Chapter 12: Selection/Masking Tips & Tricks

Overview

Selection was one of the first skills you developed as you began to use Photoshop, and one that you apply to almost every Photoshop project. Here we will begin with a quick review of selection and masking principles, improve selection by exploring the Color Range command, and then step through a series of guided exercises that will expand your masking repetoire.

ACE Preparation Topics

Working with masks

- Save and load selections.

- Explain how to create and modify a temporary mask by using the Quick Mask command.

- Create and modify selections by using the Channels palette.

Selection and Masking Review

Photoshop uses selections and masks to either hide or reveal things—selections, pixels, and even layers.

SELECTIONS can be thought of as simple masks that let you isolate and protect areas of an image as you apply color changes, filters, or other effects to the rest of the image. When you select part of an image, the area that is not selected is MASKED or protected from editing.

STANDARD SELECTIONS, such as those made with the Marquee, Lasso or Magic Wand tools, provide absolute selection—either a pixel is selected (100%), or it is not (0%). MASKS such as Quick Mask, Alpha channels, Layer masks, and Clipping masks, select according to transparency. Think of masks as gradient selections ranging from black (completely hidden) to white (completely revealed or editable) so that each pixel in an image can be selected at any of 256 levels of opacity.

When you paint on a mask with the Brush or other painting tools, black hides, white reveals, and shades of gray partially hide or reveal. Any tools or commands that can be used on a grayscale image can be used to alter a mask. When you paint on a mask, you are not altering document pixels, just the mask. Whether you view the selection in Quick Mask or standard mode Photoshop uses the true selection, represented by the mask, to hide and protect parts of the document—not just what is inside the marching ants outline.

Masks can be saved with the document whereas marching ant selections cannot. However, when you choose **Select > Save Selection**, you are actually saving the selection as an alpha channel mask. Selections can be converted to and from alpha channels, which are saved with the document.

Photoshop masks can be divided into two categories:

- Selection-related masks include Quick Masks, Alpha Channels, and Type Masks.

- Visibility-related masks include Layer Masks, Vector Masks, and Clipping Masks. These masks can be applied to any layer but the Background.

The Color Range Command

To select effectively, most Photoshop professionals begin with the tool or command that initially isolates the majority of the desired part of the image, and then refine the selection by viewing it in Quick Mask mode, and painting on it.

Guided Exercise 12.1: Compare the Magic Wand with the Color Range Command

When you want to select image areas based on color, the Magic Wand is typically where new Photoshop users start.

The **Select > Color Range** command works similarly to the Magic Wand but offers more control and finesse. You can work in the Color Range dialog box with a number of tools and when you click OK, a selection will be generated. A selection created with Color Range will be more life-like than selections with the Magic Wand tool because it generates a mask-based selection, complete with gradients of selection.

The Color Range command selects based on the colors from all visible layers, but like any other selection, you will be editing only on the active layer.

1. Open **globe.psd.** It is inside the **ch12 folder** inside the **student_files_3** folder.

   We want to change all the red flowers to a lavender tone so that they are not so jarring.

2. Use the Magic Wand to select the red flowers.

   a. Choose the **Magic Wand** tool with the default settings.

   b. Zoom in to 100%, uncheck **Contiguous** and click inside one of the red flowers.

   c. Click the **Add to Selection** button and continue clicking in reddish areas until you are pleased with your selection. Notice that it takes a fair amount of finessing with tolerance and the areas you sample to get a good selection of just the red and bright pink flowers.

   d. Deselect.

3. Use the Color Range command to select the red flowers.

   a. Choose **Select > Color Range**.

   b. Within the document window, click on one of the red flowers.

   c. Notice the whitish areas. Those are selections, based on the red color you just sampled.

   d. Drag the **Fuzziness** slider to the right. Notice that the selected areas enlarge.

   Fuzziness is like Tolerance on a slider. As you increase Fuzziness, it picks up more subtle detail, but if it is set too high, it may also pick up unwanted areas with small amounts of the sampled color.

   With maximum Fuzziness, the gray regions here are partially selected.

e. Reduce the Fuzziness to around 40, click the **Add to Sample** eyedropper, and sample more reddish areas.

You can typically get a more precise selection with more sample points at lower Fuzziness.

f. Experiment with the various Selection Previews at the bottom of the dialog box. The default None shows the actual image in the document window, and the quick mask view within the Color Range dialog box.

g. When you are pleased with your initial selection, click OK.

4. Color Range tends to skip areas, especially as shown by the marching ants of the standard (selection) mode. Choose **Select > Modify > Smooth** to smooth out your selection. Smooth by only 1-2 pixels at a time to avoid over smoothing the selection.

5. Use your selection. Make a Hue and Saturation adjustment layer, and change the hue to tone down those red flowers. Because of the precision of the Color Range selection, the red petals on the ground and inside the reflecting globe also change.
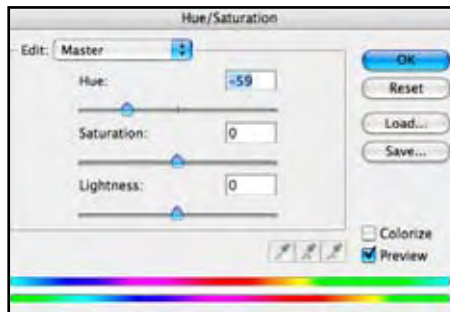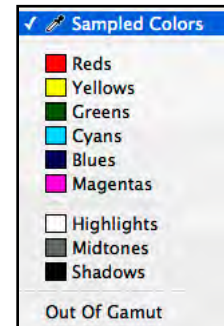

before   **after**

Color Range Presets

The Select drop down menu reveals a series of preset samples. Unlike Sampled Color, these choices do not allow addition or subtraction of sample points, but the Fuzziness slider still works.

In the globe.psd image, sampling just the Reds is much faster, and gives at least as good or better results. Try it on your own. **Highlights**, **Midtones**, or **Shadows** work well to select just those regions, followed by an image adjustment. Here Midtones were selected, and lightened with a subtle Curves adjustment.

before   **after**

Out of Gamut is a very useful choice to use before converting an image from RGB to CMYK. Use this preset to select just those colors that are out of gamut, and then desaturate them slightly to bring them into gamut.

before   **after**

The difference is so subtle here you may need to zoom way in to see the changes. Notice that the top of the globe is slightly grayer. You can see it better if you do it yourself in Photoshop.

Remember the trick to selecting a colorful object on a solid background? Select the background with the Magic Wand, and then Inverse the selection. You can accomplish the same thing with Color Range by clicking the Invert box after you select the semi-solid background, such as the sky.

Layer Masks

If you want to get rid of a portion of a layer, you could always just erase it. The problem with this is that you're stuck with the results. If you change your mind a day or week later, there's no way to get the erased pixels back. Instead, you should use a LAYER MASK, a mask associated with a specific layer, to non-destructively hide portions of that layer. You can add a layer mask to any layer except the background.

There are two ways to add a layer mask to a layer:

1. Activate the layer you want to mask, and click the Layer Mask icon at the bottom of the Layers Palette.

2. Choose **Layer > Add Layer Mask** and choose between Reveal All or Hide All. **Reveal All** is the same as clicking the Layer Mask icon, it will be a white mask. **Hide All** will give you a mask filled with black, blocking everything on the layer. This is useful if you want to mask most of the layer, and reveal only a small part of it.

Guided Exercise 12.2: Applying a Gradient to a Layer Mask

Sometimes it is nice to have one image flow into another. A quick way to do this is by layering one image on top of another, and then adding a layer mask with a gradient to the upper layer.

1. Open **wind.jpg** and **lake.jpg.** Both files are inside the **ch12 folder** inside the **student_files_3** folder.

2. Choose **Window > Arrange >Tile Vertically** to place the images side by side. Do not worry about their zoom levels.

3. Combine the two images into one.

   a. Activate **lake.jpg**.

   b. Hold down the Shift key, and with the Move tool, drag the background layer of **lake.jpg** on top of **wind.jpg**.

   c. Release first the mouse button and then the Shift key to have the lake layer centered on top of the wind image.

   d. Rename Layer 1 **Lake**, and close lake.jpg.

4. Save the image as **gradient_mask.psd** in the location of your choice.
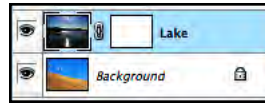
4. With the Lake layer active, click the **Add Layer Mask** button to add a mask to the Lake layer.

5. Reset your tools and foreground/background colors to their defaults, and then choose the Gradient tool.

6. Click the layer mask thumbnail to be sure the mask is active, and then make a linear gradient from the top to the bottom of the document window.

7. Experiment with other gradient shapes and angles until you get a merged image that pleases you.
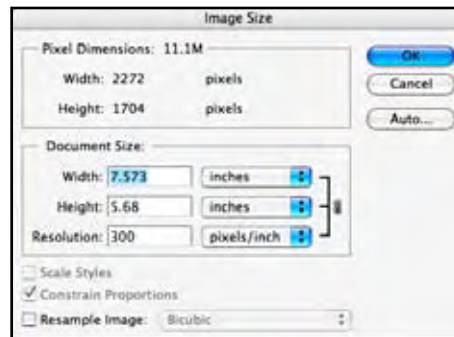
8. These photos were taken with a digital camera and have not been set up for printing. Adjust the (print) resolution in the **Image > Image Size** dialog box with **Resample Image** unchecked, and click **OK**.

8.

Save the image, and print it if desired,

Clipping Masks

CLIPPING MASKS use the pixels of one layer to determine the visibility of other layers. The bottom-most layer in the group, called the BASE LAYER becomes a mask for one or more additional layers included the clipping mask group.

In other words, wherever the base layer is transparent, the layer(s) above it in the clipping mask will not be shown. Wherever the base layer is not transparent, the other layers in the mask will appear.

Guided Exercise 12.2: Create and Modify a Clipping mask

Clipping masks can be simple or elaborate. Graphic Authority makes several collections of creative edges and frames that work well as clipping masks. They are letting us use a few of their images here for free, and you can get more, royalty free and reasonably-priced, at http://www.graphicauthority.com. Be sure to let them know you are an SRJC student if you decide to order from them. OBTAIN THE FILES USED HERE FROM INSTRUCTOR.

1. Open **lake.jpg.** It is inside the **ch12 folder** inside the **student_files_3** folder.

2. Check its size to see how big it can be printed at high quality.

   a. Choose **Image > Image Size**.

   b. With **Resample Image** unchecked, change the (print) **Resolution** to 300 pixels/inch, or whatever is appropriate for your printer.

   c. Note the **Document Size** in Width and Height.

      Lake.jpg has enough pixels for a high quality printout (300 ppi) of 7.57 x 5.68 inches. That means that its biggest standard size is 7 x 5 inches. That is the size we will use.

   d. Click Cancel because you will not print this image as is.

3. Choose **File > New** and make a new RGB document that is 7 x 5 inches, with a resolution of 300 ppi.

4. Save the file as **clip.psd** in the location of your choice.

5. Insert the lake image into **clip.psd**.

   a. Zoom out to about 20% magnification, so that you can see the gray area of the document window beyond the document itself.

   b. Choose **Window > lake.jpg** to bring the lake image forward and move it off to the side so that you can still see some of the **clip.psd** document.

   c. Hold down the Shift key, and with the Move tool, drag the background layer of **lake.jpg** on top of **wind.jpg**.

   d. Release first the mouse button and then the Shift key to have the lake layer centered on top of the wind image.

   e. Rename Layer 1 **Lake**, and close **lake.jpg**.

   f. Choose **Edit > Free Transform** press shift, and drag the handles of the Lake layer smaller so that the layer fits within the document window as closely as possible without distorting it, and Commit the transformation. It will not fit exactly.

6. Manipulate the edge image to provide a mask for the lake photo.

    a. Open **031edge_edges5.tif**. It is inside the **Graphic Authority Samples** folder inside the **ch12 folder** inside the **student_files_3** folder. This high resolution grayscale image will become the clipping mask.

    b. With **031edge_edges5.tif** active, choose **Image > Duplicate** to duplicate the image, preserving the original.
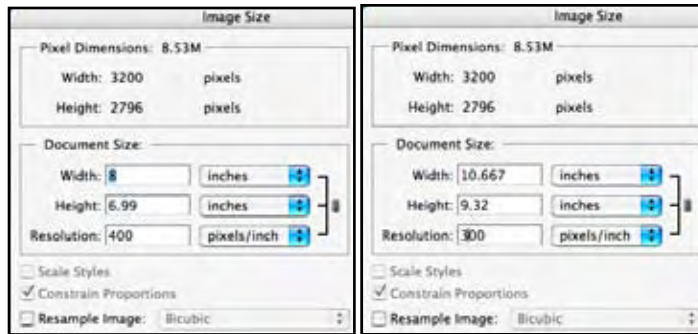
    c. Choose **Image > Image Size** again.

    d. With **Resample Image** unchecked, change the **Resolution** to **300** pixels/inch.

    Notice that the edge image has many more pixels than the target **clip.psd** file. That's because the professional quality Graphic Authority **031edge_edges5.tif** has enough pixels to accommodate a larger than 8 x 10 inch image at 300 ppi. This high resolution makes these edges very versatile.

    e. With **Resample Image** checked, change the Width to **8** inches and click OK.

    This will downsample the image so that it is closer in size to the target image. We left it a little larger so that you can transform it smaller if desired once you move it to the target document.

7. Use the Move tool to insert **layer 0** in the edge document into the target **clip.psd** file like you did with the Lake layer (step 5 on the previous page).

8. Rename **layer 0** to **Edge**, and change the layer order if necessary so that Edge is between the Background and the Lake layer.

9. Activate the Lake layer and choose **Layer > Create Clipping Mask**.
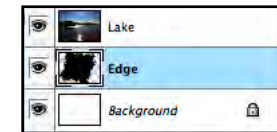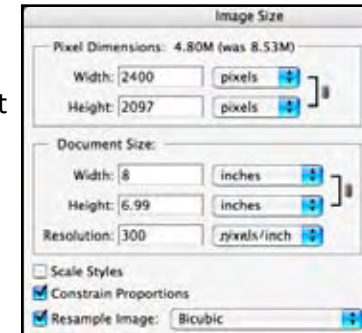
    Alternately, you could Option (Mac) or Alt (Windows) click the boundary between the Lake layer and edge in the Layers palette to create the mask. When you are in the correct position, you will see this double circle pointer:
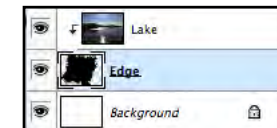
    You can tell which layers use the clipping mask, because the name of the base layer that serves as the mask is underlined, and the thumbnails for the overlying affected layer is indented with an arrow to the left side of its thumbnail.

10. If desired, you can free transform the base layer (Edge here) to refine its size and location, as shown on the next page. It does not need to be constrained.

Here we scaled the Edge layer so that most of it fits inside the document window, but we let a little "hang out" in the lower right corner to add interest to the image.

11. Instead of the plain white background, you can add a background image. Here we will add one of Graphic Authority's antique papers.

   a. Activate the Background layer in **clip.psd**.

   b. Open **002_Paper.jpg**. It is inside the **Graphic Authority Samples** folder inside the **ch12 folder** inside the **student_files_3** folder.

   c. With the Move tool, drag the **Background** layer onto the **clip.psd** document window.

   d. Once there, change the layer name to **Paper**, and use the Move tool to position the Paper layer where you want it. Here, the large size of the Paper layer gives you flexibility to move it around until you find just the right location.
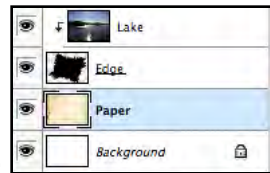
   e. Once you have the Paper layer where you want it, **Merge Down** to make it the Background layer, and conserve file size.

12. Save the document, if you haven't already done so.

13. Refine your image. Be creative. Here, we added a layer style to the Edge layer, and then changed its layer blend mode to Multiply to give it a sepia-like effect.

Clipping Mask Examples

Clipping Masks provide a number of interesting ways to combine images. Type layers make very effective masks. Here is a nice example, made on an earlier version of Photoshop. Notice that a clipping mask can contain more than two layers.

Here's a quick tutorial that uses a gradient fill layer to make a clipping mask:

http://www.digitalmediadesigner.com/articles/viewarticle.jsp?id=27264&afterinter=true

and a more extensive example, using Photoshop CS:

http://www.graphics.com/modules.php?name=Sections&op=printpage&artid=165

Vector Masks

As you saw in the previous chapter, vector masks can used to hide or reveal portions of layers. The main difference between the two is that vector masks use paths to hide or reveal parts of a layer while layer masks use pixels. That means that layer masks can provide much more subtle transitions, and vector masks offer crisper, sharper edges, making them especially useful for masking curved regions. Also, vector masks do not appreciably increase file size, but each layer mask increases file size by the same amount as an alpha channel. Vector shape layers can also be used as the base for a clipping mask.

Vector Mask Tutorial

This tutorial is a movie to show how to make and use a vector mask:

http://www.techlearning.com/quickflicks/showArticle.jhtml?articleID=161502358

Guided Exercise 12.3: Use a Vector Mask

In this guided exercise you will use a path to mask part of an image, and compare that technique with a selection you will make with the Magic Wand.

1. Open **ant2.psd.** It is inside the **ch11 folder** inside the **student_files_3** folder. (We'll move it to ch12 in the next rev. of these notes.)

2. Show the Paths palette. It contains a premade path named **ant** that surrounds the metal ant sculpture. (For more practice with the Pen tool, try making your own.)

3. Click the **ant** path to activate it, and activate the Layers palette.

4. Double click the Background layer, and name it **ant**. It is now a standard layer and can accommodate a mask.

5. Duplicate the ant layer and name it **shadow**. Be sure the shadow layer is beneath the ant layer.

6. With the ant path active, and the ant layer active, choose **Layer > Vector Mask > Current Path**.

7. Hide the Shadow layer and deselect any active paths to see just the ant on a transparent background. Notice that the curved vector masks are very smooth.

8. Hide the Ant layer and show and activate the Shadow layer.

9. With the Magic Wand at its default settings, click once in a dark part of the shadow to select most of the shadow. Add to the selection with a few more clicks, until you select all of the shadow.
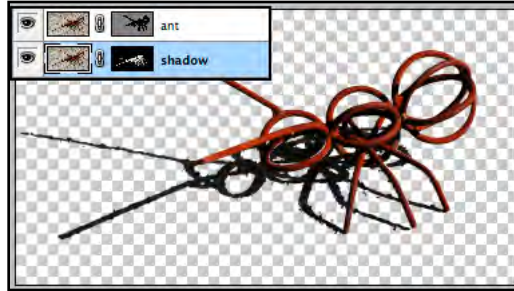

   Do not worry if you also select

some dark parts of the ant, because the ant will cover them.

10. Click the Add Layer Mask button at the bottom of the Layers palette to turn the selection into a layer mask. Now you see just the shadow, along with a few darker parts of the ant.

11. Show the ant layer to see both the ant and its shadow on a transparent background.

12. Highlight both the ant and shadow layers and choose **New Group from Layers** from the Layers palette menu.
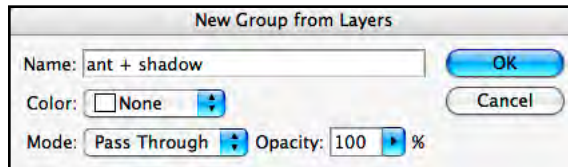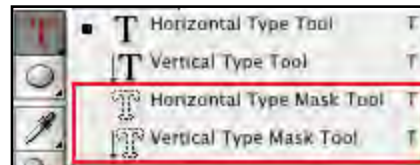
13. Name the group **ant + shadow** and click **OK**.

14. Choose **File > Save As** and name the edited document **ant.psd** in the location of your choice. Leave the document open for the next guided exercise.

Type Masks

The Horizontal and Vertical Type Mask tools are used to create selections in the shape of text.

To use them:

1. Choose the desired tool from the Tool Box—you'll find the Horizontal and Vertical Type Mask tools under the standard Type tools.

2. Choose your type options—font, size, etc.

3. Click in your document.

4. Type the desired text. You'll see a mask forming in the shape of your text.

5. Press the Enter key. You'll now a selection in the shape of your entered text.

The Type mask tools can provide some fun special effects, but because they just generate selections, they are not nearly as versatile as the Type tools, and their type prints at the resolution of the overall image because it is not scalable.

Guided Exercise 12.4: Use a Type Mask

In this guided exercise you will combine the ant group you made in the last guided exercise with a decorative background image from Graphic Authority, and then use a type mask and some other techniques to complete the image.

1. Open **002_Paper.jpg**. This image has been downsampled to 7 x 5 inches and used with permission from the Portrait Papers Collection from the Graphic Authority: http://www.graphicauthority.com/products/portrait-papers.html.

2. Be sure your foreground and background colors are set to the defaults and you have reset your tools.

3. With the Magic Wand tool, select the white background, and then Inverse the selection (**Command/Ctrl + I**) to select the paper itself.

4. Type **Command/Ctrl + Shift + J** (New Layer via Cut) to place the decorative paper on its own layer above the background and name the new layer paper.

5. Activate **ant3.psd** that you made in the last guided exercise, and with the Move tool drag the **ant + shadow** group on
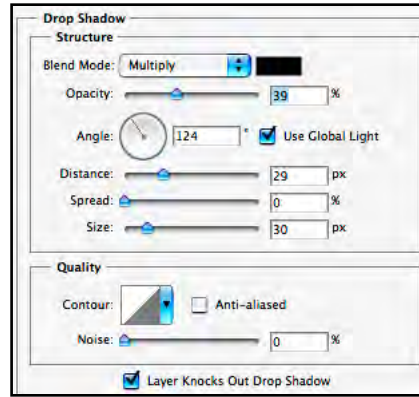
top of the **002_Paper.jpg** document window.

6. Save the document as **ants_done.psd** in the location of your choice.

7. Refine the image, saving as you go.

   a. Move the **paper** layer slightly up and to the left, so that it is a little off center.

   b. Add a slight **drop shadow** effect to the paper layer. Here are the settings we used.

   c. Sampling a light and a dark color from the paper layer, place a linear gradient onto the Background layer.

8. Notice that the ant's shadow is too dark, and in the opposite direction from the paper drop shadow. Fix these problems.

   a. Activate the **ant + shadow** group, flip it horizontally, and reposition it into the upper left corner of the document.

   b. Expand the ant + shadow group, activate the **shadow** layer, and change its blending mode to **overlay**.

9. Duplicate the **ant + shadow** group, move the duplicate below the original ant, and scale it smaller.

10. Make and use a type mask.
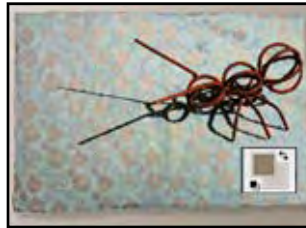
a. With the **paper** layer active, choose the Horizontal Type Mask tool and click just below the body of the upper left ant.

   As soon as you click, your image will be overlaid with a mask, with just a blinking insertion point showing. (Our mask here is aqua, not the default red.)
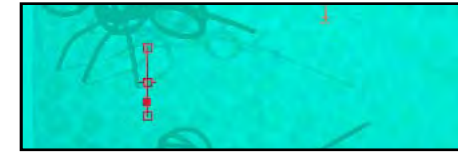
b. Pick a nice wide font, and a large font size so that your type will show up. (We used Overload, 67 pt.)

c. Type "Ant Invasion." Select all the type, and change its font or size if necessary. Then commit the type just like with the regular type tool. The type mask becomes a marching ants selection.
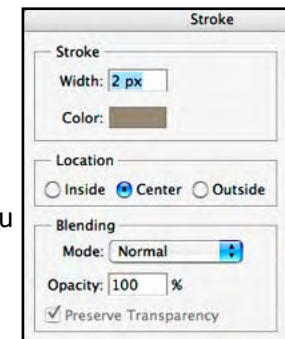
d. Use the arrow keys if necessary, to reposition the selection where you want it.

e. Choose the Move tool, and arrow up and to the left slightly. This moves the selected pixels, and reveals the underlying background.

g. Hide your selection edges (**Command/ctrl + H**) to better see what the text looks like as you move it.

h. Choose **Edit > Stroke** and add

a slight stroke to the selection to make the type outline a little more visible.

    i. Reveal your selection edges (**Command/ctrl + H** again) and deselect.

11. Finish up the image as you like. We added one more tiny ant.

12. Save and print if desired.