实验2：虚拟化身、姿势和动作实验

1 虚拟化身

在Secondlife客户端里，打开库存（Inventry），在身体菜单项里，点击右键，创建新体型、皮肤、头发、眼睛。也可以创建新的衣服等。如下图所示。

同学自己实验创建自己喜欢的化身。

2 化身服饰

见《The Clothes Make the Avatar:Creating Your Own Clothing》，模板资源在实验 3 文件夹。

3 化身动作和姿势

见《Making a Statement with Poses,Animations, and Gestures》，软件工具在实验 3 文件夹。

15

The Clothes Make the Avatar: Creating Your Own Clothing

In This Chapter

- Altering clothes
- Making clothes from scratch
- Designing accessories
- Adding prims to make clothing more realistic
- Hairdos from scratch

Half the fun of Second Life is dressing up your avatar. In a world where everything fits and you can be as outrageous as you want to be, why not learn to make your own clothes to express your own sense of crazy style? Plus, maybe you'll make something so unique that others want to wear it and — even better — be willing to pay you for it.

Because of the flexibility of appearance in Second Life, folks around you will "read" your avatar as an expression of your personality even more than they might assume things about you based on the fashion you choose in real life. So why not go all out and really express yourself? There's no better way than to make your own clothing. In this chapter, we walk you through making small adjustments to clothes you might have purchased from others, making clothing from scratch in Adobe Photoshop, crafting accessories (such as hats and flirty skirts), and even how to create a great hairdo. Get ready to go couture!

Haute Couture: Using Adobe Photoshop to Make Your Own Clothes

You can use a less-expensive graphics programs to create clothing, but Adobe Photoshop is what the best designers in Second Life swear by. It's a pricey program (US$75 – US$800) but worth every penny if you want to become a serious fashion designer in SL. However, any graphics editor that supports Targa file formats (TGA files) and can handle layers in an image will work. *Targa* is widely used as the standard graphics file format for high-end graphics output.

For this section, we'll assume you're fairly friendly with Photoshop. If not, go grab a copy of *Photoshop CS3 For Dummies* by Peter Bauer (Wiley Publishing, Inc.). If you use another graphics editing program, the tools in Photoshop might prove similar enough to what you use that you can still follow along.

To make clothes in Second Life, start by downloading the body templates on top of which you "paint" clothing. To download the free body templates, follow these steps:

1. **Aim your Web browser to `www.secondlife.com`.**
2. **Click the Downloads link in the bottom-left corner of the screen.**
3. **Scroll down the page and then click the Templates link in the Free Downloads section.**
4. **Click the Entire Template Collection in One Download link to download all the templates.**

   You need all these templates to show you where on your avatar's body your clothing will appear.

   You download these templates as Zip files. If you decide to become serious about making clothing, you'll want to save these Zip files in an easy-to-find place because you'll be using these them often.

After you have all the body templates at your disposal, you're ready to start making your own clothes.

Creating a custom t-shirt

Get started creating your own clothing with an easy project: a t-shirt. This will cost $L10 to upload the image we're going to make. Who doesn't love a pithy t-shirt? Rather than starting from scratch, start with a template:

1. **Go to Robin Wood's great SL tutorial Web site to download her premade t-shirt template:**

   ```
   http://www.robinwood.com/Catalog/Technical/SL-Tuts/SLPages/RSWTShirt
   Start.html
   ```

Look for the Click Here to Download link and download the PSD file.

2. **Save and unzip the file.**

   If you don't have a program installed to open Zip files, go to `www.winzip.com` and download the free version of WinZip.

3. **Open `RSW T-shirt.psd` in Photoshop.**

   You see a template like the one in Figure 15-1.

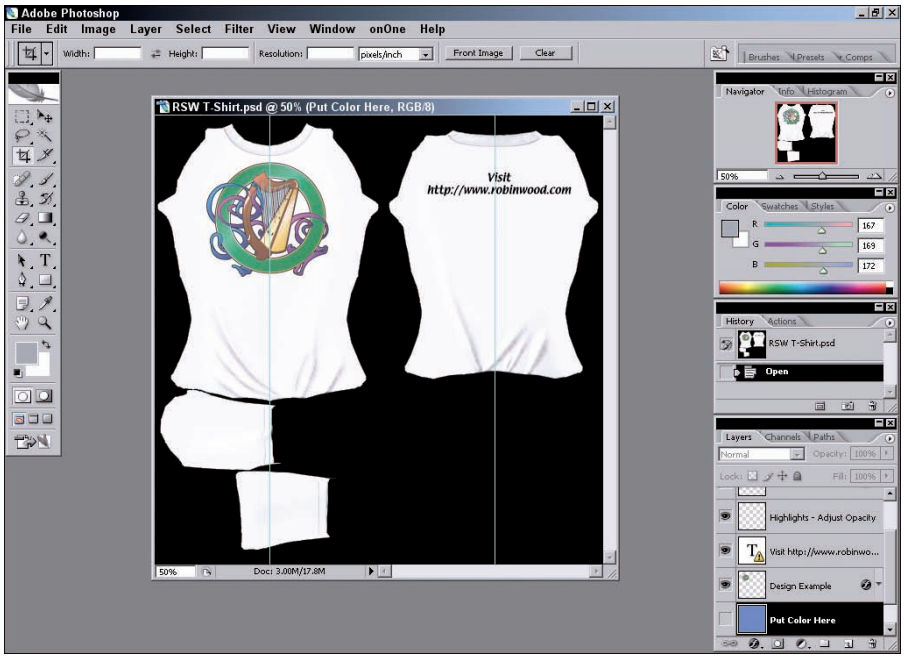

Figure 15-1: These templates can be very helpful.

4. **Be sure to have your Photoshop Layers tool open by clicking View➪ Layers.**

   You'll see that the template has seven layers. They are, from the bottom: Texture, Put Color Here, Design Example, a Text Layer, Highlights, UVs, and Cover.

5. **Hide the Cover layer by clicking its eye icon.**

   This reveals the background of the template.

6. **Decide what color you want your t-shirt to be.**

   The second layer from the bottom — the Put Color Here layer — determines the color of the t-shirt. You need to make the layer visible. You'll see when you make the eye icon visible on the layer that the

whole template turns blue. Use your Bucket tool to paint this whole layer with the background color of your shirt. The shirt in this example will be orange. See Figure 15-2 to see this layer painted.

7. **Choose a design for your t-shirt.**

   The Design Example layer is the design for the front of our example t-shirt. You can put whatever design you want on the front of your shirt, but be sure it has enough contrast with the background color of your shirt so that it's visible, as shown in Figure 15-3. You can also add something to the back of the shirt or hide the layer with that text on it. You may want to save the shirt in a variety of colors to try on later.

   Think about your design in terms of how it will wrap around the avatar anatomy. The chest area (okay, cleavage) on female avatars tends to eat the design on the front of a shirt as it wraps around her shape. You might want to make a male version with the image on the front and a female version with your image on the back.

8. **Turn the top layer, the Cover layer, back on (by clicking the eye icon on the layers) and black out the background of the file (by turning the eye icon off on the layers).**

9. **Save your file as a Targa (`.tga`) file in 32-bit resolution using the Save As function under the file menu.**

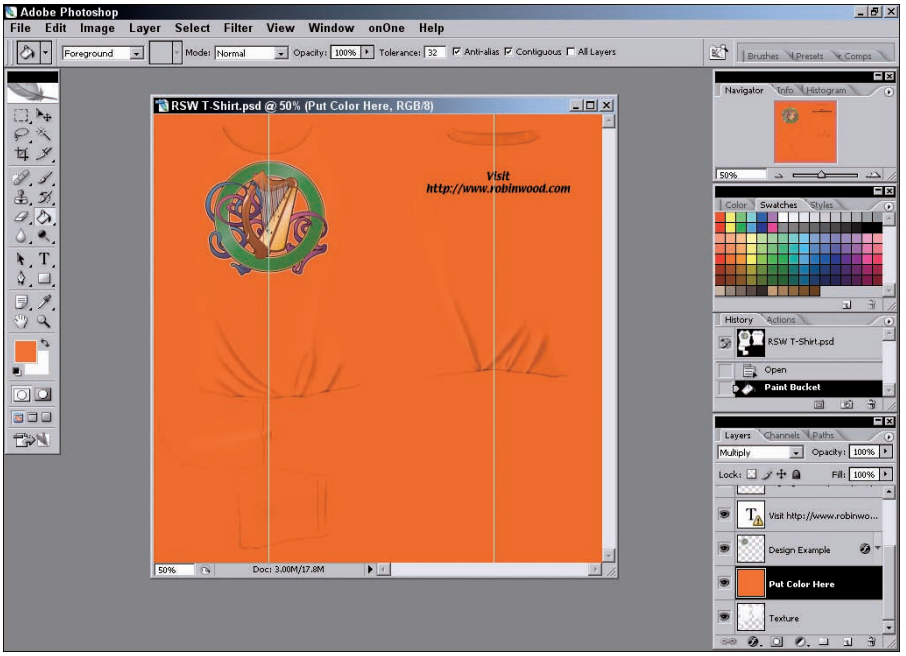

Figure 15-2: Here's the shirt template with orange added.

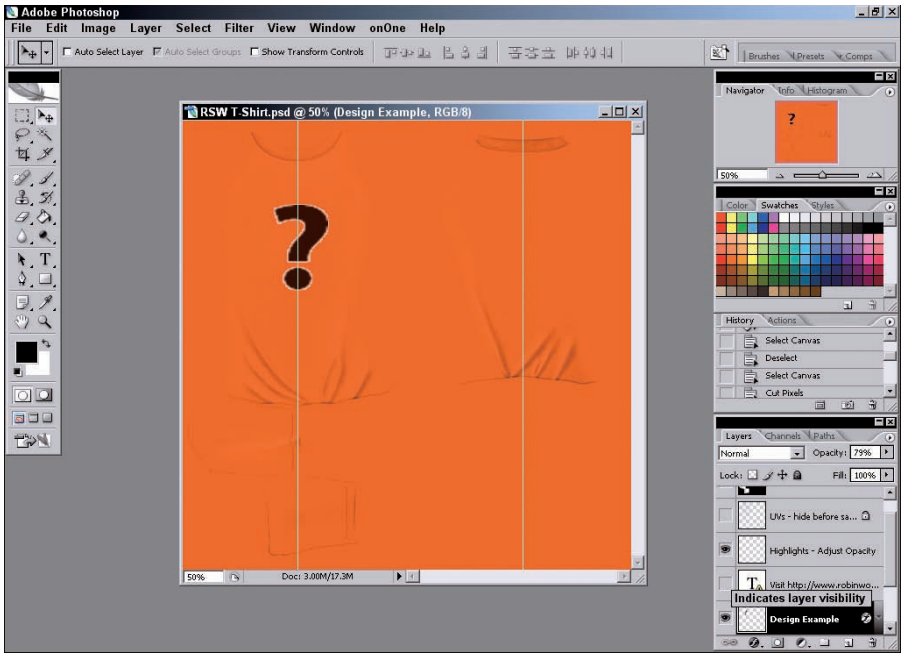

Figure 15-3: Choose a design that shows up well on the color of your t-shirt.

Don't bother to click the box to compress it. The file won't be large anyway.

10. **In Second Life, choose File➪Upload Image and navigate to your saved t-shirt Targa file.**
11. **From the Preview Image As drop-down menu of the dialog box, choose Female Upper Body or Male Upper Body (depending on the version of your t-shirt) to see how the t-shirt will look (as shown in Figure 15-4) before you pay the L$10 to upload the image, and then close the dialog box.**
12. **Open your Appearance menu and select the Shirt tab.**
13. **Take off the shirt you're wearing by clicking the Take Off button. Then click the Create New Shirt button.**
14. **Click the Fabric box and navigate to the shirt texture you just uploaded, as shown in Figure 15-5.**

You might want to choose a private place to do this because you'll be momentarily topless. Even though avatars without custom skins look like Barbie dolls, it can still be embarrassing to be caught topless, especially as a woman.

Figure 15-4: Save yourself the money by previewing how your shirt will look before you pay to upload the file.

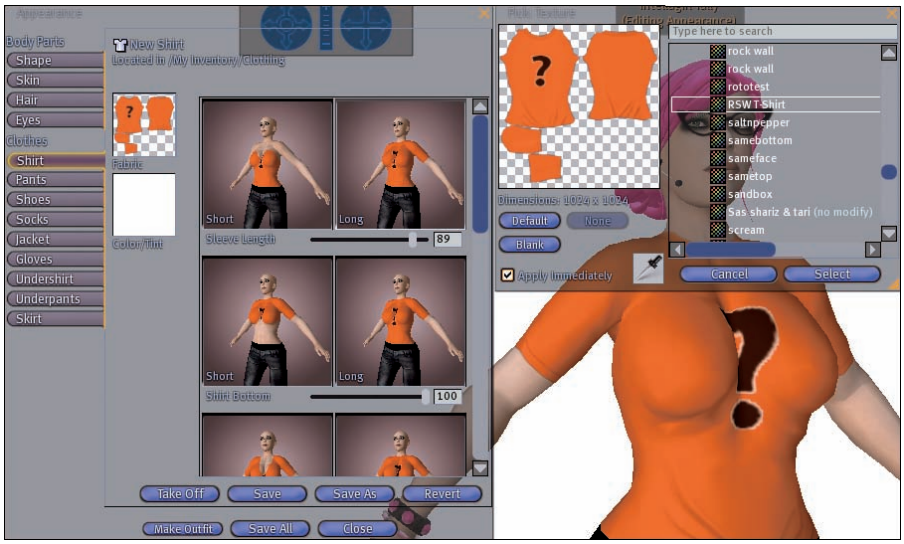

Figure 15-5: You might want to choose a private place to do this since you'll be momentarily topless.

15. **Adjust the t-shirt by using the options on the Shirt menu until you like how it looks. Adjust its wrinkles, length, and so on until it's just how you want.**

16. **Click Save.**

If you want to save the t-shirt so you can give away copies, simply right-click it in your inventory, choose Copy, right-click again in your inventory, and choose Paste. If you selected that it's transferable, copyable, or modifiable, the folks you give it to will be able to make changes and give away copies as well. For more information about the properties of objects, check out Chapter 13.

Making clothes from scratch: A baseball jersey

After you get a bit of experience using clothing templates in Photoshop, make something from scratch. Baseball shirts with contrasting raglan sleeves are perfect for men or women and offer something a little different from the standard t-shirt. Here's how to make one:

1. **In Photoshop, open the upper-body template.**

   Use the template from the Second Life Web site, as we describe in the earlier section, "Haute Couture: Using Adobe Photoshop to Make Your Own Clothes."

   For more detailed templates with better marks for tank top lines, waistlines, and so on, go to Robin Wood's Web site and download her body templates:

   ```
   www.robinwood.com/Catalog/Technical/SL-Tuts/SLTutSet.html
   ```

   They're a bit more complicated, but after you get used to creating clothes, you'll be grateful for the additional guidelines they offer.

2. **Make all the layers on the sample images invisible by clicking the eye icons on the layer tool.**

   The Second Life body templates have sample images on layers. You'll want to make all those layers invisible so you're looking at just the base template. It should look like Figure 15-6. The guidelines on the template will help you line up straps, stripes, and waistlines.

3. **Create a new layer by clicking Layer>New Layer (call it Layer 1) on top of all the existing layers.**

   This is the layer you paint on to create the new shirt.

   It's okay to do a quick Google search for baseball shirts if you need design inspiration. Just remember that you shouldn't re-create any copyrighted material in Second Life — your shirt needs to be an original design.

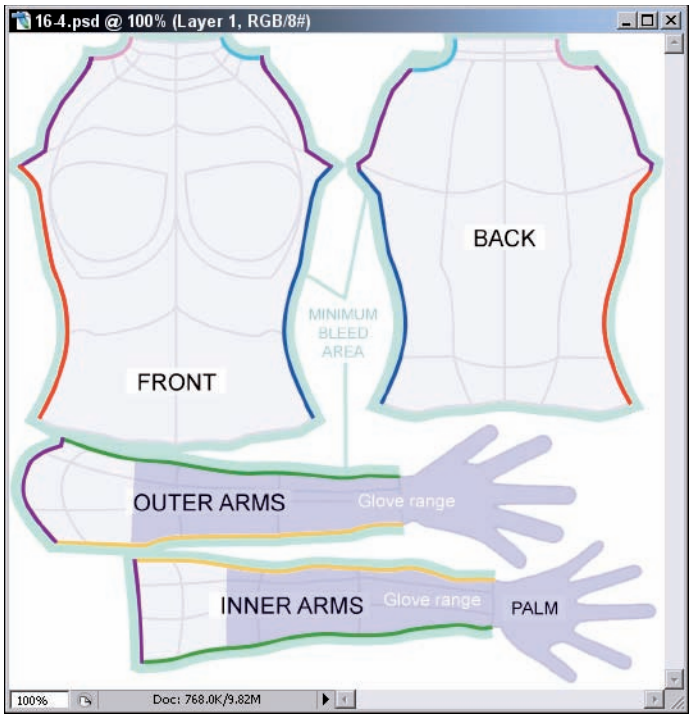

Figure 15-6: The guidelines on the template will help you line up straps, stripes, and waistlines.

4. **Start with the body of the shirt by making sure that the only image layers visible are the bottom-most layer — called *Background* — and your new layer called Layer 1.**

5. **On this top empty layer, using whatever Photoshop tool you like best, outline the body of the shirt with the color you want.**

   Be sure to fill in enough to cover the Minimum Bleed Area on the template, which is the pale-green outline around the body. You'll also want to choose where the shirt neckline will stop by painting only up to the second rounded line around the neck. In Figure 15-7, you can see the outline that we created for the body of the shirt. The edges don't have to be perfect because they fall into the bleed area. We tend to use the brush tool set to a size 10 or so brush.

6. **Fill in the body of the shirt with the same color. We use the Bucket tool.**

7. **To create the contrasting sleeves of the shirt, create a new layer on top of your existing layer called Layer 2.**

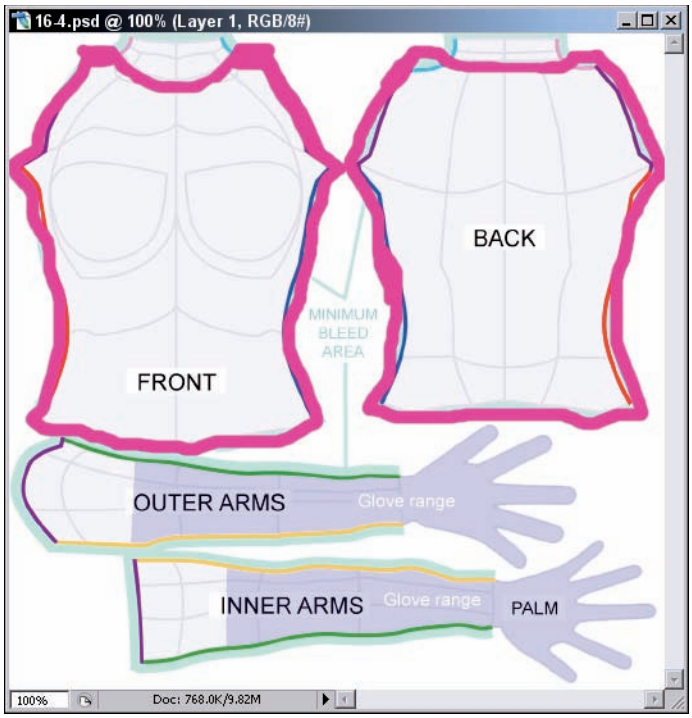

Figure 15-7: The edges don't have to be perfect since they fall into the bleed area.

8. **Outline and fill in the arms using whatever paint tool and color you prefer.**

   Again, be sure to fill in at least to the outside of the Minimum Bleed Area. Be sure to extend the sleeve fabric a bit past the wrist so you can use the appearance editor to crop them to a uniform length later. Check out Figure 15-8 to see what it should look like after your sleeves are filled in.

9. **After you have the basic shape, you can start adding some realism to your shirt by using shadows and so on.**

   Our example shirt has a contrasting neck band, some small gray stitching along the neck and wrists, and a logo on the back, but you can add whatever you'd like with the Photoshop tools you're most familiar with. See Figure 15-9 to see the finished shirt texture.

   When you add effects, use a new layer each time. This will make it easy to undo elements of the clothing that you decide you don't like.

Figure 15-8: Be sure to extend the sleeve fabric a bit past the wrist so you can use the appearance editor to crop them to a uniform length later.

10. **Flatten all your visible layers (Apple +E or Ctrl +E), flatten all the layers of your shirt, and then hide the template layer so that you only see your shirt.**
11. **Right-click the shirt's visible layer (probably Layer 2) in the Layers palette and choose Select Layer Transparency.**
12. **Press Q on your keyboard to create a quick mask (a quick mask creates an alpha layer for the background of the image, which SL will see as being transparent). Select the whole image, copy it, and paste it all into a new layer called finished shirt.**
13. **Move the finished shirt layer below Layer 2.**

    You'll have something similar to Figure 15-10.

    The black area you see now will end up as transparent in Second Life when you wear the shirt.

The *alpha layer,* that black layer that blocks out the background of the template, is handy to know about. If you want to make a keyhole shirt, put a hole in some pants, or create some other kind of open area on a piece of clothing, you'll want to be sure that the open area shows up as black on your alpha layer.

14. **Save the file as a 32-bit Targa (`.tga`) file, and you're ready to upload it into Second Life and try it on.**

    Follow Steps 9–14 in the previous "Creating a custom t-shirt" section to upload the graphic, test it, and adjust it. See Figure 15-11 to see how our finished shirt turned out.

Don't be afraid to experiment. Make lots of different versions of a piece of clothing until it's just right. Save your Photoshop files often as different versions, and use the Upload preview in Second Life to see how they look.

You can also use photographs of real clothing applied to the template for super-realistic clothing, but beware of copyright infringement.

Figure 15-9: The finished texture looks a bit like fabric laid out and ready to sew.

Figure 15-10: Be sure to move the black alpha layer below your painted layer before saving or you won't be able to see your shirt.

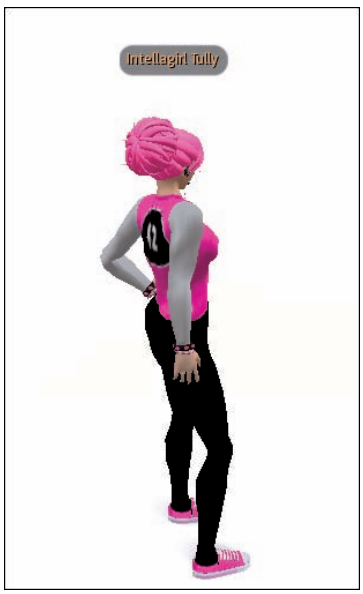

Figure 15-11: This shirt might not be high fashion, but it's an easy way to express yourself.

Editing Clothes Made by Others

In Chapter 13 we discuss setting permissions on objects. Now it's time to combine that knowledge and apply it to clothing. In this section, we just look at modifying the length and color of clothing. However, the editing possibilities are endless — as long as the maker of the clothes allows modifications.

Adjusting sleeve length

Say you bought a great shirt, but it has long sleeves, and you prefer short ones. If the maker of the shirt made it modifiable, you can easily shorten them.

You can tweak any article of clothing *as long as it's modifiable.* Here's how to check:

1. **Choose a clothing item from your Inventory by right-clicking it and choosing Properties.**

   The Inventory Item Properties dialog box appears, as shown in Figure 15-12.

   For an article of clothing to be editable, the Modify check box of the You Can section of the Properties menu must be selected (marked). If the Modify box isn't enabled, you're done — you can't edit the article of clothing.

2. **Assuming that the shirt is modifiable, close the Inventory Item Properties dialog box and keep going.**

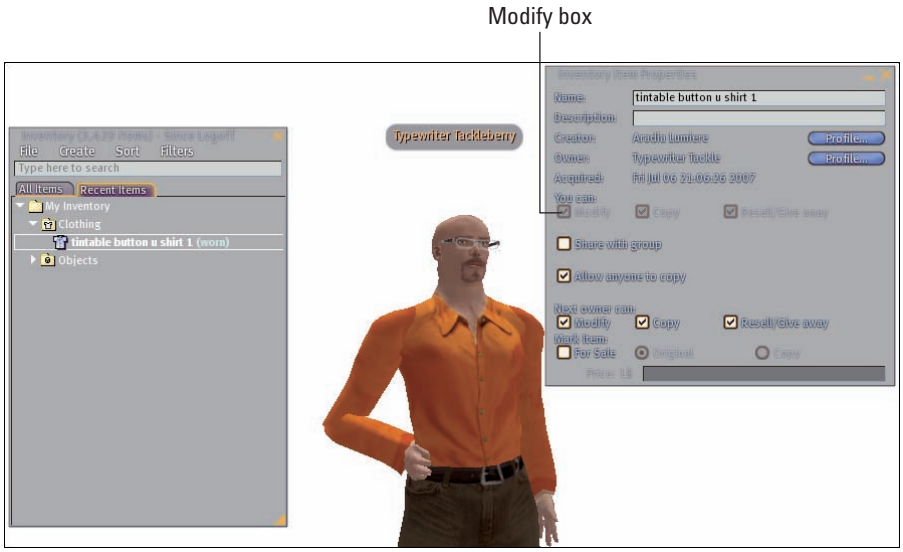

Figure 15-12: Check the properties of a piece of clothing to be sure it's modifiable.

Here's how to modify the sleeves, making long sleeves shorter:

1. **Put on the shirt:**
   a. *Right-click it in your Inventory.*
   b. *Choose Wear, as shown in Figure 15-13.*
2. **Right-click your avatar and choose Appearance from the radial menu, as shown in Figure 15-14.**
3. **From the Appearance menu, click the Shirt tab and scroll to the Sleeve Length adjustment slider, as shown in Figure 15-15.**
4. **Adjust the Sleeve Length slider to make the sleeves the desired shortened length.**

   Your shirt has shorter sleeves.
5. **Be sure to click the Save button (or agree to save when the menu asks you to) or you'll lose the changes you made to the item.**

You can take away fabric from clothing, but you can't add it. For example, if you buy a short-sleeved shirt, you can't make the sleeves longer. Likewise, if you buy shorts, you can't make them into trousers. You can, however, make long sleeves or long pants shorter — that is, as long as the clothing creator made them modifiable.

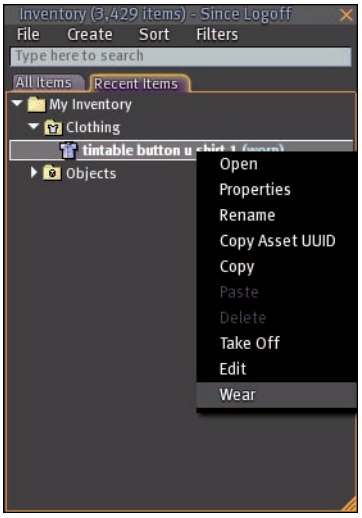

Figure 15-13: Put on the article of clothing you want to modify.

Figure 15-14: The appearance editor.

Figure 15-15: Adjusting sleeve length here.

You can also raise and lower the waistband and neckline of a shirt. If a shirt shows off too much midriff, consider making a pair of system underwear (underwear made using the Second Life menus rather than uploading a texture made outside of Second Life) to match it and making that garment as tall as possible. If the color of the shirt and the underwear match (see Figure 15-16), no one will see a seam, and you won't show anything you don't want to.

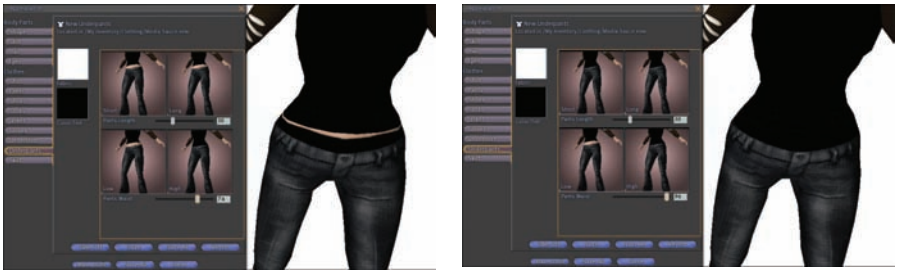

Figure 15-16: The before and after of the modified shirt.

Changing the color of a garment

Changing the color of a modifiable piece of clothing is simple. Follow these steps:

1. **Put on the shirt you want to edit by right-clicking it in your inventory and choosing Wear.**
2. **Right-click your avatar and choose Appearance from the radial menu.**
3. **In the Appearance menu, click the Shirt tab.**
4. **Click the Color/Tint box and select the desired color from the pop-up, as shown in Figure 15-17.**
5. **Click the Save button or say yes when you're asked if you want to save or you'll lose the changes you made.**

If you want to own the same piece of modifiable clothing in different colors, check the Properties menu to see whether you're allowed to copy it (refer to Figure 15-12). If you can, make a copy of it in your inventory and change the color of one. Now you have two versions of the garment, in different colors.

Changing the color won't always turn out just as you want because you're really tinting the fabric that the original garment is made of *and* combining the old color with the new color. This might result in a shade other than what you really wanted. Experiment with different shades until you like the outcome.

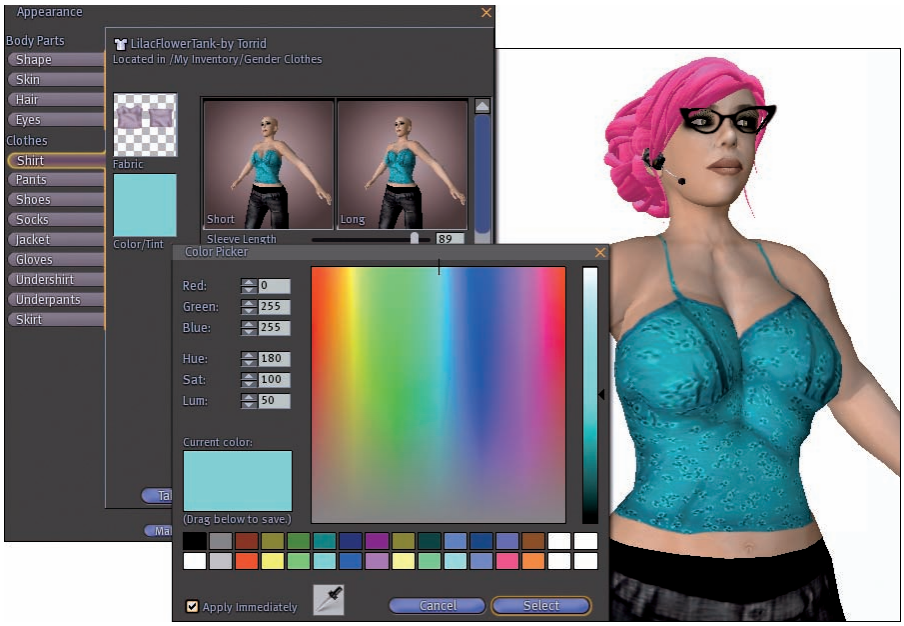

Figure 15-17: The range of colors is nearly infinite.

Creating Accessories by Using Clothing Layers

Clothing layers don't have to cover you up. With the alpha layer, you can mark areas of a template to remain clear. Because of this, creating jewelry, tattoos, and other body modifications as clothing layers is easy. In this section, we show you how to make a pearl bead necklace that you wear on an Underwear layer. You can also use this technique to create a simple tattoo. Be aware, though, that wearing such accessories on a clothing layer means you can't wear anything else on that layer, such as actual underwear.

1. **Open the Upper body template downloaded from the Second Life Web site and draw a circle, as shown in Figure 15-18.**

   We used the circle selection tool and then traced using the Stroke command.

2. **Resize the circle to the size of bead you would like (Edit>transform, scale) and copy/paste it over and over to make a necklace.**

3. **Merge the layers to put all the beads on the same layer (Cmd+E or Ctrl+E), as shown in Figure 15-19.**

   These beads are a subtle off-white color, but you can use any color you'd like.

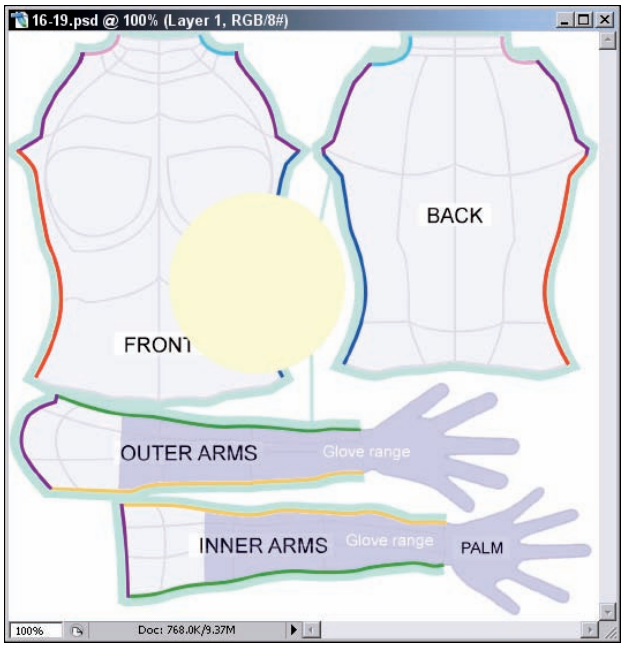

Figure 15-18: A simple circle starts off the bead design.

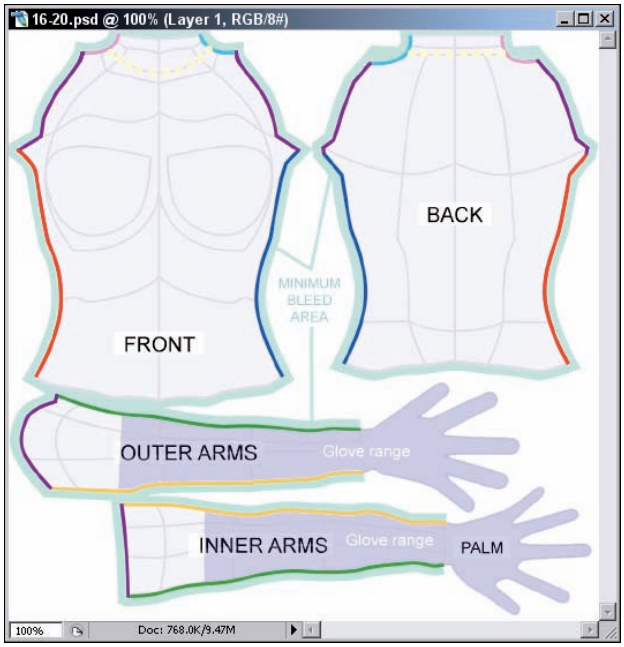

Figure 15-19: Culture your own pearls.

4. **On another layer below the beads, draw a line (using the brush tool set to a small brush) connecting them to make it look as if they're on a chain or cord, as shown in Figure 15-20.**
5. **Apply bevel/emboss (in the Layer style) to the bead layer to make the beads look rounded.**

   Adding the bevel to the layer makes the beads look round and gives them a bit of a shine; see Figure 15-20.
6. **Merge the bead and cord layer; then hide the other layers.**
7. **Press Q to create a quick mask. Then select the whole image, copy it, and paste it all into a new layer.**

   The black area you see will end up transparent in Second Life when you wear the necklace.
8. **Save the file as a 32-bit Targa (TGA) file.**

   You're ready to upload the file into Second Life and try it on.

   Follow steps in the earlier section, "Creating a custom t-shirt," to upload the graphic, test it, and adjust it.

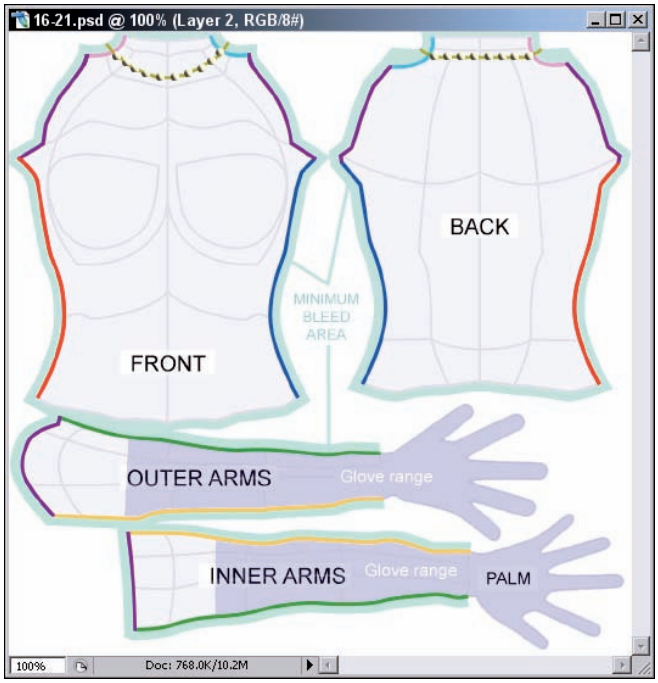

Figure 15-20: Add a bevel to the layer to make the beads look round and shiny.

9. **The finished necklace should look similar to Figure 15-21.**

   Even though this necklace is simple and without much detail, you can let your imagination run wild after you get the basics down.

Figure 15-21: This necklace is simple and without much detail, but now that you know how to make it you can let your imagination run wild.

You can use these same techniques to create tattoos, makeup, or skin details. Just use a template, paint on your tattoo or makeup (leaving the rest of the template blank with an alpha layer), and upload it.

Using Prims in Clothing

If you've seen folks wearing belts and skirts that swirl in the wind, or collars that stand up, you've seen clothing made of prims. *Prims* are the basic building blocks used to create objects in Second Life. We discuss attaching objects to your avatar in Chapter 5, and we use the same approach here. First, though, you have to build the clothing that you'll attach.

Skirts are perhaps the easiest and most common prim clothing because the skirts made with the Appearance tool just don't look like real skirts. The same skills you use here can be used to make any kind of prim clothing, so

guys shouldn't feel left out — you can make some tails for your tux, or even a tail for your avatar.

Decide what kind of skirt you want to make. This example shows how to make a knee-length, lace skirt. To make a skirt from prims, follow these steps:

1. **Start with a hollow tube (hollow set to 95.0 on the Hollow setting). It's one of the basic shapes available on the building menu.**
2. **Set the size from the knee to the waist.**

   For this example, use size set to X=0.500, Y=0.500, and Z=0.495.

   You can eyeball the skirt by standing next to it. Make the width of the tube about the width of your body.

   To test whether your initial tube is wide enough, switch it to Phantom in the Object tab on the Edit menu so you can walk into it and see whether it goes around you. Be sure to turn Phantom off afterward.
3. **Use the Cut Path options on the Object tab of the Edit menu to cut away most of the tube.**

   For this example, use B=0.750 and E=1.000. To set the beginning and ending cuts.
4. **Use the Taper settings to angle the top end of the shape to form the gathers of the skirt.**

   This example uses X=–0.85 and Y=–0.65. This little wedge will become the individual pleats of the skirt.
5. **Copy and rotate this shape so that it makes an oval at the top approximately the size of your waist.**

   You'll need about 15 objects to make a full skirt. For a fuller skirt, use more.
6. **Change the texture of all the prims by holding down the control button as you click on each object, and then use the Texture tab of the Edit menu.**

   This example uses a lace texture that we got from a free stock photo site, but you can use any texture you'd like.

   You have lots of free textures in your inventory already. Look in your Library folder for the Textures folder. Even textures for rock and grass can be cool on clothes if you tint them with other colors. Who knew pink marble could look just like satin?
7. **Select all the prims selected and then click the Flexible option on the Features tab in the Edit Objects menu box.**

   This makes the sections of your skirt flow as you walk, which looks more realistic. To test it, select the whole skirt and move it. You can't tell that it's flexible until you move it. You'll see it flow and swing as you move it.

8. **Select all the objects in the skirt by highlighting them all and then link them by clicking Tools (at the top left of your screen) and selecting Link.**

   All the parts become one object.

9. **Name your skirt with the Edit tool on the General tab.**

   If you don't do this, you'll bury the skirt in your Inventory as just another generic object.

10. **Right-click your skirt and choose More➪Take Copy.**
11. **Open your Inventory, click the Recent Items tab, and find your skirt.**
12. **Right-click the skirt and choose Attach To➪Pelvis.**

    Your skirt will probably attach to you upside down or in some other strange way. Use the Edit tools to rotate it and position it correctly.

We pair the skirt with a simple, gray tank top and gray underpants with knee-length legs both made with the Edit Appearance tools. Then we made a short jacket using the lace texture used on the skirt prims and put the skirt off-center just a little for an asymmetric waist line. This full dress cost only L$10 for the template upload. Now that's a bargain.

Don't be frustrated if your first efforts don't turn out exactly how you'd like them to. Sometimes mistakes create the best innovations. Try on your creation, experiment with combining it with other clothing. Above all, have fun.

Making Hair

By far, hair is by far the toughest accessory to make in Second Life. It has to look like real hair and fit your head, which isn't always easy to do. Expect to look silly when you try it on and expect to make some horrible hair before you make your first really great do. In this section we make a very simple, Gibson Girl hairdo. It's not nearly as stylish as many that you'll find in the Second Life shops, but it will show you the basics that you'll need to start creating your own unique looks.

To create a basic hairdo, follow these steps:

1. **Make a torus using the building tool. It's the hollow ring shape at the top of the tool with the other basic shapes**
2. **On the Object tab, enter the following settings:**

Size X	0.450
Size Y	0.250
Size Z	0.200
Pathcut V	0.350

Pathcut E	1.000
Hole Size X	0.30
Hole Size Y	0.35
Taper X	1.000
Taper Y	1.000

It's a funny little shape, but most of it will be hidden inside your head.

3. **Copy the object over and over again, rotating each of them to create a crown.**

For help with copying and rotating of objects, see Chapter 13.

It should take about nine pieces. For a finer look, use a more-narrow torus and more copies.

4. **Select all the prims by holding down the Ctrl button and clicking on each one and create a copy by then holding shift and dragging the group.**
5. **Rotate the copy 180 degrees below the first object.**

   This will look a little like a plywood pumpkin, but don't worry. When finished you will get a shape which is beginning to look like the Gibson Girl style that we're going for.
6. **Select the new do and link all the objects by pressing Ctrl+L.**
7. **Give you hair a name in the General tab — something like Hair Test 01.**
8. **Right-click the hair and choose More➪Take Copy.**
9. **Find the hair in your inventory (probably on your Recent Items tab), right-click it, and choose Attach➪Skull.**

   The hair won't know how to attach, so you'll have to do some editing to rotate and position it on your head. You will notice there is something missing — bangs.
10. **To add bangs, copy one of the original prims and make it sweep across the forehead like bangs by rotating it.**

This is a good time to save and copy the hairdo again. Be sure to rename each version of the hair so you can keep your separate drafts of your hairdo.

11. **To soften the hairdo, add some wisps at the front of the face. Start by making a new torus with these settings:**

Size X	0.144
Size Y	0.283
Size Z	0.140
Pathcut V	0.770

Pathcut E	1.000
Hole Size X	0.30
Hole Size Y	0.35
Taper X	1.00
Taper Y	1.00

This smaller shape can also be used around the neck or twisted to be added to the bun to make loose curls.

12. **Use this new prim to add some detail around the face to your taste.**

    Try it on often to make sure you are framing your face. Save copies of it often.

13. **Put on a copy of the final style.**

14. **After you have the hairdo positioned, edit the texture, experimenting with different ones until you find one you like.**

    We used Atoll Wood Endcut (which is in your Library already), tinted orange. We also rotated the texture zero degrees.

15. **Save a copy of the final version of your new hairdo.**

16

Making a Statement with Poses, Animations, and Gestures

In This Chapter

- Deciphering the lingo
- Striking a pose
- Creating an animation
- Making a gesture

Everyone in Second Life (SL) has the same basic poses and animations. For example, your hands go up and down when you type, your feet shift a bit when you stand still, and you primly put your hands on your knees when you sit. But why be like everyone else? Why look like a stiff robot when you can move naturally, give people a thumbs up when you approve of an idea, or flip a cartwheel when you're excited?

In this chapter, we go over the difference between a pose, an animation, and a gesture. We show you how to try out one of each (you can buy one or use one from the Library in your Inventory), and then create your own. Before you know it, you'll have your own distinct style for expressing yourself physically.

Understanding the Terminology

Before you begin, time to lay out some of the terminology to help differentiate between a pose, an animation, and a gesture:

- **Pose:** *Poses* are stationary, frozen positions. Your avatar will strike the pose and stay in it until you turn off the pose.
- **Animation:** *Animations* are short sequences of movement, such as a dance step, cartwheel, or hand wave. They might or might not loop to repeat until you stop the animation.

Animation Override: You can purchase a *HUD* (*Heads-Up Display,* see Chapter 4 for more info) that automatically overrides the default animations (the ones given to you by SL when you created your account) your avatar will use while standing, sitting, and talking.

- **Gesture:** *Gestures* are combinations of animations, sound effects, and poses. For example, you can buy a complete gesture that makes you wave, say "Hi," and then stop waving. You can also combine your own sounds and animations to make your own custom gestures. Gestures are typically *hot–keyed* (setting up a custom keyboard shortcut to make the gesture easier to use) to be used from the keyboard rather than searching for them in your Inventory each time you want to use them. They can also be associated with words that you might use in chat. For example, when Sarah (co-author) types **LOL** in her chat window, her avatar automatically laughs while clutching its stomach.

You can upload sounds just like you upload an image, using File➪Upload Sound. It will cost you $L10 to bring a sound into SL. Clips must be in Wave format (`.wav`) files, and must be 10 seconds or less in length.

Some folks confuse animations and gestures. When you search for premade ones, you might want to try both search terms.

Creating and Using a Pose

You can, of course, buy poses premade in Second Life, but we start by showing you how to make your own. If you want to discover how to use a pose you already have in your Inventory, you can skip to later in this section.

To make a pose, you need a 3-D posing program, such as Poser (`www.e-frontier.com/go/poser`), but this can be expensive. Look for a great, free alternative — Avimator (`www.avimator.com`) — and its updated version, QAvimator (`www.qavimator.org`). Both are free and easy to use. Avimator has a much simpler interface than the updated QAvimator, but the Q version will give you more control over your animations and poses.

To start, visit the QAvimator Web site, download the software for your operating platform, and install it.

After you install the software and open the application, you see the QAvimator interface, as shown in Figure 16-1. Lots of options are available in QAvimator for you to play with, but for this example, we focus on the basics — the timeline, the Avatar tab, and the Keyframe tool (key frames mark important changes in the position of the avatar). Movements will be cued to transition smoothly from one keyframe to another at the bottom.

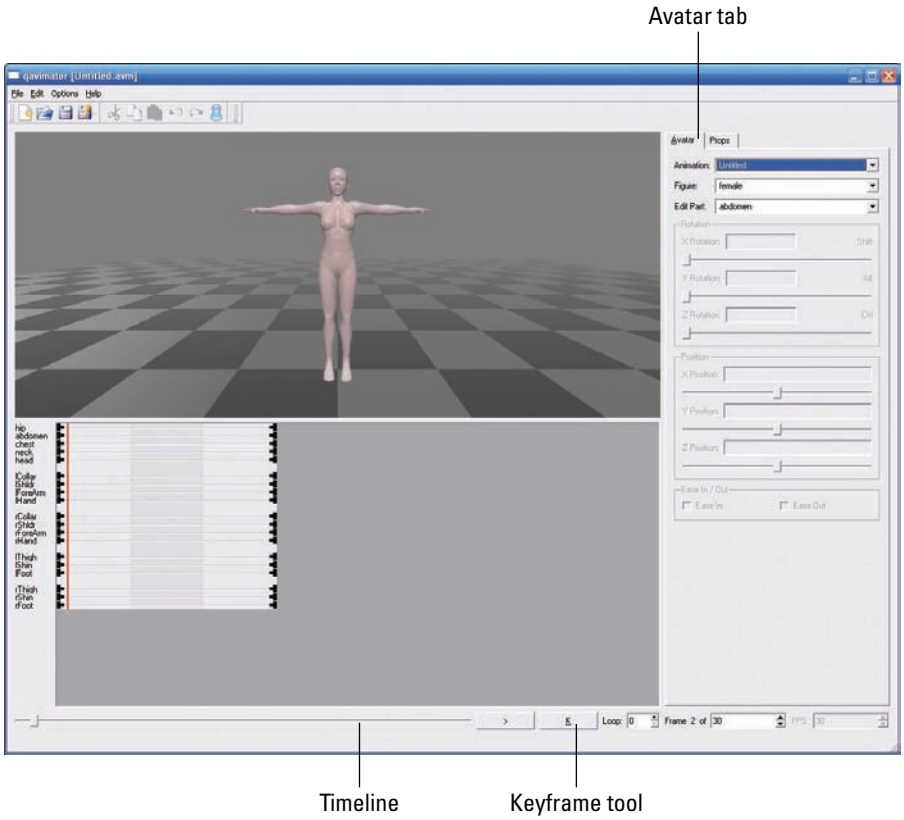

Figure 16-1: The QAvimator interface.

Start by making a yoga position. This one is called Sraddha Vrisikasana (or Devotion Scorpion), and is truly a position we could never achieve in real life (although in Second Life, it's easy). To create the Sraddha Vrisikasana, follow these steps:

1. **Change the number of frames to 2 in the Frame box at the bottom-right of the screen.**

   To make a pose, you need only two frames.

2. **Move the frame slider at the bottom of the screen to the right.**

   The slider moves all the way over to the right because we have only two frames in this animation.

   This (the second frame) is the frame that will contain your pose.

3. **Click the K button to mark this as a keyframe.**

   You're ready to strike a pose.

4. **Choose Options➪Joint Limits.**

   After all, most yoga positions require a bit of unnatural bendiness.

   The bottom half of the screen shows a timeline with each poseable body part listed.

5. **Click each and make the following adjustments by using the X Rotation, Y Rotation, and Z Rotation tools on the right side of the program window.**

   You end up with a position that looks like Figure 16-2.

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
Hip	167	0	0
Abdomen	–20	0	0
Chest	–55	0	0
Neck	0	0	0
Head	–65	0	0
lCollar	0	0	0
lShldr	0	–92	0
lForeArm	0	0	90
lHand	0	0	0
rCollar	0	0	0
rShldr	0	96	0
rForeArm	0	0	–90
rHand	0	0	0
lThigh	65	0	0
lShin	78	0	0
lFoot	78	0	0
rThigh	65	0	0
rShin	78	0	0
rFoot	78	0	0

6. **Save the pose.**

   Choose File➪Save As and name your pose. We call ours `scorpion.bvh`.

   Be sure to change the file extension to `.bvh`, or Second Life will not recognize the pose.

7. **Fire up Second Life and choose File➪Upload Animation, as shown in Figure 16-3.**

   Yes, uploading your pose will cost L$10. Still, the L$10 is worth it to have your very own crazy yoga pose!

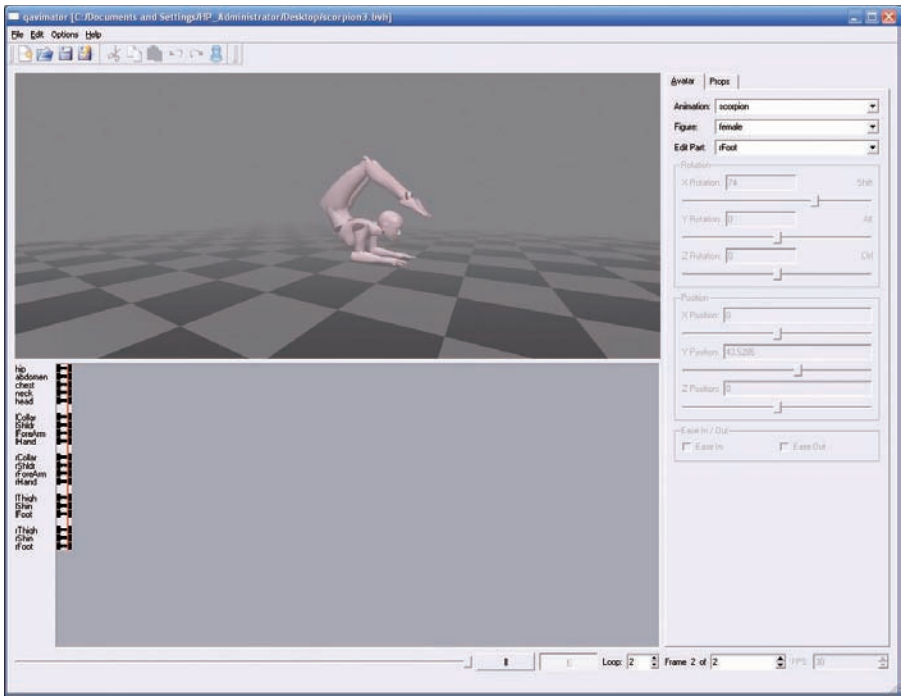

Figure 16-2: Quite the amazing yoga pose.

8. **Navigate to the `scorpion.bvh` file and choose Open.**

   An upload menu (as shown in Figure 16-4) appears with some really important options.

9. **Fill in these definitions andmake these settings for your pose:**

   - *Name:* Give your pose a name you can remember so you can easily find the pose in your Inventory.
   - *Description:* If you intend to sell your poses, you'll want to be sure to put in a clear description so others will know what the pose is.
   - *Priority:* This field dictates whether your pose will be overridden by typing animations, default shifting around while your avatar stands and so on. If you make it the highest priority (4), you will hold the pose no matter what else you are doing.
   - *Preview While:* For this pose, we'll preview it Standing. If this were a sitting pose, you'd want to select Sitting from this list so you can preview how your new pose will transition from the basic sitting pose. However, we will add that previewing this one in Walking is pretty funny.
   - *Loop:* Select this check box so your avatar will stay in the pose rather than just doing it once and standing back up.

Figure 16-3: Upload your animation.

- *In% and Out%:* These percentages control the speed at which the loop happens. Because we don't want this to visibly loop (thereby giving a still appearance), we put both settings at 0.
- *Hand Pose:* You can't control how your fingers look in QAvimator, so this is where you choose whether you want your fingers to point, be relaxed, or even make a Peace sign. We chose Relaxed so our fingers are spread to look like they're supporting us better.
- *Expression:* This is a fun one. We're setting ours to None, but if you want it to look like you're particularly enjoying your yoga (or maybe it's causing you pain), go ahead and choose a different expression.
- *Ease In (sec) and Ease Out (sec):* These settings dictate how long it takes your avatar to reach the final pose and how long it takes to go back to a normal standing position. We set them both to 0 to get a sudden pose that will stay.

10. **Click the blue Play button to preview your pose.**

    The gray avatar in the blue screen should strike the scorpion pose and stay there. If it does, click the Upload (L$) button.

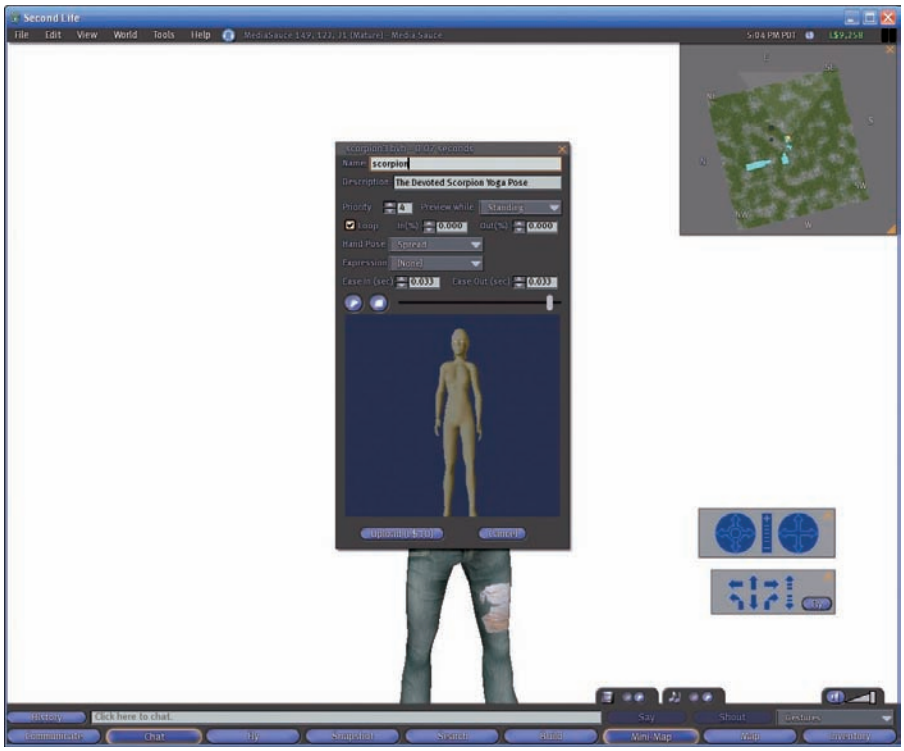

Figure 16-4: Setting some additional pose options.

Your new pose is saved in your Inventory in the QAnimations folder with the name you gave it in Step 9.

Now it's time to try out the pose you just made. Although the following directions are for the pose we showed you how to make in the first part of this chapter, they will work for any pose in your Inventory, including premade and purchased poses. To perform the pose, follow these steps:

1. **Click the Inventory button on the bottom-right of your screen and find the pose in the Animations folder of your Inventory.**

   You'll know it's a pose because it will have a little yellow dancing man next to it, as shown in Figure 16-5.

2. **Double-click the pose to prompt a pop-up window (as shown in Figure 16-6) asking you how you'd like to perform the pose.**

   - *Play in World:* If you click the Play in World button, everyone around you can see you perform the pose.
   - *Play Locally:* If you click the Play Locally button, only you will see the pose on your screen.

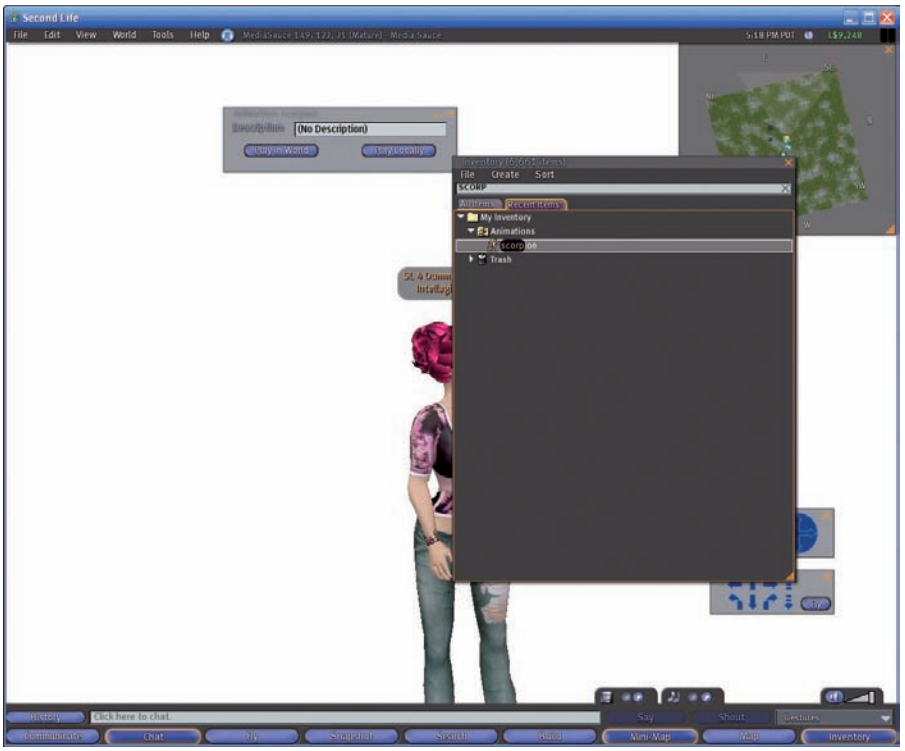

Figure 16-5: Here is the scorpion pose in my Animations folder.

If you're unsure about your new pose and don't want to look silly in front of other people, choose Play Locally so that no one else can witness your contortions.

Figure 16-6: Decide whether you want others to see you striking a pose.

Your avatar performs the pose, as shown in Figure 16-7.

Making an Animation

Animations are just like poses except that instead being frozen in a position, your avatar moves through a serious of movements and then stops or repeats them. Most animations that you see in SL are dance steps, so we'll do something different. Hmmm, how about "raising the roof?" Here's how:

Figure 16-7: Tah-dah! You're a virtual yoga master!

1. **In QAvimator, start a new project by choosing File➪New.**

2. **Set the number of keyframes to 6.**

   The default setting gives you 30 frames to work with, but you won't need that many for this example.

   When you "raise the roof," you pump your arms from a bent position to a straight position over and over, so each arm pump is two movements (up and down). You also need to get into the position and then back out again.

   To accomplish this, set the following:

   - *Two arm pumps:* Two keyframes each
   - *The initial position:* One frame
   - *The transition back to normal:* One frame

   That's a total of six keyframes.

   a. *Click the hip timeline at six equal distances.*

   b. *Click the K button to create a keyframe at each one.*

3. **Make the animation. Set the X, Y, and Z rotations for each of the parts for each keyframe to match the following tables.**

Keyframe 1

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
lCollar	65	0	0
lShldr	–4	–88	0
lForeArm	0	0	146
lHand	0	0	62
rCollar	53	0	0
rShldr	0	85	0
rForeArm	0	0	–149
rHand	0	0	–52

Keyframe 2

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
lCollar	0	–1	–7
lShldr	–2	–89	0
lForeArm	0	0	87
lHand	0	0	41
rCollar	0	0	0
rShldr	0	85	0
rForeArm	0	0	–90
rHand	0	0	–34

Keyframe 3

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
lCollar	46	4	–11
lShldr	0	–92	0
lForeArm	0	0	59
lHand	0	0	28
rCollar	–46	0	0
rShldr	0	92	0
rForeArm	0	0	–59
rHand	0	0	–28

Keyframe 4

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
lCollar	–69	0	0
lShldr	0	–91	0

lForeArm	0	0	17
lHand	0	0	12
rCollar	–69	0	0
rShldr	0	91	0
rForeArm	0	0	17
rHand	0	0	–28

Keyframe 5

Body Part	*X Rotation*	*Y Rotation*	*Z Rotation*
lCollar	90	0	0
lShldr	0	–92	0
lForeArm	0	0	17
lHand	0	0	0
rCollar	90	0	0
rShldr	0	92	0
rForeArm	0	0	–17
rHand	0	0	0

If entering all these numbers feels tedious now, when you get used to how to pose the figure in QAvimator, this will all be easy. The numbers become less important and more intuitive.

4. **Save the animation as `raisedaroof.bvh` or whatever filename you like.**
5. **Upload the animation with the following settings for the upload preview:**
   - *Priority:* 2.
   - *Preview While:* Standing.
   - *Loop:* Select this only if you want your avatar to repeat the animation over and over again.
   - *In% and Out%:* These aren't important here because you're not looping the animation in this example.
   - *Hand Pose:* Relaxed.
   - *Expression:* We chose a happy face for the animation. You have several to choose from.
   - *Ease In (sec) and Ease Out (sec):* Leave these set at 0.300.
6. **Click the Upload (L$10) button and then find the animation in your Inventory under the Animations folder. Enjoy!**

   Now you can raise the roof when you want to celebrate, as shown in Figure 16-8.

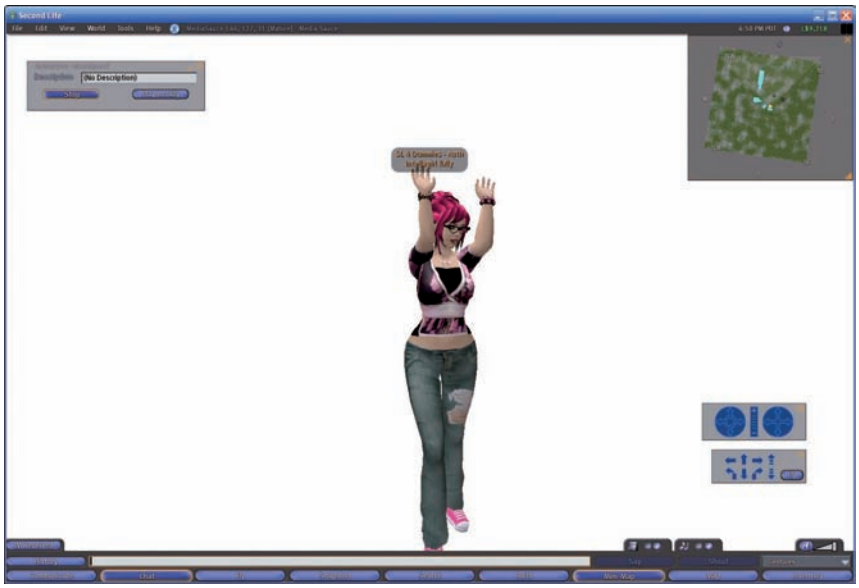

Figure 16-8: SL rocks! Raise the roof!

Animations and poses can be placed in poseballs very easily. *Poseballs* are used to imbed poses into furniture, to provide dances on a dance floor, and so on. For sample poseball scripts you might want to look at, check out

```
www.netstartel.com/~walton/sl/poser.txt
```

For more on building poseballs, see Chapter 13.

Creating a Gesture

To make a *gesture,* such as waving hello or shaking your head, Gestures can be combinations of poses, animations, and sounds. In this example, we show you how to combine a few animations and sound effects to create something that really announces a party. It's easy and fun, so jump right in!

To create a gesture, follow these steps:

1. **Open your Inventory by clicking the Inventory button on the bottom-right of the screen.**
2. **Choose Create⇨New Gesture.**

   The new gesture appears in your Inventory's Gestures folder and is called New Gesture.
3. **Double-click New Gesture to open it and then give your gesture a name.**

We call ours Celebrate.

The default for the new gesture has the avatar wave and say, "Hello," but we're going to change that.

4. **Start by removing the steps in the right-hand box by clicking each one and then clicking the Remove button until the right-hand box is empty.**
5. **Add the elements you want by clicking Animation in the Library box on the left and then clicking the Add button.**

   You see Start Animation: None in the Steps box. Now you have to tell the gesture what animation to play.
6. **Click the Animation to Play drop-down list, below the Steps box, and scroll down until you see "`Celebrate`" (or whatever you called your animation in Step 3).**
7. **(Optional) Add a sound to your gesture:**
   a. *Click Sound in the Library box.*
   b. *Click the Add button.*
8. **(Optional, if you use Step 7) Click the Sound to Play drop-down list, below the Steps box, to see some of the sound options.**

   We opt for Comedy 1, which is in the Sounds folder in your Library (found in your Inventory). Here's how:
   a. *Go into your Library and find Comedy 1.*
   b. *Right-click Comedy 1, copy it, and paste it into your Sounds folder under My Inventory.*

      This makes it become an option on the Gesture screen.

   At this point, you have the hand raising and a sound. Continue with the remaining steps to add one more gesture.
9. **Click Animation in the Library box again, click the Add button, and then choose Clap from the Animation to Play drop-down list.**

   Your gesture menu looks something like Figure 16-9.
10. **Click the Preview button to see what your gesture will look like.**
11. **If you're happy with your gesture, click the Save button to save it in the Gestures folder in your Inventory. If you're not happy you can continue to make changes using the menus.**
12. **Select the Active check box at the bottom of the New Gesture window.**

    The gesture is available from the Gestures drop-down menu on the far right of your SL screen.

After you create a few animations and gestures, you'll either want to create more, or, well, have a better appreciation for really great ones you find in SL. Here are a couple of good places to find animations in SL. You'll see the

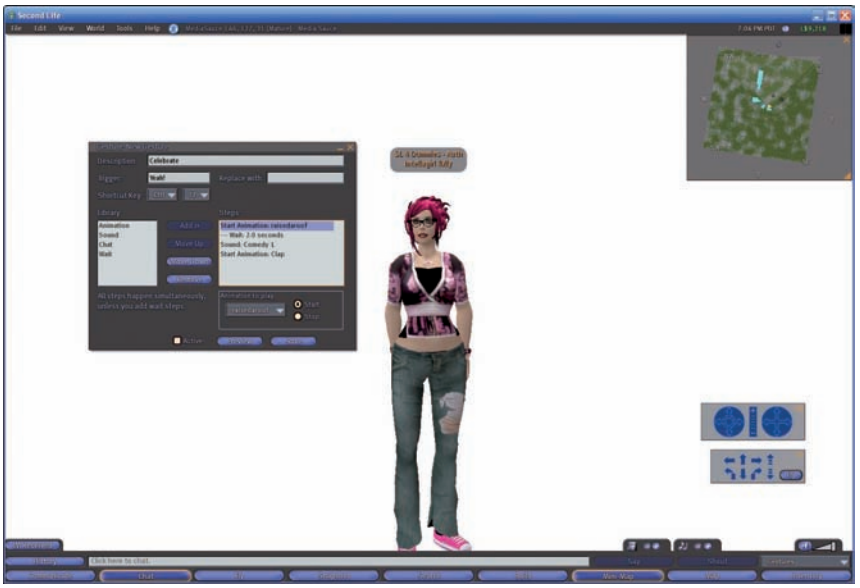

Figure 16-9: Reviewing the New Gesture window.

region name and coordinates for each location. Use these on the Map so you can teleport right to the spot.

Most stores will have pose stands you can use to preview how the animation or gesture will look when your avatar performs it. Expect to pay anything from $L1 to $L100 for each animation.

- **Bits and Bobs (Resolution; 155, 69, 24; PG):** Here you can find a HUGE selection of animations of mostly couples, ranging from dancing to, well, more "adult" behaviors.
- **Pose Paradise (Pose Paradise; 158, 117, 21; Mature):** Go here for lots of cute couple's poses, but you can also find great Kung Fu moves as well as sitting, walking, and other animations.
- **Animation Warehouse (Animation Island; 147, 26, 322; Mature):** This is a huge warehouse of animations from many different vendors.
- **M&P Shop (The Puppeteer; 142, 144, 31; Mature):** Here you can find a castle with a tower for each kind of animation, furniture with built-in animations, and HUDs for animation override.

Many animation stores sell mature animations. If you're worried about having to look past sexual animations to find sitting, dancing, and other innocent animations, then visit only those animation stores that are marked PG.