aRtBee

presents:

Paula Sanders

Creating Hair in Poser

An annotated capture of a perfect tutorial.

Contents

Oct 2012

Introduction

A decade ago, **Paula Sanders** wrote her "Creating Hair in Poser 5" tutorial. She investigated on the styling of medium to long hair, without using the Calculate Dynamics features.

This single webpage tutorial, plus four webpages with hints on creating such hair effectively, can be found here:
http://www.perpetualvisions.com/articles-and-graphics/tutorial-poser5-hair.htm
while also Paula's other works
(www.perpetualvisions.com and http://www.perpetualvisions.com/tocs/toc-articles.htm)
are definitely worthwhile looking into. At least they have helped me a lot during my journey through 3D image creation.

As Poser Hair Room is concerned, hair can be styled (turning you and me into a virtual hairdresser), or hair can suffer (or benefit) from dynamics like wind and fierce movements, or both. The latter has its issues, as most women do know from reality: severe dynamics can completely ruin the costly efforts of a talented hairdresser.

Before considering dynamics, it's good to realize what can be done by styling alone. This is exactly what Paula presents in her perfect tutorial on this, which follows right here. I only can add value in two ways:

- Bundle the various webpages into one PDF
- Annotate her tutorial and hints, to give some extra depth and background information.

All with Paula's consent, in case you wonder.

So let's give the stage to… Paula Sanders.

Creating Hair in Poser 5

I did not intend to write a tutorial on creating hair in Poser 5 because, honestly, I do not feel competent in this area. However, I was not able to find ones that were detailed enough so I decided to try. For the people who designed the hair, please forgive me if I have complicated some of the steps or missed out on others.

I. Delineating the Polygons in the Skull Cap for the New Growth Groups

Step 1 - Enlarge and save the four head shots. The Face Camera image remains as it is. While this does not have to be done in the **Hair Room.** All work can be done in the **Hair Room.**
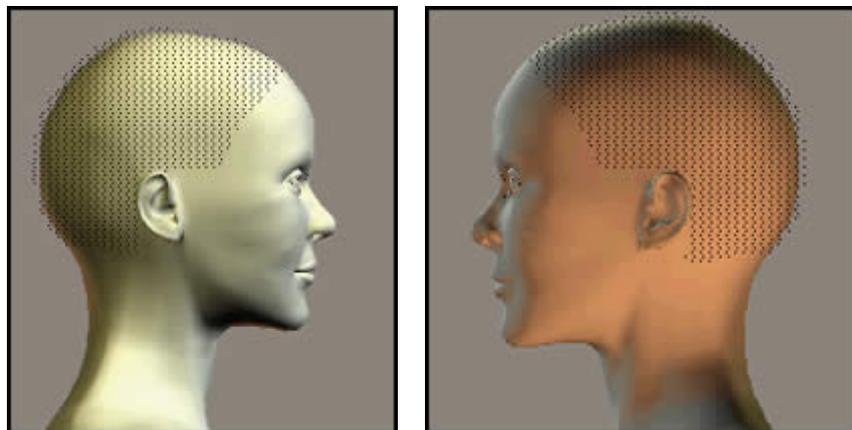
Front   Back
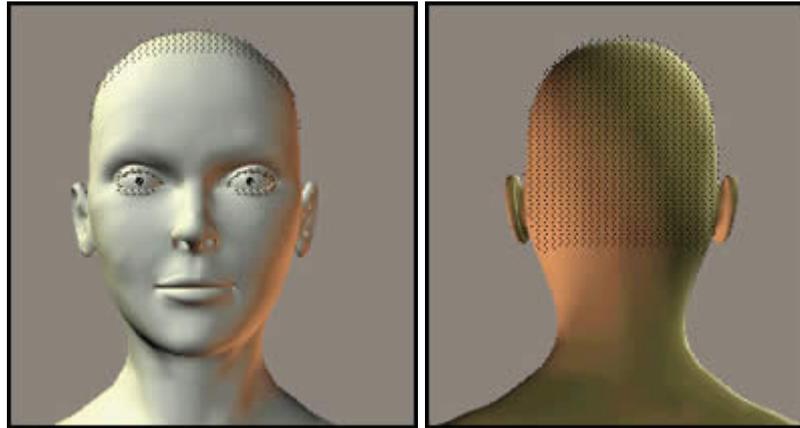
Left   Right

For the Left, Right, and Back camera images, access the **Zoom** Tool and clicked on it until the head is the correct size. If you get it too large, then, make it smaller by using a **Ctrl-Zoom.**

Step 2 - Click on the section of the head where bangs would normally be; and then, click on **New Hair Group** twice so you get Hair__1 and Hair__2.

Step 3 - Click on **Edit Hair Growth.** Click on the down arrow in the **Group Editor** and remove the entries other than Hair__1 and Hair__2.
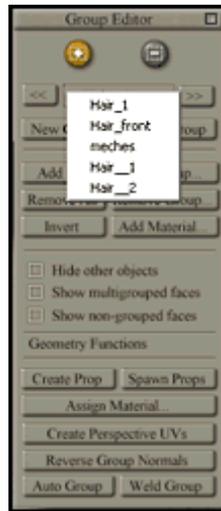
Step 4 - Make sure Hair__1 shows in the **Group Editor** window. Click on the area where the bangs would be (this is the front of the skull cap) and decide on a section of polygons to capture as Hair__1.


Step 5 - Do the same with Hair__2. Do not worry what the Current Group under **1. Hair Growth Groups** is. The **Group Editor** is what is important at this stage.
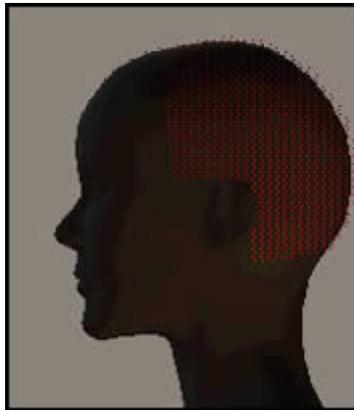

Step 6 - Close the **Group Edito**r by clicking the square in the upper right hand corner and select **Left Camera** in the camera section; Activate the skull cap by clicking on it. Select **New Hair Group** and it will be Hair__3.

Step 7 - Choose **Edit Growth Group** and draw a rectangle around the polygons you want in this hair group in the same manner as you did in step 4 or 5.
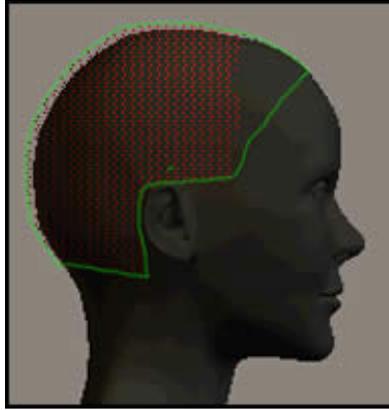
Step 8 - Close the **Group Edito**r by clicking the square in the upper right hand corner and select **Right Camera;** Activate the skull cap by clicking on it. Select **New Hair Group** and it will be Hair__4.

Step 9 - Choose **Edit Growth Group** and draw a rectangle around the polygons you want in this hair group in the same manner as you did in step 4 and 5.

Step 10 - Close the **Group Edito**r by clicking the square in the upper right hand corner and select **Back Camera;** Activate the skull cap by clicking on it. Select **New Hair Group** and it will be Hair__5.

Step 11 - Choose **Edit Growth Group** and draw a rectangle around the polygons you want in this hair group in the same manner as you did in step 4 and 5
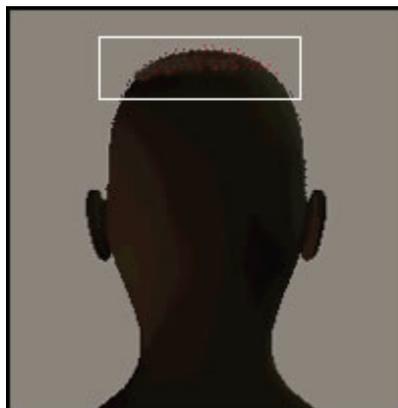

II. Establishing Guide Hairs

Step 12 - For this hair style, at this stage, Hair__1 and Hair__2 should be set up the same. Hair__3 and Hair__4 should be set up the same. Hair__5 will be different.

Step 13 - In the Hair Room, of course, select from **Hair Growth Groups, Current Group: Hair__1**. You do not need to access **Edit Growth Group**. Click on **Grow Guide Hairs** and watch them sprout.

Step 14 - Choose a **Hair Length** of 0.9000

[aRtBee: from this image and the ones below I infer that Paula uses Feet (=30,5 cm) for standard Poser units. When you're using Meter instead, you'd set this value to about 0,27.]

Step 15 - Choose a **Length Variance** of 0.1000

[aRtBee: this one too refers to your Poser units setting. When you're into Meters, set this value to 0,03 instead]
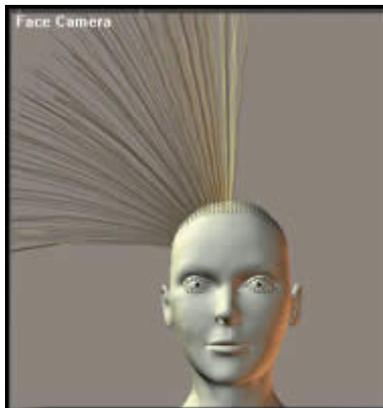
Step 16 - Choose a **Pull Back** of 0.00200

Step 17 - Choose a **Pull Down** of 0.00210

Step 18 - Choose a **Pull Side** of 0.00150 It is important to notice that for hair to pull to the right and to the left, one o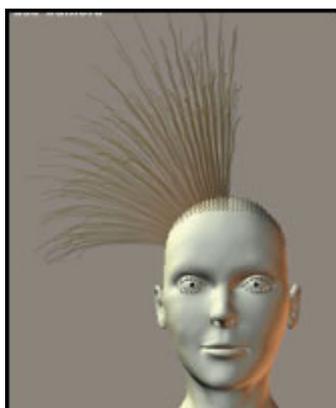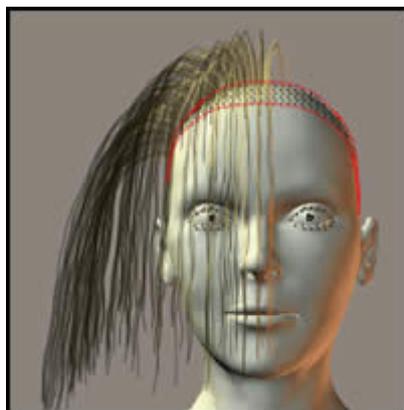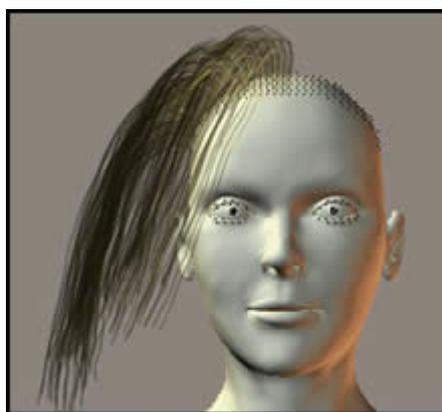f the numbers must be a negative (-) number. This is reflected in the table below which shows Hair__1 as a positive number and Hair__2 as a negative number.

This will just give an example of how one hair group can be manipulated by the dials. You can start with any hair group. When I created this basic hair, I started with the sides, then the fronts, and lastly the back. The table below will show the basic settings for this section.

Procedure	Hair Groups 1 and 2	Hair Groups 3 and 4	Hair Group 5
Hair Length	0.9000	0.9000	1.6500
Length Variance	0.1000	0.2000	0.2000
Pull Back	0.00200	0.00200	0.00415
Pull Down	0.00210	0.00210	0.00800
Pull Side	hg1 0.00150 hg2 -0.00150	hg3 0.00100 hg4 -0.00100	0.00000

The final results of this section are shown below. In section three, the hair will be styled. The bottom most figure of the group below shows the left camera view just quickly rendered. Compare it to the left camera view (at the end of the tutorial) of the hair after it has been stylized and some of the **Styling Controls** have been modified.
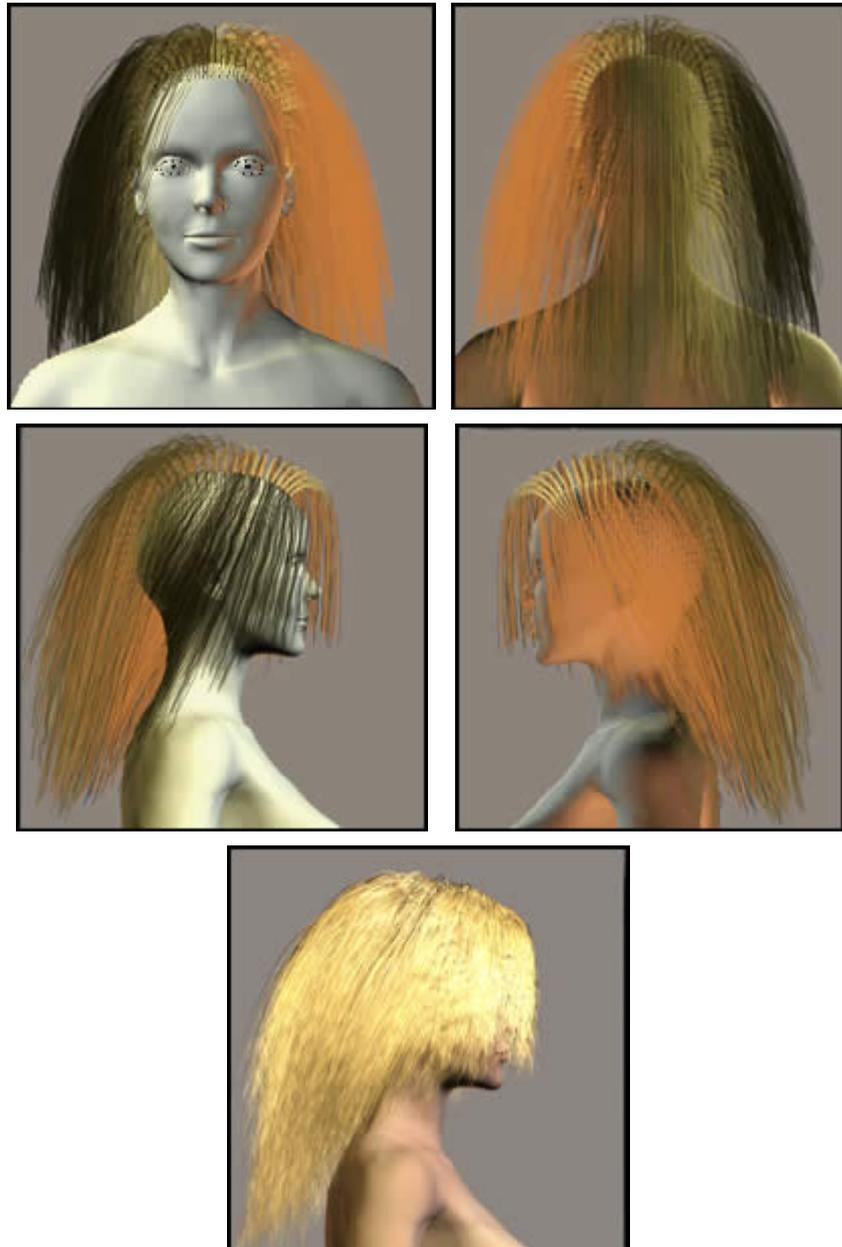
III. Styling the Hair

The style I decided on was going to be very basic. It was mainly to smooth and blend the hair above into a unit and add some body and texture to it. This style was the work that any beginner could do.
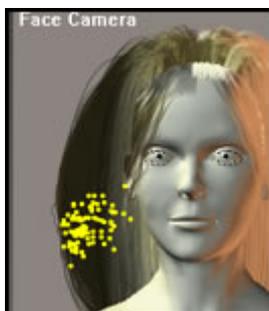
Step 19 - Start styling the hair by first selecting the **New Hair Group.** Then, click on the orange arrow, which is the **Selection** Tool, in the **Hair Style Tool Palette,** pictured on the right**.** Draw a box around the hairs that you want to style. You can work with many hairs or just a single strand. Yellow nodules or dots will appear. The Poser 5 manual starting on page 237 describes the hair styling tools and how to use them. The best way to get a feel for them is to play with them with the hair in different camera settings. The **Falloff Slider** is very important. It is a key as to how much of the hair (from the tip to the root) the tools will effect. As stated above, using different camera angles in conjunction with the tools is very important when

styling the hair. However, the selection nodules or yellow dots are only apparent from the front camera angle. However, one can still select the strands of hair and work with them.

Step 20 - As you work with the **Hair Styling Tools**, you might also want to be working with the **Styling Controls.** The table underneath shows the settings for this simple hair style. The only ones changed from the default value were the Number of Hairs and the three Kink Settings.

State of Being	Hair Group 1 & 2	Hair Group 3 & 4	Hair group 5
Number of Hairs	700	1000	500
Kink Strength	5.00	5.00	6.00
Kink Scale	500.00	500.00	700.00
Kink Delay	0.30	0.70	0.70

[aRtBee: generally it makes sense to give all your growth groups (on the same body part) the same value for Hair Density. The larger the group, the more hair it will grow. The density number itself represents the amount of hairs per ft^2 (for Paula), or per m^2 (in my case), etcetera.]

The end result with only a quick render and nothing being done in the material room is pictured below.

Front   Back

Left   Right
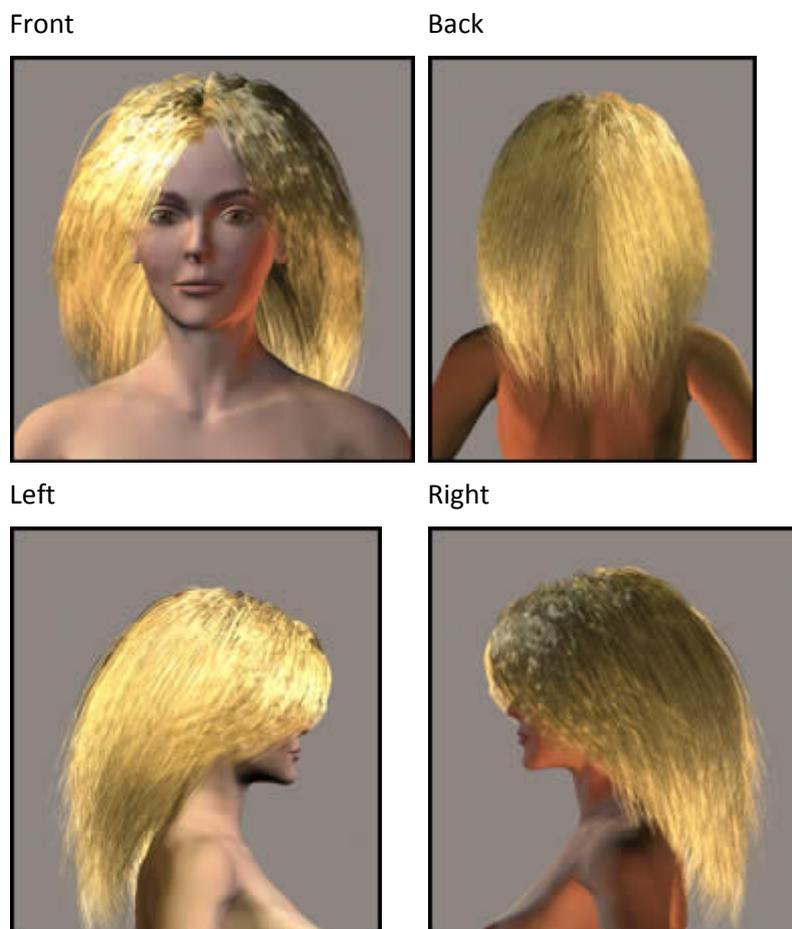
[aRtBee: each hair is subdivided into small elements, and the smaller they are the more work Poser has to do, but the better details can be addressed (the usual performance versus quality balance). The amount of pieces is set in the Verts per hair (each vertex marks the end of such a hair-element). When all your growth groups use the same length per element, the hairs on all those groups will behave more or less similarly.
For instance, when Paula uses 0.9 feet for hair length and uses the default 20 verts per hair, then each element is 0.9 / 20 = 0.045 feet long. Hair group 5, which is set to 1.65 feet hair length, should then have 1.65/0.045 = 37 verts per hair to make the hair in this group behave like the hair in the other groups.
Changing the amount of Verts per hair affect the result of the three Pull and the three Kink parameters.]

Hints on Creating Hair in Poser 5 – part 1

I do not claim to be an expert in creating hair in Poser 5. Having made many wigs for miniature figures, I am aware how hair needs to fall to be styled. I have been trying to take some of this knowledge with me as I work in the Poser 5 Hair Room. I basically am sharing my experience with you in the hopes that it might speed up the process for you. Each of these mini tutorials will consist of one or more hints. They are more or less diaries of my relatively successful experiments.

I will assume you might have read my first tutorial [aRtBee: previous chapter]. If, not, you might want to read it, for I will be referring to it in the first hint.

Hint # 1

If you look at *Step 6* in the first tutorial, it instructs you to close the **Group Editor** before assigning a new **Hair Group** or changing the **Camera Position** of the figure. I did that in the first tutorial for a reason. I felt that if the steps were clearly delineated, there would be less confusion in executing them. However, all these steps can be done at the same time without having to close any palettes or menus.

[aRtBee: true, this holds for about all palettes. As far as the Group Editor is concerned, it's well advised to UNCHECK the Hide other objects option before closing it, as otherwise you might run the risk of having to unhide all your other scene elements manually.]

Hint # 2

I have been playing around with the placement of **Hair Groups** on the skull caps. While I know that some people have used just a few, I have found that I have used 7 successfully. The pictures show the placement and I will explain why and for what types of hair styles they work well.
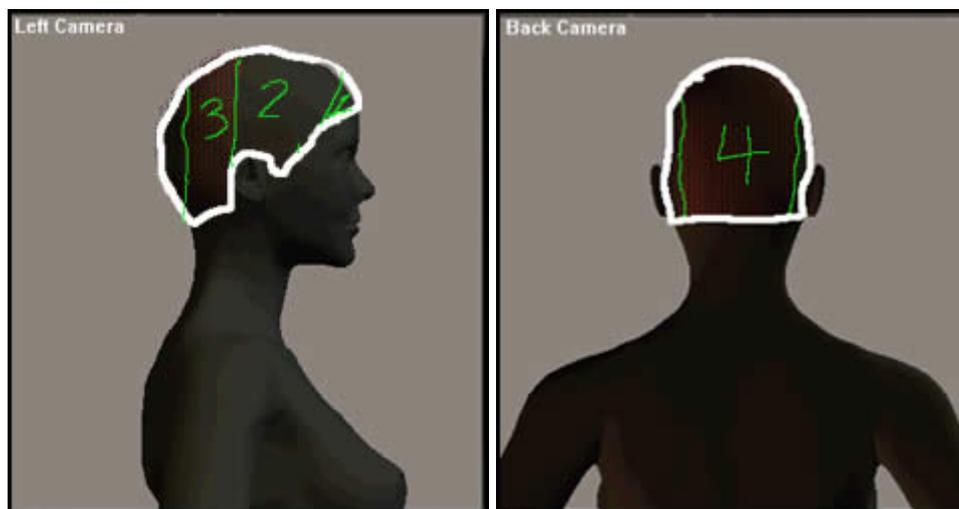

The first two sections are in the front. These are pictured here by the area marked #1 and its counterpart which would be on the other side. These would be created from the front as in the first tutorial. I create two bangs so I have flexibility in styling. The next two sections are section #2 and its counterpart. These two I found to be straight forward and easy to style. Section #3 and its counterpart were the ones that I found added a lot to the hair piece. I found that part of the hair never would lie properly and I could not always blend it to my satisfaction. By setting the **Pull Down** control to 0.00600 and the **Pull Back** control to 0.00500, I could get it to lay in a fashion more similar to regular hair, so I had less styling to do to make it behave like regular hair. Then the back piece could be used to smooth out and cover any imperfections.

Illustrations are most easily understood than word. These show the basic setup for the straight hair template I was fashioning.
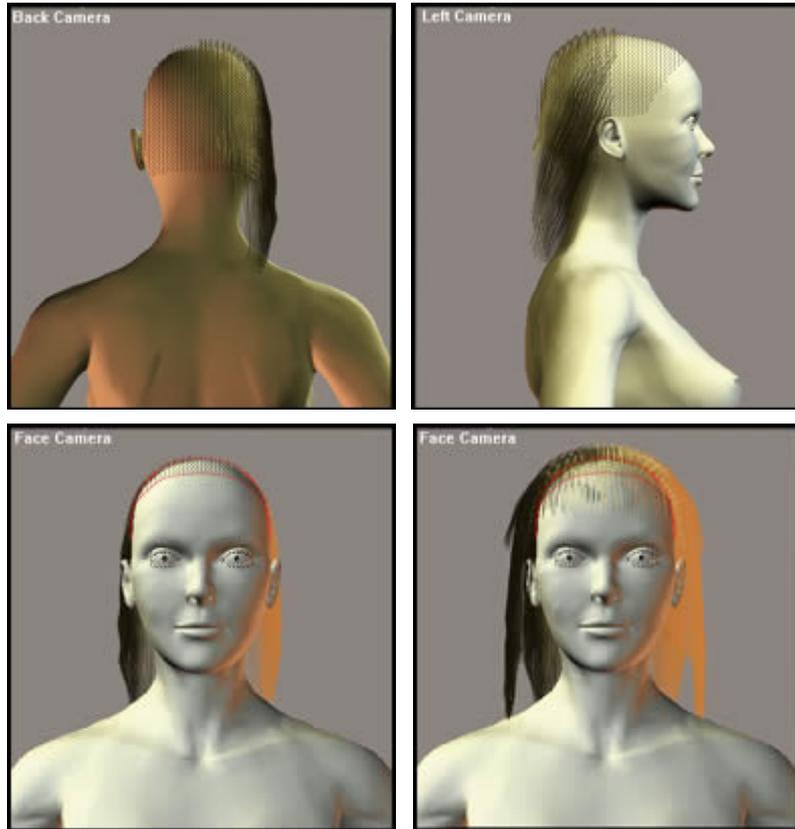
Bangs Setting   Long Hair Setting
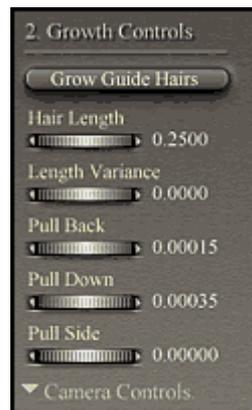
The hair lies smoothly on the neck. It is not puffing out to the side which it wanted to do previously. The Pull Back and Pull Down setting took care of that.

The spaces between groups of hair visible in the bottom set of pictures are not a problem. I will be able to easily manipulate the hairs with the styling tools to spread them out. I'll describe how later in this tutorial and show the styling tools I have found the most helpful for this type of manipulation.

The bangs are straight forward. The settings are shown above. Again, later, I will blend them into the rest of the hair.

It is important to continually look at the hair from all camera angles. What looks good in one, might look terrible in another. It is easier to fix problems as they occur. I work symmetrically around the head.

Once I had established a basic hair setting, I started to use the **Hair Styling Tools.** I found that there were three I used the most for just arranging the hair in place. This did not involve any curling. The three tools were: the **Selection Tool, Translate Hairs Tool,** and **Remove Hairs from Selection Tool.** Three other settings that are important at this stage of the process are 1) to NOT check the **Constrain**

Length, 2) to be aware of the **Falloff Tool** and to adjust the Falloff Tool Slider as you use it, and 3) to clear each selection after you have finished with it so you won't access it by mistake. All you need to do is hit the **Clear Selection Tab.**

Hair Style Tools   Selection   Translate   Remove
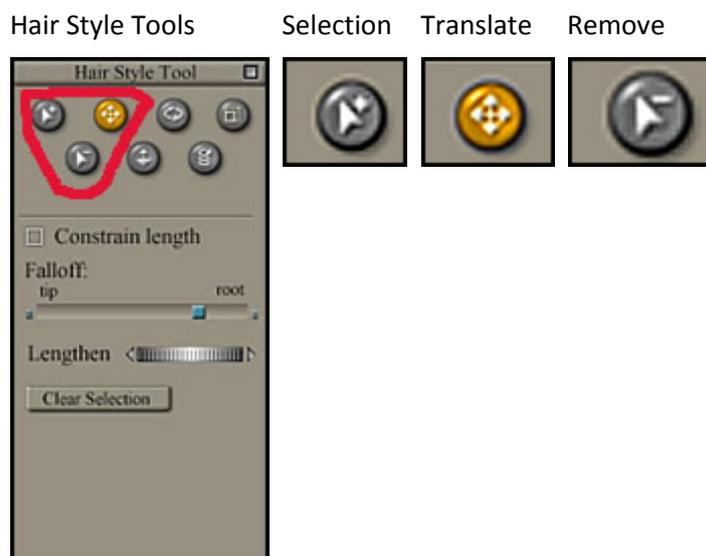

The illustrations below will describe as well as possible without a video how I use these tools together to manipulate the hair for a very basic style. This basic style I call a template because I can then develop a lot of styles from it later on.

If you look at the first illustration, you will see that the hair is going toward the back. Before the dark hair in back of her ear was hanging as seen in the picture, it overlapped the hair in front of the ear. To move it in the direction of the arrow, I first had to select it. But there is no way to know whether I have selected the correct strands or not from a side view. So I selected the hair with the **Selection Tool** in a side view and then changed the view to a front view as seen in the second illustration. Now the nodes (yellow dots) show. I returned to the side view and with the **Translate Tool** dragged the strands back as I wanted them.
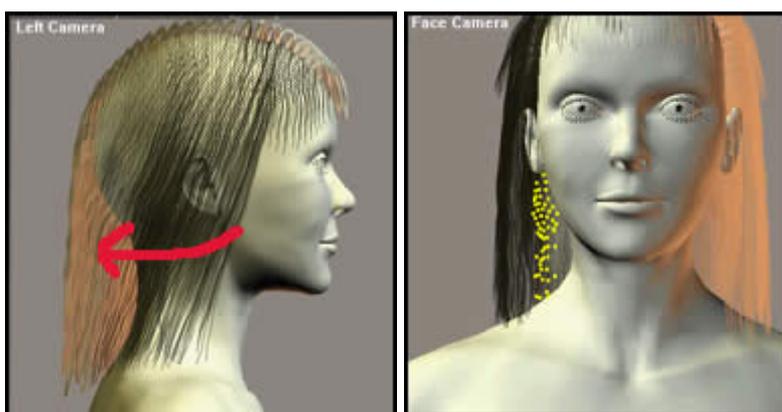
Now this same **Translate Tool** is great for lengthening individual strands of hair. However, what if the **Selection Tool** selects too many strands? The **Remove Tool** will remove one or more strands as depicted by nodes. Once again, it helps to be in the front camera angle. It helps to zoom up closely. If you are working with hair lengths, it is especially important to have the **Constrain Length** Box unchecked.
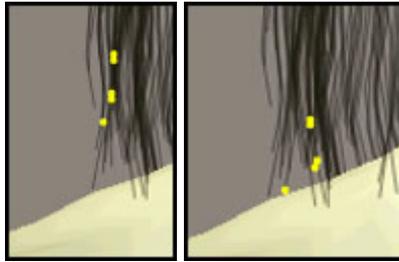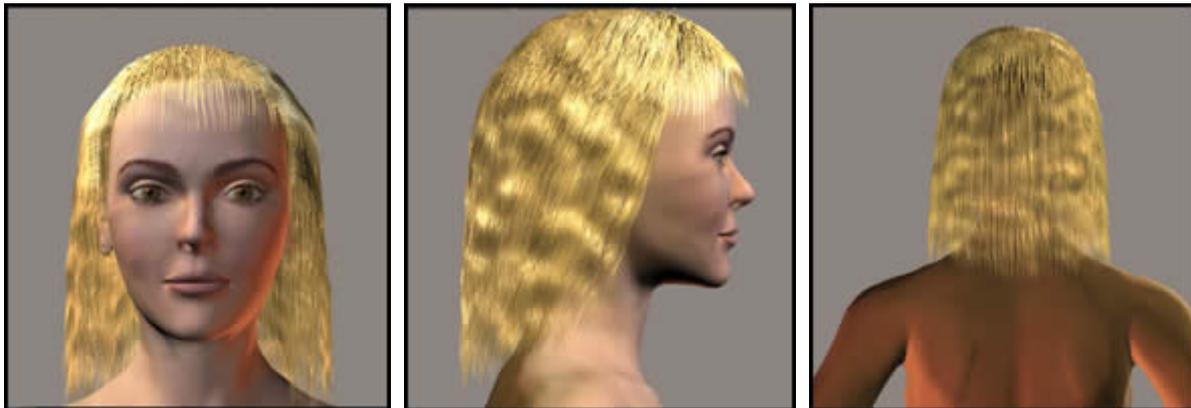
This hairstyle now has been finished in the sense that I call it a template. I will use it for creating many different hair styles.

Guide Hairs for Straight Hair Template
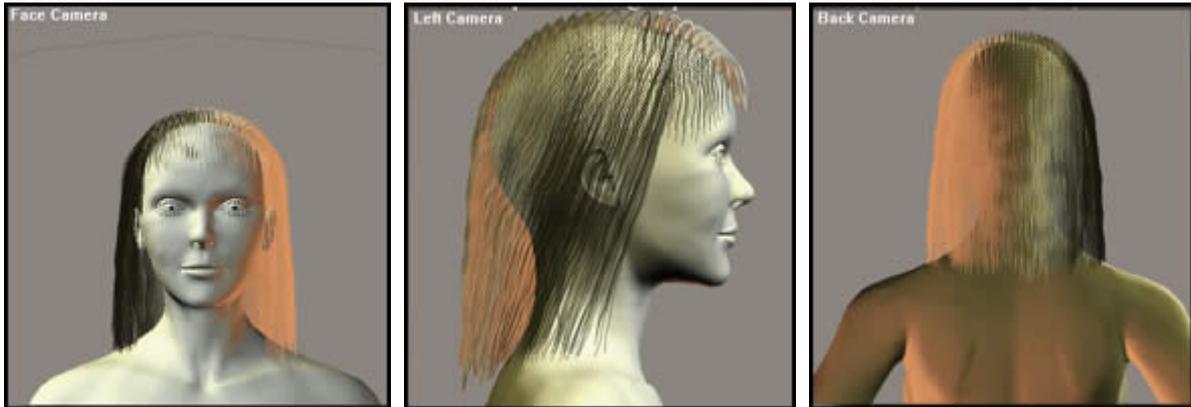
Simple Render with Hair Strands Added

I added hair strands to the bottom row before I rendered it in draft mode to see what it would look like. I did not take it to the material room. If you look at how the skull cap was segmented, the number of strands added are shown in the box below. These are only an example to see if the number should be increased or decreased.

|	
Bangs (2)	300
Above Ear (2)	1000
Lengthwise Behind Ear (2)	800
Back of Head (1)	1000

Hints on Creating Hair in Poser 5 – part 2

This is the second *Hints Tutorial* Each time I finish one I can actually measure how much I have learnt. Yes, I can even see where I could have done previous things differently and better. But, if I waited until I was "Perfect" Ha! Ha! I would wait forever. So here goes four more hints. These are based on the Straight Haired Template I created in the first Hints section [aRtBee; previous chapter] These three styles are somewhat different. I have "cut" one of the hair groups, and I will describe the differences in shortening or lengthening hair; and I have curled other sections of hair by varying amounts.

Hint #3 How To or Not To "Cut Hair"

There are various ways to lengthen or shorten hair in Poser 5. Some work better than others. I will describe two ways here. For the first hair style I wanted to shorten the two hair groups over the ears. The first method I tried was just changing the length of the **Grow Hairs** of the whole group. I changed the **Hair Length** from 0.8000 to 0.2000. Notice the hairs at the top, marqueed by the red box. Before I did this, the "roundish hills" were of uniform height. When rendered the figure, the swatch of hair looked like it had been mowed shorter than the rest by a run-away mower. What I found interesting is that the effect was not apparent until I changed the length of the hair on both sides of the head.
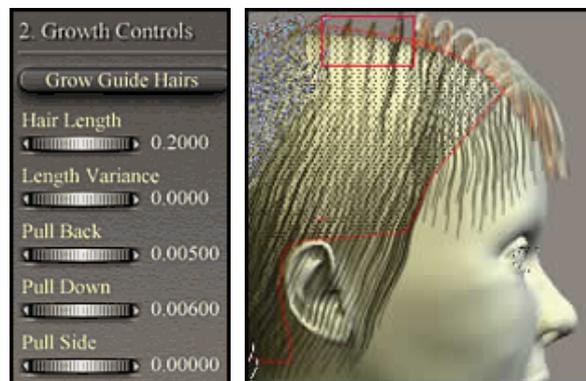
The next method I tried which worked beautifully, except for a minor problem of two left over hair pieces on one side, which in this case was not important, was to use the shortening and lengthening dial in the **Styling Tool Menu.** I will be referring to this slider a lot in my next tutorial. Notice how the hair on the top of her head is uniform.
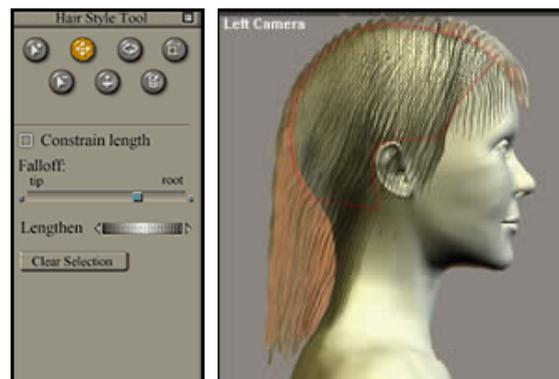
[aRtBee: as noted earlier, the hair is divided into elements as set by the Verts per hair parameter. When you shorten the hair using the Hair Length parameter, the lengths of all elements will change accordingly and the hairs will bend and curl in a more (or less) detailed way **over its entire length**. This is what happened in the first way of cutting the hair, Paula encountered effects at the root.

When you alter the length using the Lengthen dial, the change is either made
- From the root to the falloff point, when the Constrain length option is checked
- From the falloff point to the tip, when the Constrain length option is unchecked.

Paula's case is the latter, which explains why there she encountered no effects at the hair root using this way of cutting hair.]

Hint # 4

In this hint, I will show how I took the straight haired template and, by cutting and styling the hair a little, made my first straight hair style. I used the **Translate Hairs Tool** for the majority of my styling. First, I selected the hair (group 3 on one side and group 4 on the other).Using the tool, I pushed the hair toward the back of the ear on both sides of the head. If I missed a stray hair, I turned the head to the Face Camera position so I could see the yellow nodes, selected the hair in question, and then with the **Hair Remover Tool** eliminated the other nodes before I used the **Translate Hairs Tool** to push the stray hairs into place. Then I **Cleared the Selection.** Where I to use this hair style on a model, I would probably curl the bottom under. But I will do that in hint #6 so I won't repeat myself. For my test renders, I kept the population of hairs in all the **Hair Growth Sections** at about 1,000.
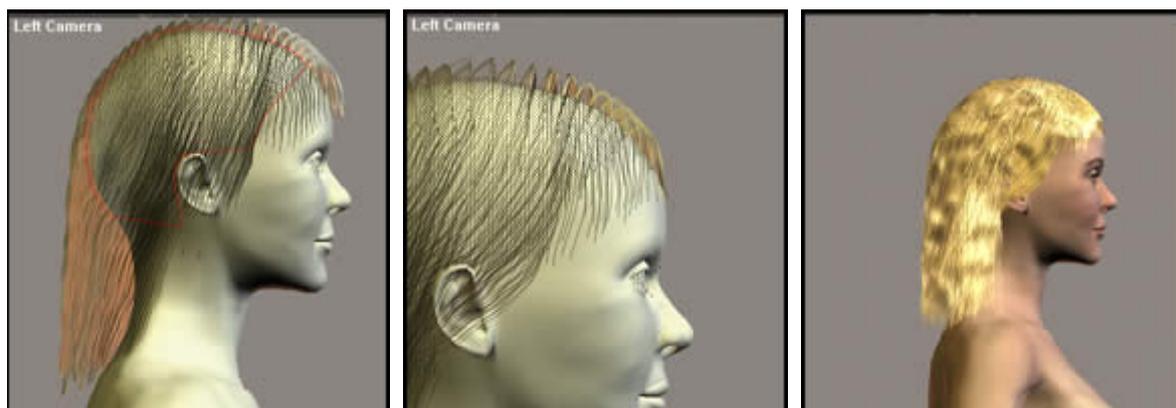

Hint # 5

This hint will show how I changed the hair style by making it slightly curly. This is really simple to do. All you do is manipulate the **Kink Strength** dial. I varied the strength from 20 to 15 on the various parts of the head. The below illustrations will show how this looked differed from the above one. The first illustration just shows the importance of often having to manipulate the position of **Guide Hairs** one at a time or a few at a time. Again, here I used the **Translate Hair Tool.**
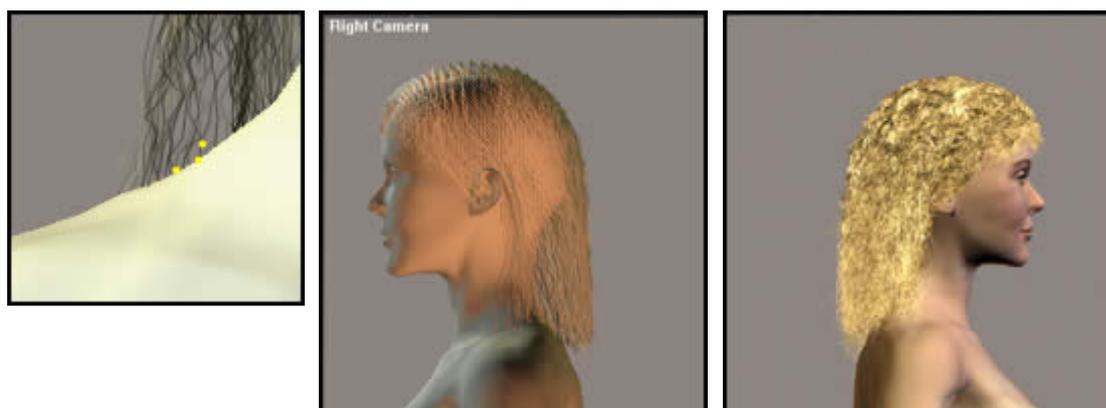
Hint # 6

In this hint I increased the curl as well as turned under the bottom of the hair using the **Curl Hairs Tool.** The first dials I changed were those involved with setting the **Kink** parameters. Then with the **Translate Hairs Tool**, I separated the hair on the side of her head. This hair was the hair that had originally been placed over the ears and then cut. I also elongated, hair by hair some of the bangs that were nearest to the side of her face. I used the same tool.
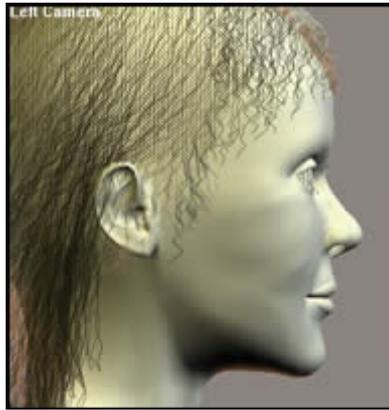
The next step is the newest one. For this I used the **Curl Hairs Tool.** What is important to note is the direction of the red arrows. With the head facing front, I moved the tool in the specified directions so that the hair would curl under *toward* the face. In the back, the direction was toward the top of the head for the hair to curl under.
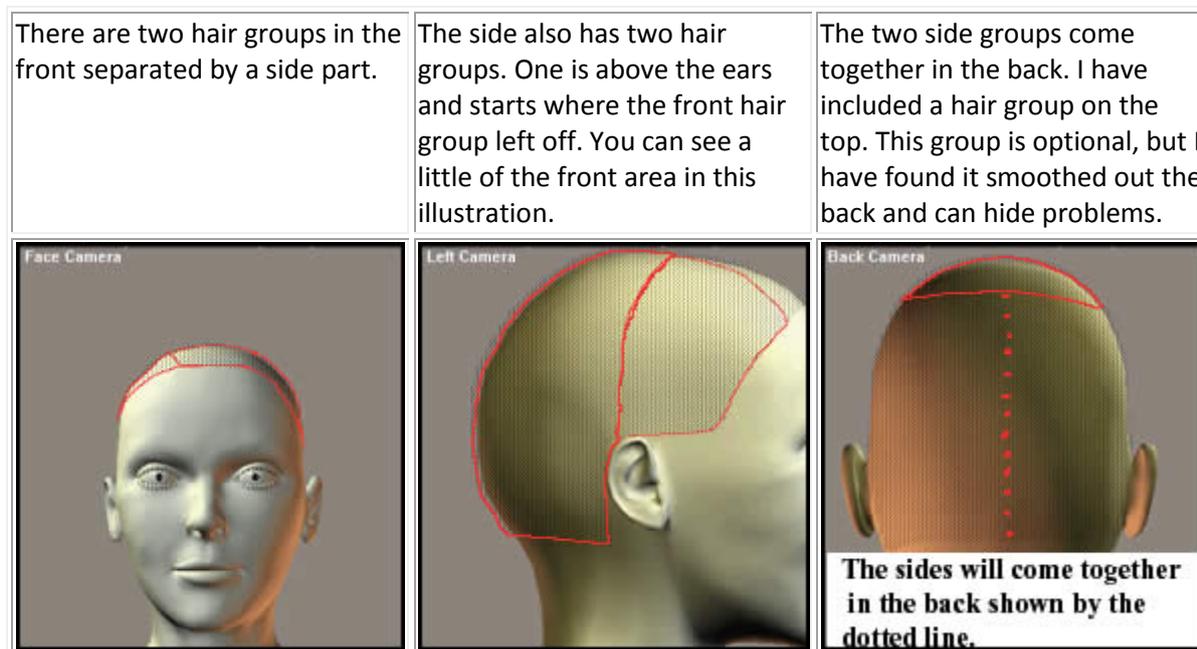
Hints on Creating Hair in Poser 5 – part 3

In this Hints # 3, I'll be dealing with various aspects of creating free-flowing hair with a side part. Along the way, I found out a lot more about a number of the tools and techniques of the Hair Room. The more I use it, the more I see its amazing power and the more fun it is.

Hint #7

In this hint, I'll describe how I set up the hair. This is a short hint. I used this template for the three styles I'll show in this *Hints Tutorial.* Again, I broke up the hair into 7 parts. However, this template differed from the first 7 part template.

There are two hair groups in the front separated by a side part.	The side also has two hair groups. One is above the ears and starts where the front hair group left off. You can see a little of the front area in this illustration.	The two side groups come together in the back. I have included a hair group on the top. This group is optional, but I have found it smoothed out the back and can hide problems.

The sides will come together in the back shown by the dotted line. |

Hint # 8

Initially I decided to style this hair without changing any of the **Growth Controls** except for **Hair Length.** I immediately started to use the **Styling Tools,** but when I went to supplement them by changing a setting in the **Growth Controls,** instead of complementing what I had done, I eradicated what I had done using the **Styling Tools.** One can use them together, but one must be aware that the styling one has accomplished with the **Styling Tools** will change and not in the expected manner. For example, I had bent down some hair with the **Translate Tool.** I went to bend it more with the **Pull Down Growth Control.** Instead of bending down further, it resumed the position it had had *before* I had used the **Translate Tool.** I will list those numbers I eventually changed from their default settings in the **Growth Controls**.

Growth Controls	Sides Above the Ears	Sides Meeting at the Back	Back Top
Hair Length	0.6500	0.6500	0.6500
Pull Back	0.00070	0.00500	0.00500
Pull Down	0.00175	0.00500	0.00500

[aRtBee: indeed be aware that any action in the panel 2 Growth Controls resets all results from the styling via the Hair Style Tool palette. Good to know when you do want to rest as there is no other way to accomplish that, but bad news when you want to alter Hair Length of your Pull settings after the detailed styling.]

Now I was ready to just use the **Styling Tools**. I mainly used the **Translate Tool** in conjunction with the **Falloff Slider** and the **Constrain Length**. (These pictures below do not show any changes made in the **Growth Control Tools**.)

Row one shows the hair being bent with the **Translate Tool.** It is important in this stage to keep the hair at a constant length and move it from near to the roots. If you do not keep the hair at a constant length, it will not have the nice wave at the top. You want to section it off in small sections from bottom to top as shown in the pictures.
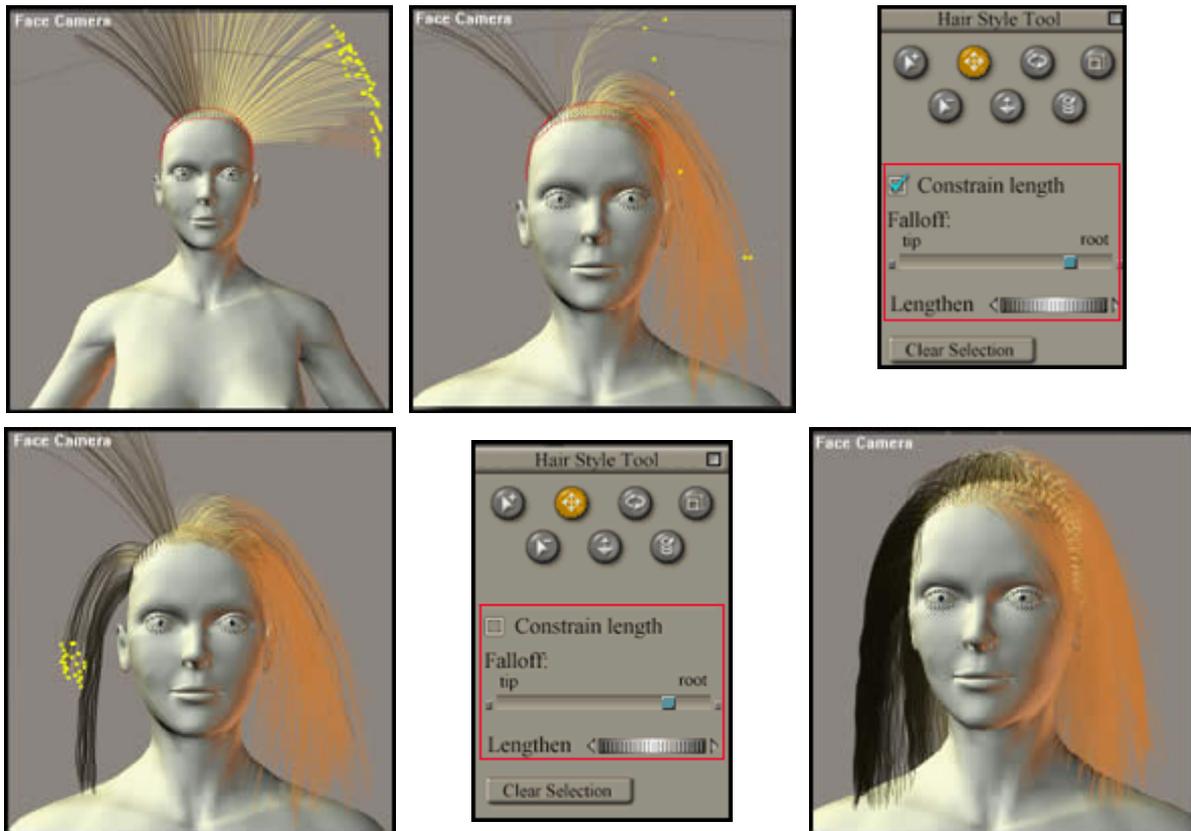
The bottom row shows **Hair Group** with the **Yellow nodes.** Now is the time to remove the **Constrain Length** and with the **Lengthen Dial** bring the hair to the same length as the rest of the hair. I used the **Lengthen Dial** instead of increasing the hair length with the **Translate Tool** so I could keep the waves on top. Otherwise I could have affected them by flattening them out since I would have been basically pulling on the hair.

[aRtBee: again, when the Constrain option is unchecked you will alter the distance between the hair falloff point and the tip, while keeping the distance between the root and falloff point intact.]
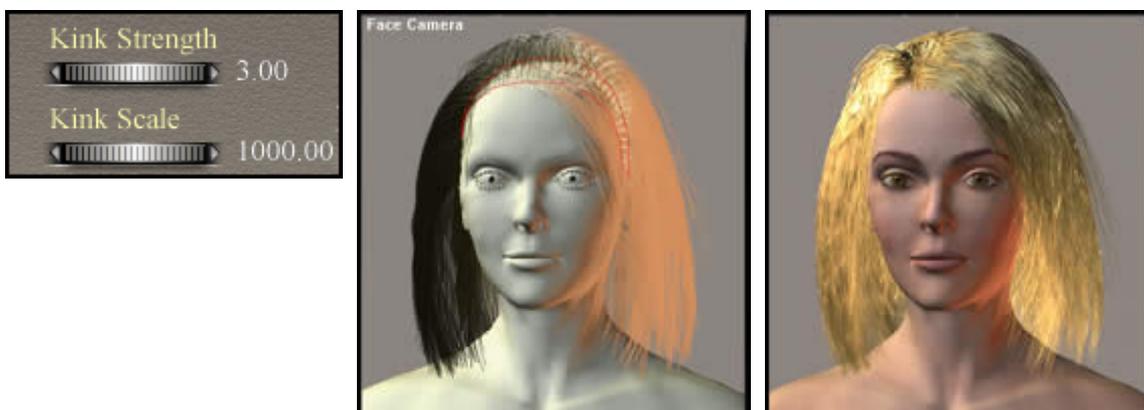
I, then, took the **Curl Hairs Tool** and bent the ends under as I had done in an earlier tutorial. See *Hint #6* in the proceeding tutorial. This section involves two hair styles because before I curled it, I added some kink to it. I didn't change the **Kink Strength** from the default, only the **Kink Scale**. I think it gave it a little more body and ability to curl under better without appearing too kinky.

This last free flowing long haired style will involve a few *Hint sections*. To lengthen the hair, I used the **Lengthen Slider** in the **Style Tools Menu.** I highlighted each **Hair Group, and** then with the **Lengthen Slider** pulled downward until I had a length I was satisfied with.
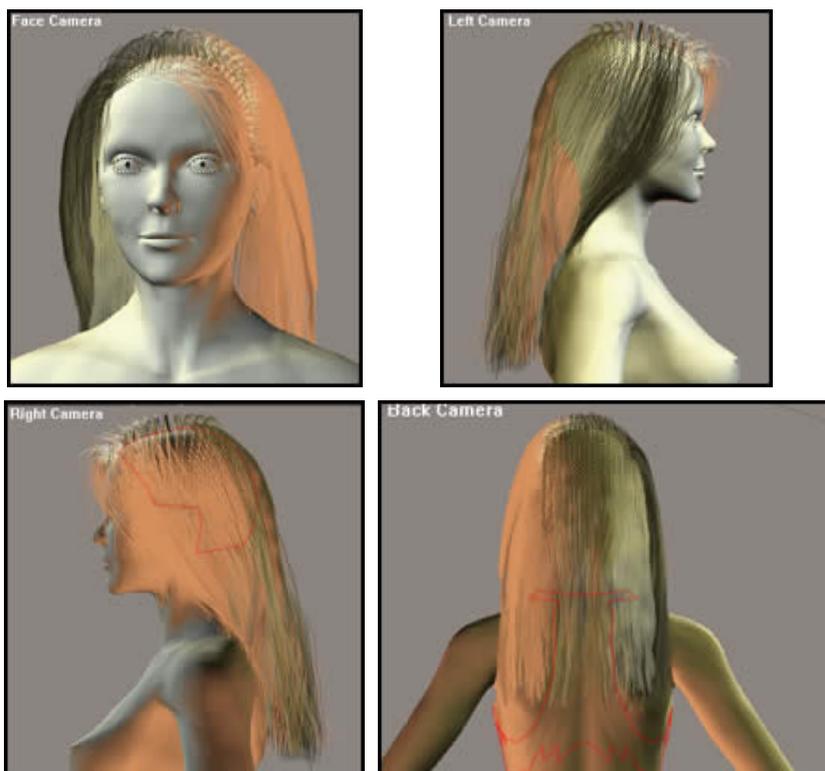

Hint # 9

This hint will explain how I was able to smoothly draw back the hair so it would fall over her shoulders. The tool I used was the **Translate Tool.** Using a side view, I selected the hairs I needed, in this case the two **Hair Groups** nearest her face on either side. These were the front group and the group above the ears on each side respectively. I pulled the hair back following the red arrows. (See below).The **Falloff Slider** was set so that the action started near the *root* of the hair. However, notice the hair circled in blue. All the hair will go straight back. To correct this, I changed the **Falloff Slider** so that it was near the tip and then the hair strands bent into place. See step 2.

Step 1
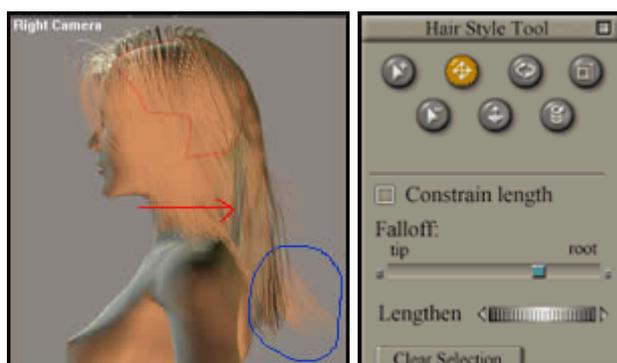
Step 2
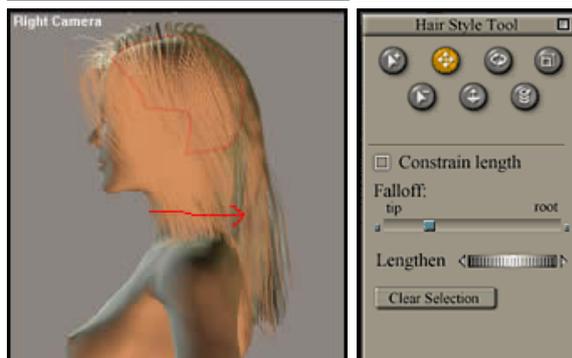
[aRtBee: actually this hint is to think and work like a real-life hair stylist, and to work your way from the root down to the tip. So, set the slider to the right, do some styling, move the slider to the left a bit, more styling, and so on till you've reached the tip end.]

Hint #10

When I got ready to try a render, I set the number of hairs in each **Hair Group** to be 1,000. However, I noticed many "stray hairs." I found a number of the **Guide Hairs** and fixed them, but I was still left with too many stray hairs. So, with some of the **Hair Groups**, I cut the number of hairs to 800.

1,000 Hairs   **800 Hairs**
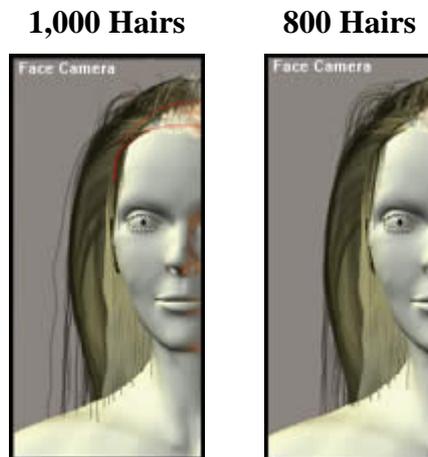
I then did a quick render. Once again, this would not be a final product and I did not take it into the material room.

[aRtBee: as noted earlier, my recommendation is to set the Hair Density the same for all groups on the same body part. As groups may vary in size, the amount of hairs per group as such might not give the most satisfying results.]

Hints on Creating Hair in Poser 5 – part 4

This hair style is totally different than the others I have created. I will give an example of the final product first, and then show how to create it. Again, I render it directly without any change in materials or lighting from the default settling in Poser. All I do is click on *Render>Render.*
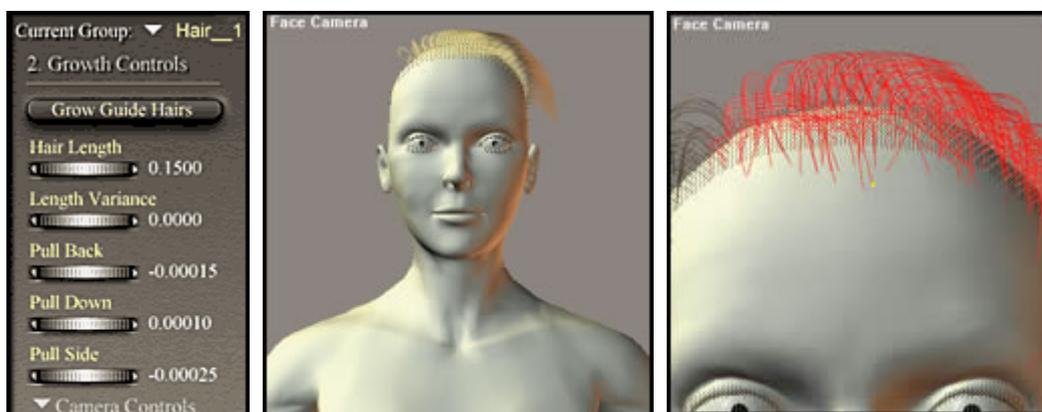

Hint #11

For this hair style, I created 11 **Hair Groups.** Aside from keeping track of the **Hair Groups** which you can by renaming them, it isn't harder to deal with more. In fact, it is easier because you can vary the lengths and the direction of the hairs from the start. This is important for a short hair style.
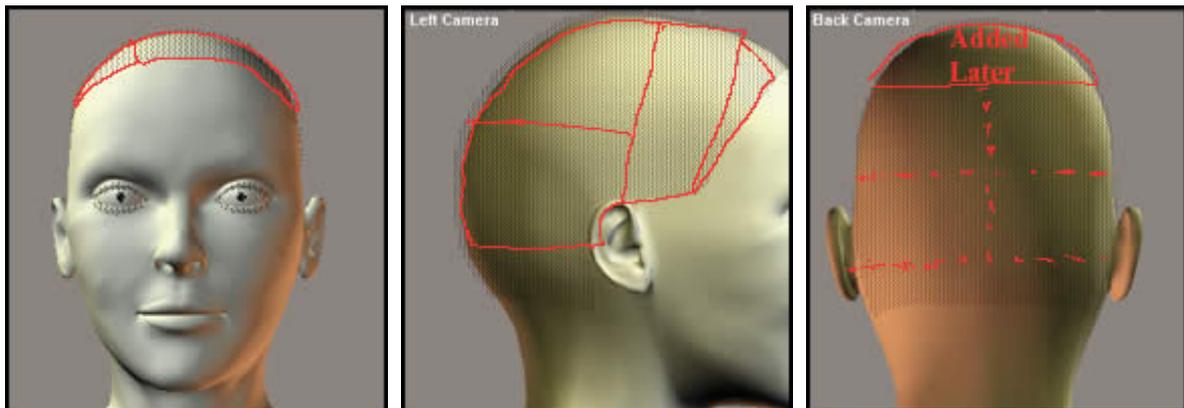
The hair in the two front groups and the side group nearest to the face (2, 1 on each side of the head), will be very short and turn toward the face. The length of the **Guide Hairs** in all **Hair Growth** sections was 0.1500 [aRtBee: feet that is. You can use 4,5cm instead.]

Hint #12

This is the first time I used the **Scale Hairs Tool** to create hair styles. If you look at the middle picture above, you will notice the tail of hair hanging over her shoulder. For this style, that tail was divided

into small sections and bent . To blend it, I used the **Scale Hairs Tool**, shown in the first picture below, because it would shorten some of the strand in one section as I bent it. I alternated between using the **Scale Hairs Tool** and the **Translate Hairs Tool**. But it is important to **Constrain** the length and only work from the **tip** of the strand. This method insures that the hair will not be pulled flat on top.

Hint #13

The trick to selecting a few hairs is to first zoom in on the image. Then to using the **Selection Tool** select a few hairs**.** Then, using the **Remove Hairs Tool**, remove all the rest. It is not hard to select 1 **Guide Hair.**

[aRtBee: note that you're not removing hairs from the head, but from the selection to-be-styled only.]
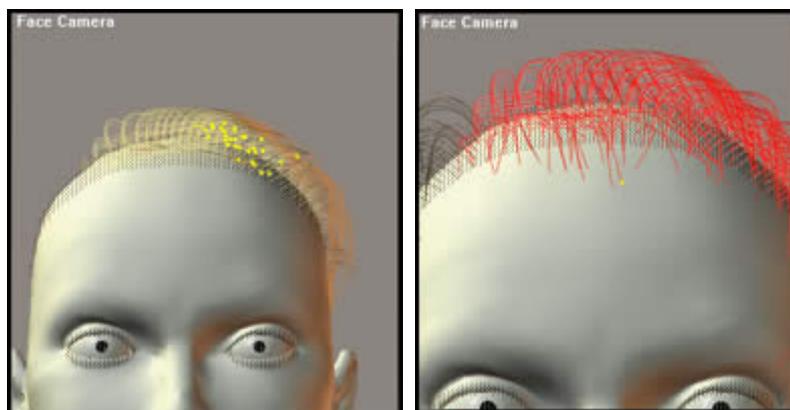

Work from the lowest part of the hair toward the top. Next add the hair on the sides closest to the face. The length of the **Guide Hairs** should be 0.1500 [aRtBee: or 4.5cm that is, the value depends on your Poser units settings]. The hair should look like the pictures below.

The positioning of the hair above the ear is illustrated by the pictures below. Before using any of the styling tools, I set the **Growth Controls** as illustrated. To shorten the hair in front of the ear, I selected it, and used the shortening/lengthening dial on the **Styling Tools** menu. As it turned out, I later lengthened them and blended them with the front section.
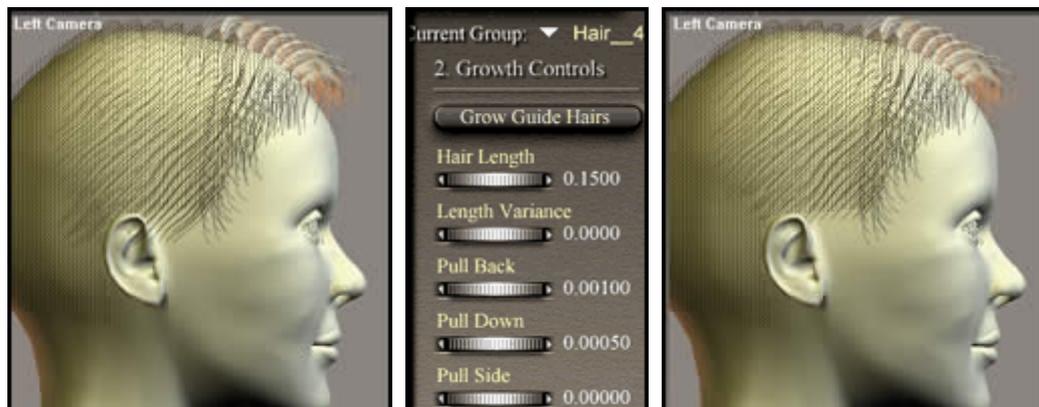
The next section I added was the one on the same level but abutting the back of the head (7). To correct the tail, I used the Translate Hairs Tool as described many times previously. I worked in small sections with a few hairs at a time. The ragged appearance of the bottom of this hair line is not critical because the lower level will blend into it. Theoretically, I should have worked from the lower to the higher level as I did with the front of the hair, but, there is another way to smooth out the back if necessary and I will address this at the end of this discussion. Notice that the settings are the same for both side Growth Hair sections.
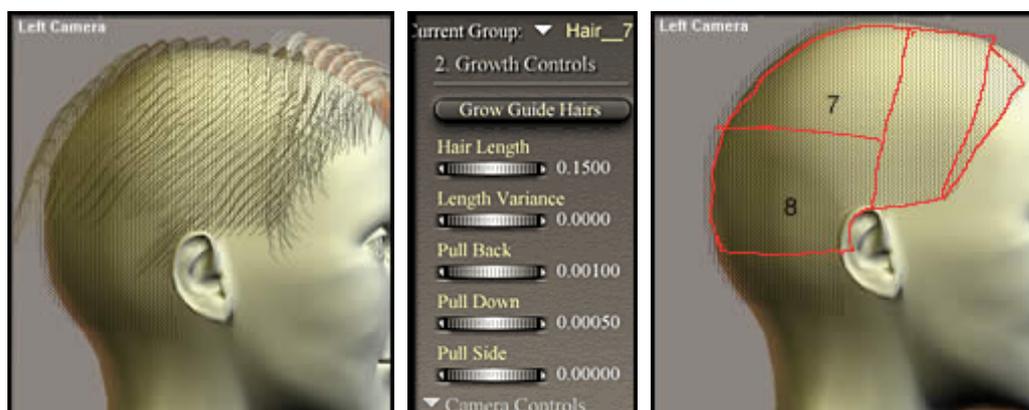
The bottom section of hair (8) behaved in the same manner as did section 7. The settings were the same and the manner of working with them were the same. The major difference was that the **Guide Hairs** at the nape of the neck had often to be isolated and straightened and made the same length.
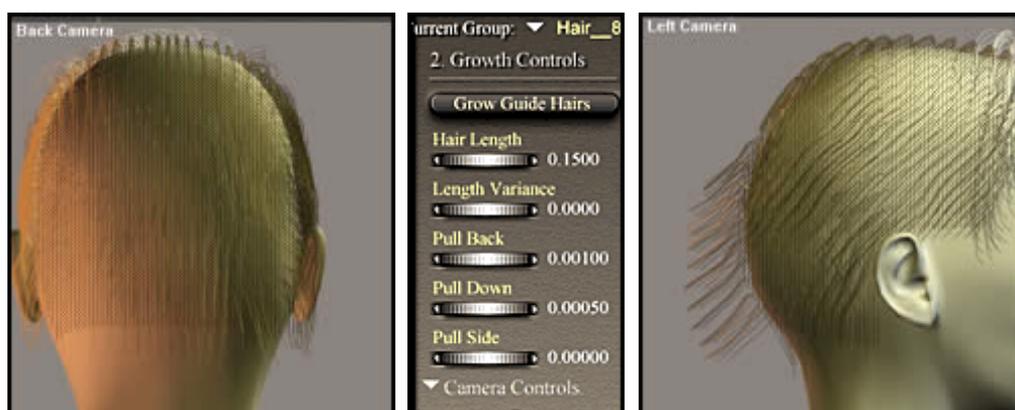
Hint #14

To straighten a hair, I used the **Translate Hairs Tool** with **Constrain Length** on. Then, I would remove the **Constrain Length** and with the **Translate Hairs Tool** push it back a little. If I had a number of hairs or I didn't want to change how the hair was positioned (flat or puffy), I changed the length with the **Lengthen/Shorten Slider**. I, also, of course, could shorten or lengthen a group of hairs with the **Translate Hairs Tool**.

When I finished the hair style, I did not like the way the back looked, so I added another section of hair in the back. You will see it identified in the beginning of this tutorial as "added later." I let the hair extend in the back to just below the ears and blended it in with the **Translate Hairs Tool.**

Hint #15

The number of hairs per section is very important when rendering, especially for a short hair style. I tried a number of combinations, and I found, the fewer the better. This makes sense because if one has short thick hair, it is often thinned when it is cut so it will lie flat. Counting both sides of the head there are 11 sections in all.

Section Name	Number of Hairs Per Section
2 Front Sections	200
2 Side Sections Abutting Face	300
Back Top Section "Added Last"	500
Rest of Sections	800