on the same map, so you don't have to load different maps for the head and the body when making changes - just apply the same skin texture to the whole figure.

Poser 4 characters have only one eyeball part per eye, so you can just simply texture the eyes and make them shiny without having to apply two different textures. To do this, first load the texture in the Material Editor, then adjust the parameters in the reflectance channel, then apply this shinier texture to the eyes only by clicking on one of them with the "Paint over existing Material" tool.

There are no upper eyebrows (the eyebrow is painted on the head texture), so you don't have to apply a transparency map to them, but you do have to apply a transparency map to the eyelashes. To do this, choose a color for the eyelashes, load the transparency map, then click on one of the eyelashes with the "Paint over existing Material" tool.

Poser 5 characters

Poser 5 characters have three texture maps: one for the head, one for the body, and one for the eyes. So, if you want to make changes to the skin texture, you have to do it separately for the body and the head, just like with the DAZ characters. To change the head texture, first open the Material Editor, then choose the Inspect tool. Click on the head - this will load the head texture into the Material Editor. Make your changes and apply the new texture to the head with the "Paint over existing Material" tool. Now do the same for the body.

Just like Poser 4 characters, Poser 5 characters have no upper eyebrows; the eyebrows are painted on the head texture. For the eyelashes, you have to load and apply the transparency map just like we did with the DAZ characters and Poser 4 characters.

One big difference, however, is that the Poser 5 characters' eyes have 4 parts: a transparent and shiny outer eyeball, the inner eyeball which has the eye texture, a disk for the pupils and a disk for the lens. So, if you import a Poser 5 character, you have to break it up into its groups.

If you import the character with the "Preserve groups" option unchecked, do the following:

- First make the changes to the skin textures and apply the transparency maps to the eyelashes.

- Then click on "Decompose into objects" (1). If you open up the Keyframe/Scene Editor, you can see that now the character is broken up into its parts. Choose the wireframe display mode to enable you to see better (2).

- In my scene, the left eye parts are "NoName, 46 - 49. The first one among these is the outer eyeball. Make it transparent just the way we did with the DAZ character. (3)

- The next object in the list is the inner eyeball. Load the eye texture, make the reflectance shader "matte", and apply this texture to this object. (4)

-The next object is the lens. You can make this totally transparent. (5)

- The last object in this eye group is the pupil. This should already be black. If not, make it all black.

- Do the same steps for the other eye's groups, too.
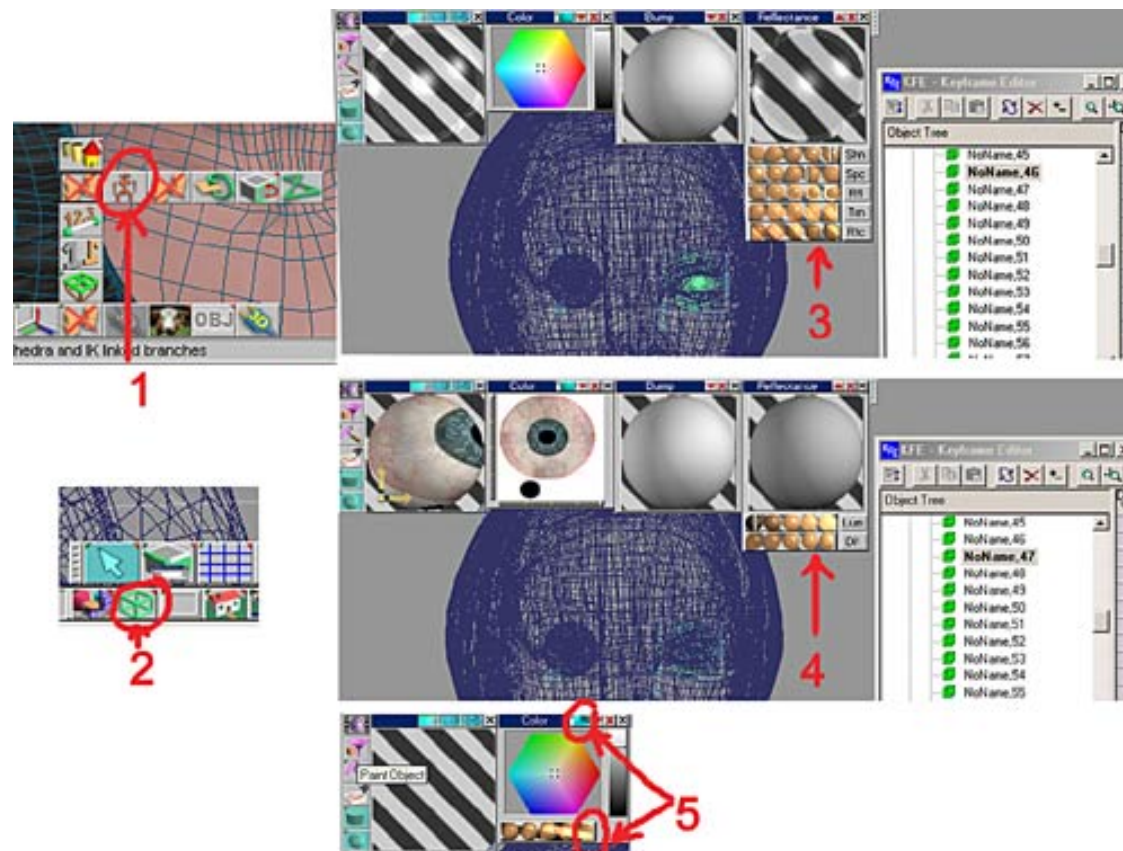
(See Figure 4.1)

Figure 4.1

If you import the character with the "Preserve groups" option enabled, do the following:

- Open the Keyframe/Scene Editor, then click on the + sign in front of your figure's name to open up the list of objects. Click on one of the eyes (Figure_1 leftEye:1).

- Click on the "Decompose into objects" tool. In tS5, click the Refresh button in the KFE's toolbar. In tS6, scroll down until you find the new eye group.

- Now open up this eye group and texture it the same way as above.

- Do the same procedure with the other eye.

5. Tips and tricks

5A. Making changes to the skin texture

If you want to make changes to the textures of your imported characters, you can do that easily by following these steps:

- Load the Material Editor, then choose the Inspect tool

- Click on the particular part you want to texture - this will load the texture into the Material Editor

- Make your changes inside the Material Editor

- Apply the new texture to the given part only by choosing the "Paint over existing Material" tool, then clicking on the part to be textured.

You might also want to increase the shininess of the skin a little in the Reflectance panel.

If you want to make the lips shinier, just click on the lips with the Inspect tool, increase the shininess, then click on the lips again with the "Paint over existing Material" tool.

5B. Prevent glowing nostrils

Depending on the texture map and the kind of shadows you use for your lights, some Poser figures' nostrils might look too light. You can correct this in postwork, or you can download Traveler's no-glow nostril props for Michael 2, Victoria 2 and Stephanie here:

http://www.morphworld30.com

If you use these, don't forget to include them in the list of items to save when you export your .obj file from Poser, then, once inside trueSpace, give them a dark, semi-transparent texture.

You could also make your own props by scaling down 2 cylinders to fit in the nostrils and making the texture dark and semi-transparent. These are the settings I used for my cylinders:

Size: x = 0.048, y = 0.048, z = 0.040

Rotation: x = -10.00, y = 0.00 z = 0.00

Color: R = 64, G = 31, B = 8

Transparency shader: "glow", Scale = 0.96, Centre cov. = 1, Edge cov. = 0.7, Zero angle = 77, Edge fall off = 0.55, Noise density = 0.44, Detail = 10.
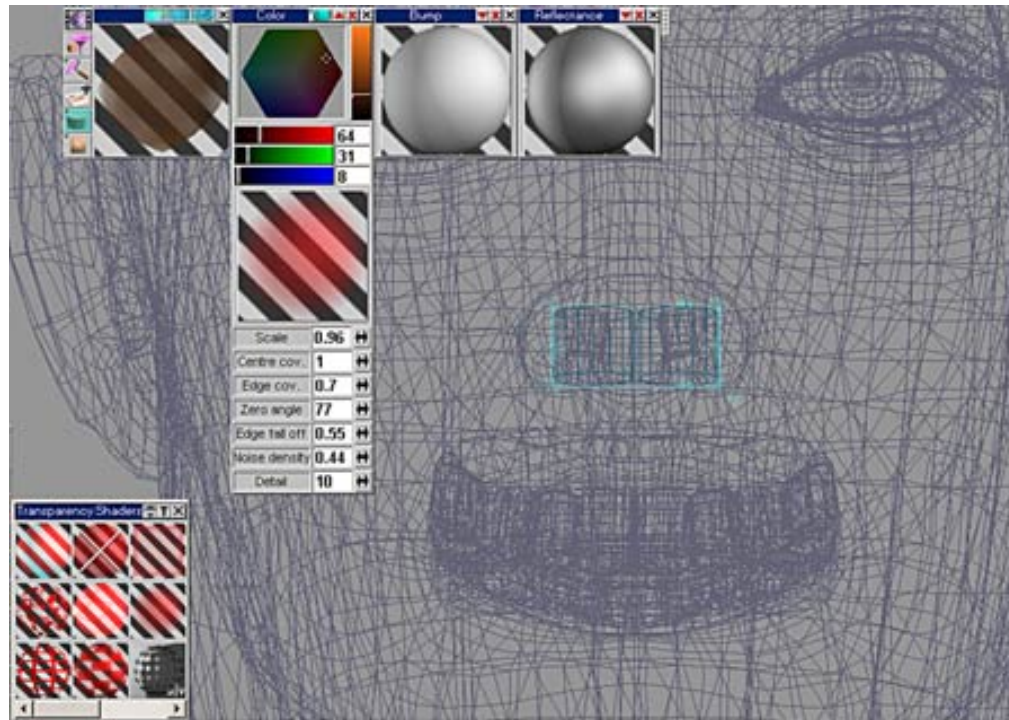(Figure 5.2) Of course, you can experiment to find the settings you like the best.

Figure 5.1

Before   After

Figure 5.2

5C. Making a new eye texture map for the outer eyeballs

As I mentioned before, before Vicki3 DAZ characters' eyes were made up of two spheres each: the eyes, which have the eye texture applied to them, and the outer eyeballs, which are transparent and shiny. If you want, you can copy the eyes' texture to the eyeballs' texture in the UV map. These are the steps to follow to do this: (You need an image editing program, preferably with layers, for this. I use Photoshop, so that's what I'm going to talk about here. I'm using Vicki2 as an example here; Michael2's and Stephanie's eyeballs are mapped to a different area, so you'll have to adapt the technique to their UV map.)

1. Open up the head texture you are going to use and also the texture template for the character's head. (You can download the texture templates from DAZ if you don't have them.) (Figure 5.3)

2. Make the texture template the same image size as the head texture. (In Photoshop, go to Image/Image Size and enter the same values in the width and height boxes of the Pixel Dimensions area.) (Figure 5.4)
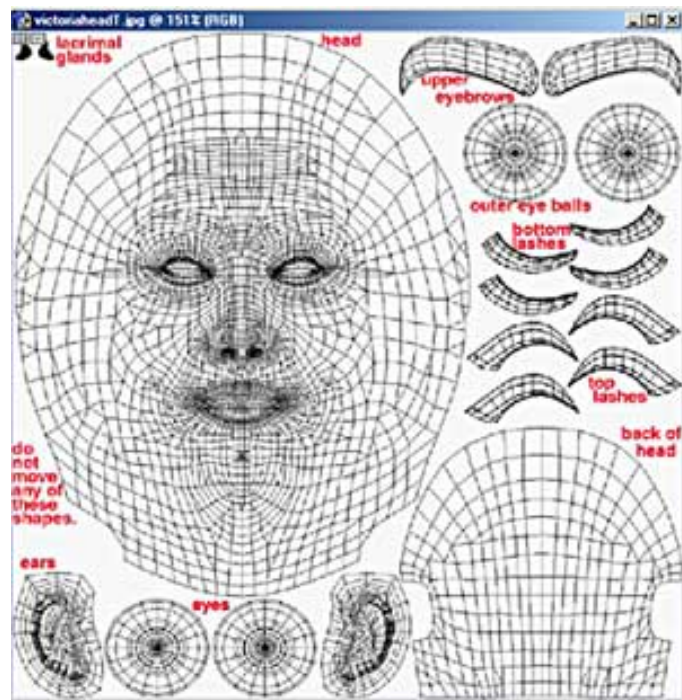
Victoria head texture template
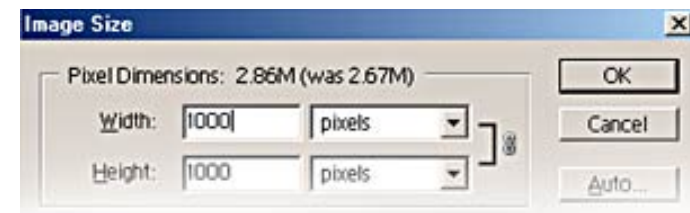

Image Size

Figure 5.3   Figure 5.4

3. Make the head texture active, then Select/Select All/Copy.

4. Make the texture template active, then Paste.

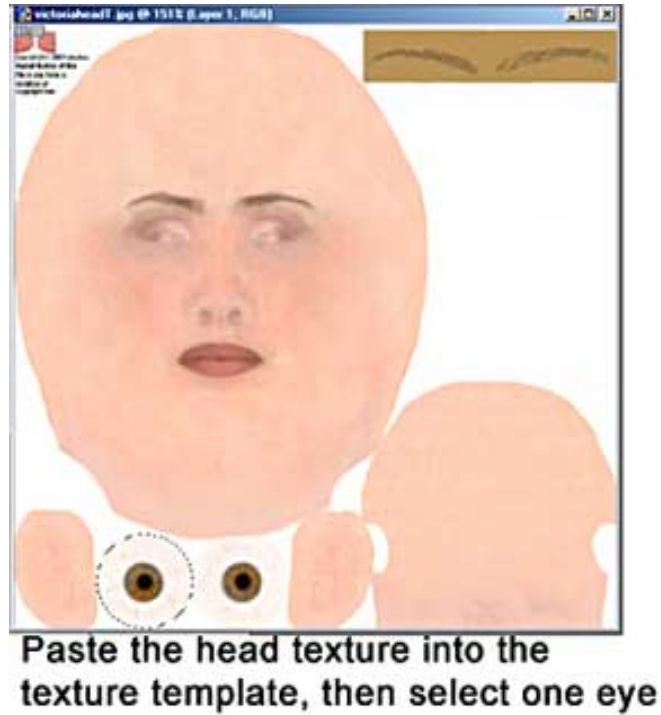5. Choose the Elliptical Marquee Tool and draw a circular marquee around one of the eye textures. (Figure 5.5)

Figure 5.5

6. Copy, then Paste.

7. Select the Move tool.

8. Hide the layer with the head texture. (Figure 5.6)

9. Lower the opacity of the layer with the eye texture copy so that you can see the texture template underneath. (Figure 5.7)
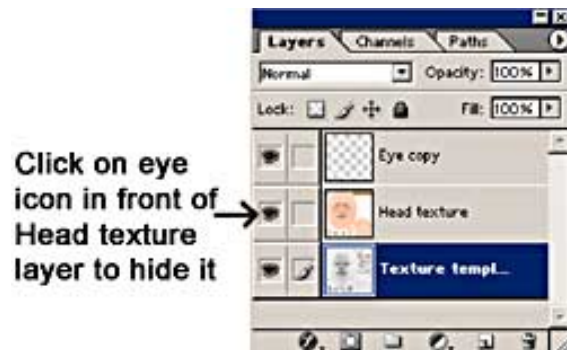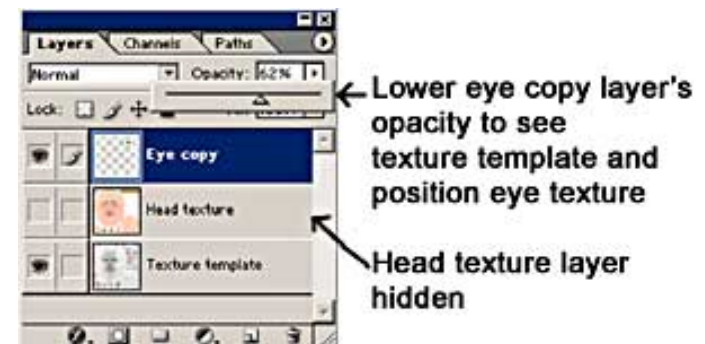

Figure 5.6

Figure 5.7

10. Position this copy above one of the eyeballs. (Figure 5.8)

11. Make the opacity of this layer 100% again.

12. Paste again to get another copy of the eye texture, lower the opacity of this layer, and move this eye texture to the other eyeball, then increase the opacity of the layer to 100%.

13. Unhide the layer with the head texture.
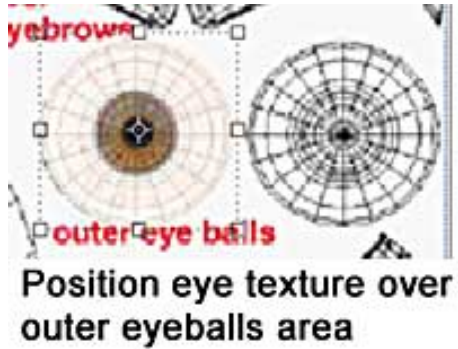
14. Save your new head texture. (5.9)

Position eye texture over
outer eyeballs area

Figure 5.8

The new head texture

Figure 5.9

15. Now, when you import your character into trueSpace, you can just load this new head texture and apply it to the outer eyeball. Don't forget to also make the eyeball shiny. You can use the Caligari Phong reflectance shader, and increase the shininess, and maybe add a little reflectivity. (Figure 5.10)
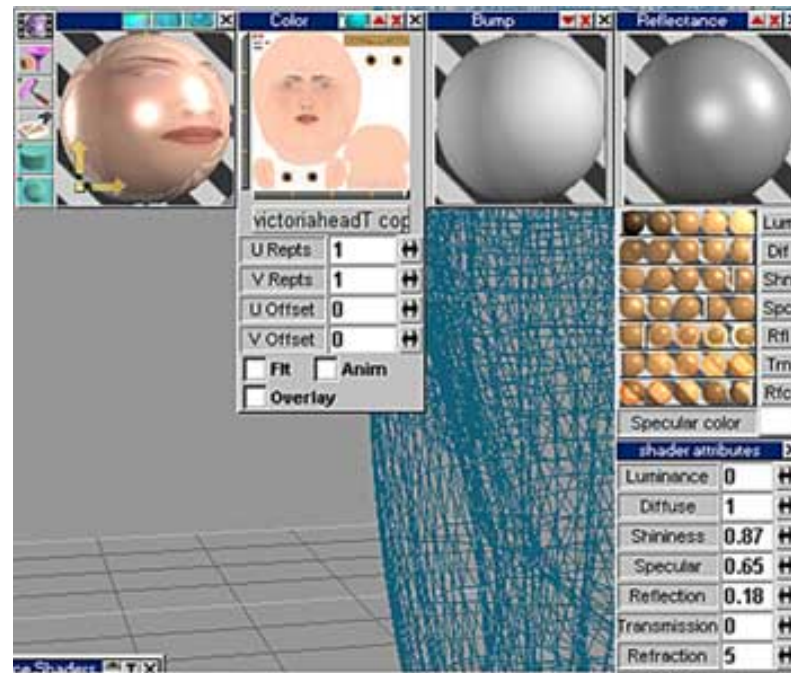
Eye texture and reflectance settings
inside trueSpace

Figure 5.10

Questions? Comments? E-mail me at Sue3d@render-lab.com

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