

## Introduction to Photoshop

### Layers

#### Conventions

Keyboard command sequences will be within <[ and ]>.  
Keyboard command sequences will mix both Mac and PC,  
for example <[Command/Control+j]> means:  
On a Mac do <[Command+j]>  
On a PC do <[Control+j]>

#### \*\*\*\*\* SLIDE 3 References

Scott Kelby, How Do I Do That In Photoshop, Chapter 6  
Robin Whalley, Essential Photoshop, Chapter 3  
Robin Whalley, Photoshop Layers, Chapters 1, 2, 3

#### ----- Optional Reference Books -----

"Layers: The Complete Guide to Photoshop's Most Powerful  
Feature - 2nd Ed." by Matt Kloskowski  
"The Hidden Power of Adjustment Layers in Adobe Photoshop"  
by Scott Valentine  
"The Hidden Power of Blend Modes in Adobe Photoshop" by  
Scott Valentine

#### \*\*\*\*\* SLIDE 4 Layer Basics

Matt Kloskowski, who wrote the book on layers called layers  
"Photoshop's most powerful feature." I contend that it is  
Photoshop's essential features since everything done in  
Photoshop is done on a layer; without layers, Photoshop  
simply wouldn't be. Without layers, you can't do anything in  
Photoshop. You could use Photoshop's Adobe Camera Raw module  
to edit RAW format images, but if you take that image into  
Photoshop, it becomes a layer.

The layer is the fundamental unit in Photoshop. You can  
think of a layer as a transparent sheet that you tear off  
and put on top of an image; because the layer is  
transparent, you can see the base image and anything done in  
the layer changes how the base image looks without touching  
the original base image. Layers allow for non-destructive  
editing of images.

#### \*\*\*\*\* SLIDE 5 Layer Basics

Commands that have to do with layers can be found, not unexpectedly, under the Layer menu item. You can also get to a subset of layer menu commands by bringing up the contextual menu on the layer panel (Mac: Control + mouse click, PC: right mouse click); this contextual menu does not have all of the layer commands.

One of the most common actions you will do in Photoshop is the creation of a new layer. This can be done a number of ways:

- Under the Layer menu, select New then Layer
- Use the keystroke command of <[Shift+Command/Control+n]>
- In the layer panel, click on the icon that looks like a piece of paper with the corner folded up (Create New Layer)

Any of these three actions will create a new empty layer on top of the currently active layer. The currently active layer is the layer that is highlighted in the layer panel; the currently active layer does not have to be visible or the top layer of the stack.

#### \*\*\*\*\* SLIDE 6 Layer Basics

The other most common action that you will do dealing with layers is to copy the currently active layer; you do this so that you can make destructive edits to the layer without changing the base image. To copy a layer, do one of the following actions:

- Under the Layer menu item, select New then Layer via Copy <[Command/Control+j]>
- Under the Layer menu item, select Duplicate Layer...
- In the layer panel, select the layer you want to copy and drag it to the Create New Layer icon (icon of paper with folded up corner) at the bottom of the panel
- If there is an active selection, you can copy this (note that an entire layer can be an active selection) with a cut and not a copy. Under the Layer menu select New then Layer via Cut <[Shift+Command/Control+j]>. Note that this is a destructive edit in that it takes the selected area and removes it from the current layer to put it on a new layer.

Hopefully you will quickly see that there is more than one way to perform the same action in Photoshop. There is no right way or wrong way to work in Photoshop - if you're comfortable using the keyboard this is great in that it will save you some time, if you'd rather use the mouse and menu selections, this is also perfectly fine.

#### \*\*\*\*\* SLIDE 7 Layer Panel

Of all the tab groups and panels you will interact with in Photoshop, the Layer panel is the one that you will be using the most. When you open an image file in Photoshop, it will automatically open up as a Background Layer in the layer panel. The Background Layer is a special layer in that some actions, such as using the Move tool on it, will not work. Other actions, such as using the paint brush, will work. You should NEVER do anything in the Background Layer - you should consider this layer to be your original file and you NEVER want to make changes to your original image. Notice that the Background Layer has a padlock icon to the right - this indicates that the layer is locked to some actions.

#### \*\*\*\*\* SLIDE 8 Layer Panel

This example is just one of an nearly infinite possibilities of layers in a Photoshop file. Working from the top down:

- Top Layer: This is the active layer in that it is highlighted, most actions taken will happen in this layer.

From the left to the right:

-- Eye icon: This is a toggle that allows the layer to be visible (Eye icon showing) or hidden (no Eye icon)

-- Adjustment Layer icon: This layer is an adjustment layer, the icon tells you what type of an adjustment layer it is.

-- Chain icon: This indicates that the layer mask is linked to the layer.

-- Layer Mask icon: A layer mask selectively and non-destructively hides and reveals content of the layer it is linked to; this layer mask has a vertical gradient going from pure black at the top to pure white at the bottom. The layer mask also has a bounding box to show that it is the active element in the layer.

-- Layer name: If you are using an Adjustment Layer, Photoshop will fill in the name of the adjustment you are using (here, Black & White) and the number of the instance of the adjustment layer. If I did a second Black & White adjustment layer, it would be called "Black & White 2". New layers are labelled "Untitled" and you can rename layer names.

- Middle Layer: This layer is a copy of the Background layer and, as it is the first layer in the stack, it is automatically named "Layer 1" - if I was to make a copy of this layer, Photoshop would automatically name it "Layer 1

Copy 1", another copy would be "Layer 1 Copy 2" and so on. Notice that this layer is hidden - the Eye icon is not there - so any effect that the layer(s) above have are not having an affect on this layer.

- Background Layer: Default bottom most layer of a Photoshop document. It is visible, so the Black & White adjustment layer effect will be affecting how this layer looks - note that the Background layer itself IS NOT Black & White, just that the Black & White adjustment layer is making the Background layer appear Black & White.

#### \*\*\*\*\* SLIDE 9 Layer Panel Options - Top of Panel

From the top going down:

- First Row left to right:

-- Layers, Channels, and Path tabs: The Layers tab reveals the Layers panel and the layer stack. The Channels tab reveals the channels used (default is All, Red, Green, and Blue) which changes based upon image mode; the Paths tab reveals the paths panel with paths created by the Pen tool and the Shape vector tool - you will not be using the Paths tab in this class.

-- Contextual menu icon

=====

- Second Row left to right:

-- Filter drop down menu: You have the ability to run filters on the layer stack to selectively reveal only certain layers of the stack. The drop down menu selection criteria are:

--- Kind: show pixel, adjustment, type, shape, or Smart Object layers

--- Name: enter a name or partial name to search on

--- Effect: show layers that have Layer Styles

--- Mode: show layers that have specific blending modes

--- Attribute: show visible, locked, empty, linked, clipped, layer masks, vector masks (not used in this class), layer effects, advanced blending (Blend If...) layers

--- Color: show layers that have a certain color assigned to the visibility (Eye icon) column

-- Quick filter icons left to right:

--- Pixel Layers

- Adjustment Layers
- Text Layers
- Shape Layers
- Smart Object Layers

-- Filter on/off switch: turns filter options on or off

=====

- Third Row left to right:

-- Layer Blend Mode: this affects how the currently active layer interacts - or blends - with the layer immediately below it. More on layer blend modes later.

-- Opacity: visibility of the layer from 0% (transparent) to 100% (opaque)

=====

- Fourth Row left to right:

-- Layer lock icons: you can lock specific elements of the current layer to make it selectively uneditable. Icons from left to right:

--- Lock transparent pixels: when active, transparent pixels on the layer can not be edited

--- Lock image pixels: when active, any pixel that has color information can not be edited

--- Lock position: when active, can not move or reposition the layer

--- Lock artboard stacking: ignore, not used in this class

--- Lock All: when active locks the layer down so it can not be edited

-- Fill: how much of the pixels are in the layer from 0% (no fill) to 100% (filled). DO NOT CONFUSE Fill with Opacity! They are different. Example: I have a square with a Layer Effect of Drop Shadow. If I change the Opacity of the Layer from 100% to 0% both the square and the Drop Shadow go away (transparent); if I take the Fill from 100% to 0%, only the square fill fade away, the Drop Shadow will remain because it is attached to, but not part of, the layer.

\*\*\*\*\* SLIDE 10 Layer Panel Options - Bottom of Panel

Going from left to right:

- Link layers icon: will link multiple layers together for purposes of positioning layers identically

- Add Layer Style icon: drop down menu to add a Layer Style

to the currently active layer

- Add Layer Mask icon: adds a layer mask to the currently active layer
- Create New Fill / Adjustment Layer: drop down menu to create a new fill or adjustment layer that will go on top of the currently active layer
- Create New Group: you can organize multiple layers into a group to better structure your layer stack
- Create New Layer: creates a new blank layer on top of the currently active layer
- Delete Layer: select and drag a layer to the trash can to delete it without warning dialog box

#### \*\*\*\*\* SLIDE 11 Layer Blending Modes

Blend modes affect how the currently active layer interacts with the layer immediately below it. Some stunning effects can be created by changing the blend mode of a layer. Blend modes are split into different categories:

- Default Modes:

- Normal
- Dissolve

- Darkening Modes:

- Darken
- Multiply
- Color Burn
- Linear Burn
- Darker Color

- Lightening Modes:

- Lighten
- Screen
- Color Dodge
- Linear Dodge (Add)
- Lighter Color

- Contrasting Modes:

- Overlay
- Soft Light
- Hard Light
- Vivid Light
- Linear Light
- Pin Light
- Hard Mix

- Comparison Modes:

- Difference
- Exclusion
- Subtract
- Divide

- Color Modes:

- Hue
- Saturation
- Color
- Luminosity

\*\*\*\*\* SLIDE 12 Layer Blending Modes

Other than for Normal, the three most commonly used blend modes are: Multiple, Screen, and Overlay / Soft Light. Other modes you might use depending on the effect you want to achieve are Color and Luminosity. If you are manually creating a panorama from multiple overlapping images, you will want to use the Difference mode (hint: let Photoshop stitch the panorama together for you - it does it very well and relatively fast).

\*\*\*\*\* SLIDE 13 Layer Blend Mode: Multiply

The Multiply blend mode multiplies pixel values between two layers, the overall effect is to darken colors. If a black to white gradient is overlaid in Multiply mode, the colors will go from black to darker colors, white in Multiply mode is transparent.

\*\*\*\*\* SLIDE 14 Layer Blend Mode: Multiply

Example of black to white gradient overlaid in Multiply mode.

\*\*\*\*\* SLIDE 15 Layer Blend Mode: Multiply

A practical example of using the Multiply blend mode is to create a mostly transparent watermark on an image. Here I have my watermark (a vector shape of a film strip) with text in white, with a bevel and emboss layer style added to make the watermark pseudo-3D.

\*\*\*\*\* SLIDE 16 Layer Blend Mode: Multiply

When the layer blend mode is set to Multiply, the white becomes transparent while the shading of the bevel and

emboss layer style creates a slightly darker color.

\*\*\*\*\* SLIDE 17 Layer Blend Mode: Screen

The Screen blend mode divides pixel values between two layers, the overall effect is to lighten colors. If a black to white gradient is overlaid in Screen mode, the colors will go from lighter color to white, black in Screen mode is transparent.

\*\*\*\*\* SLIDE 18 Layer Blend Mode: Screen

Example of black to white gradient overlaid in Screen mode.

\*\*\*\*\* SLIDE 19 Layer Blend Mode: Screen

A practical example of using the Screen blend mode is to add decorative elements to a photograph. Here the base image is the Background Layer and the elements that will be added are Layer 1.

\*\*\*\*\* SLIDE 20 Layer Blend Mode: Screen

Layer 1 has elements in white on black. When the blend mode is set to Screen, the black pixels will become transparent.

\*\*\*\*\* SLIDE 21 Layer Blend Mode: Screen

Layer 1 is in Screen mode. There are too many elements which spoil the photograph. A layer mask will be used to non-destructively adjust the transparency of the elements of the layer.

\*\*\*\*\* SLIDE 22 Layer Blend Mode: Screen

The layer mask has been applied to the elements layer, hiding and revealing the contents of the elements layer of Layer 1.

\*\*\*\*\* SLIDE 23 Layer Blend Mode: Soft Light

The Soft Light blend mode is a mix of Multiply and Screen modes and is used to enhance contrast along edges. If a black to white gradient is overlaid in Soft Light mode, the colors will go from darker color to lighter color, neutral gray in Soft Light mode is transparent.



\*\*\*\*\* SLIDE 24 Layer Blend Mode: Soft Light

Example of black to white gradient overlaid in Soft Light mode.

\*\*\*\*\* SLIDE 25 Layer Blend Mode: Soft Light

A practical example of using the Soft Light blend mode is to increase the contrast along edges, enhancing the apparent sharpness of an image. Here I have an image that I duplicated and from the Filter menu item I am selecting the High Pass filter.

\*\*\*\*\* SLIDE 26 Layer Blend Mode: Soft Light

I set the pixel radius to 4 pixels; this is how many pixels adjacent to the edges will be affected. For this effect to work, a value usually between 4 and 10 works the best.

\*\*\*\*\* SLIDE 27 Layer Blend Mode: Soft Light

The High Pass filter will turn the layer mostly neutral gray with black and white elements. When the Soft Light blend mode is selected, the neutral gray pixels become transparent and the black and white pixels lighten and darken the colors, enhancing the edges and making the image appear sharper than the original.

\*\*\*\*\* SLIDE 28 Adjustment Layers

Adjustment layers are layers that have an effect on the appearance of the layer that it sits on top of. Adjustment layers are grouped into three broad categories: layers that affect tonal range, layers that affect color, and layers that affect appearance.

All adjustment layers come with a layer mask that you can use to selectively hide or reveal the effect of the adjustment layer on the layer below.

Adjustment layers are non-destructive in nature; they do not edit the pixel color information on the layer it is affecting.

\*\*\*\*\* SLIDE 29 Adjustment Layers

DO NOT CONFUSE adjustment layers with layer adjustments!  
Layer adjustment will apply the selected effect to the

currently active layer and modify the pixel information. Layer adjustments do destructive edits and therefore should only be done on their own layer.

Layer adjustments can be accessed through the Image menu item selecting the Adjustments item and then the adjustment option you want to apply.

Adjustment layers can be accessed several ways:

- From the Window menu item select the Adjustments Panel
- From the Layer menu item select the New Adjustment Layer and then the option
- From the bottom of the Layer panel click on the Create New Fill / Adjustment Layer icon to bring up a drop down menu with the options

#### \*\*\*\*\* SLIDE 30 Layer Adjustment

While layer adjustments do destructive edits, there may be some times that you will want to perform a layer adjustment as opposed to an adjustment layer. While the adjustment layers are replicated in the layer adjustment (the first three groups), there are other options available as a layer adjustment, such as HDR Toning... and Shadows/Highlights... that are not adjustment layers. Again, when doing a layer adjustment, you will want to have made a copy of the layer you want to change and perform the adjustment on that layer.

#### \*\*\*\*\* SLIDE 31 Adjustment Layers

This is the list of adjustment layers. They are grouped together by the effect that they have on the layer below.

The groups are from top to bottom:

- Fill: these adjustments will create a fill of either a solid color, pattern, or gradient above the layer below
- Tonality: these adjustments will alter the appearance of the tonality - primarily contrast - of the layer below
- Color: these adjustments will alter the appearance of the color value of the layer below
- Clipping: these adjustments will alter the appearance of the layer below by limiting color range

#### \*\*\*\*\* SLIDE 32 Layer Styles

The layer styles are grouped into two categories:

- Blend If options: interacts with current layer and layer below to cause portions of the current layer to become

transparent based upon tonality (black - white) range. Very powerful but seldom used.

- Pixel effects: adds specified pixel effects to the layer.

#### \*\*\*\*\* SLIDE 33 Layer Styles

The left image is the drop down menu from the Layer Styles icon. The top element of the menu, Blending Options..., is the Blend If. The other elements in the list are the pixel effects that can be attached to the layer.

The right image is the Layer Style panel where you can select the pixel effect and how it blends into the layer that the style is attached to - when a pixel element is selected the center dialog boxes will change.

At the bottom is the Blend If option. Here you can blend the pixel tonality range to make some pixels either on the currently active layer, or the underlying layer, transparent. This effect is better shown in class to understand its function.

#### \*\*\*\*\* SLIDES 34 & 35 Layer Filtering

More slides on the layer filtering options and the filtering icons.